FOOD SYSTEMS SUMMIT 2021 DIALOGUES

September 2021

Synthesis of Independent Dialogues

REPORT 3
Part 2, Section 3

UNITED NATIONS FOOD SYSTEMS SUMMIT 2021

This supplemental report provides in-depth documentation in support of the third Independent Dialogues Synthesis Report. Specifically, the report covers Themes 9-15.

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This report was prepared by the Blue Marble Evaluation Network

Blue Marble Evaluation (BME) is an approach to evaluating global initiatives aimed at transforming systems towards a more sustainable world. Blue Marble Evaluators constitute a global network of evaluators who work in the space of global systems transformation. For this assignment, our BME team brings together evaluators from around the globe who offer an interdisciplinary approach to research and evaluation. As a team, we bring various standpoints yet at the same time we have a shared view seeing the world as a global system of ecological and human interdependence.

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The Purpose of the Food Systems Summit: Support for the Agenda 2030 Decade of Action

UN Secretary-General António Guterres will convene a Food Systems Summit in September 2021, as part of the Decade of Action to achieve the Sustainable Development Goals (SDGs) by 2030. The Summit aspires to launch bold new actions to deliver progress on all 17 SDGs, each of which relies to some degree on healthier, more sustainable and equitable food systems.

To prepare for the 2021 Food Systems Summit (hereafter referred to simply as "the Summit), Independent Dialogues have taken place around the world. Independent Dialogues are one of three main components of the Food Systems Summit Dialogues (FSSD), the other two being Member State Dialogues and Global Dialogues. Independent Dialogues could be convened by any interested group. A guidebook for conducting Dialogues and training of conveners offered a standardized process for facilitating dialogues and a standardized feedback reporting form. Dialogues typically lasted an hour to two hours at most. They typically included a presentation on the topic of the Dialogue followed by panel discussions or breakout groups. Independent Dialogues aimed to offer a seat at the table to food system stakeholders who have an opportunity to "debate, collaborate, and take action towards a better future" (Food Systems Dialogue).

The Independent Dialogues invited participants to discuss how food systems can be transformed. This synthesis organizes and presents Dialogue results in answer to four questions:

- What food systems transformations are needed and envisioned?
- Who should engage in transforming food systems?
- How should the transformation of food systems be undertaken?
- What success factors are key to transformative results?

The Blue Marble Evaluation Team (BME) did not organize or convene the Independent Dialogues, collect the data, or design the data collection forms. Rather, we were tasked with synthesizing and analysing data that were submitted for dialogues held between 5 November 2020 and 21 July 2021. The analysis of that data resulted in several reports, including the Synthesis of Independent Dialogues (September 2021) which identified 22 themes to address the four questions.

Supporting Documentation for the Synthesis of Independent Dialogues

There are four supplemental reports that provide illustrative quotes to support that September 2021 Synthesis report. Each supplemental report provides extensive documentation (i.e., quotes) to illuminate and support each of the identified 22 guiding themes. These four reports are:

- **Report 1** provides illustrative data that supports the themes identified to answer the question, "What food systems transformations area needed an envisioned?" The data are organized into

the three thematic areas: (Theme 1) Transformed Systems, (Theme 2) Sustainability and (Theme 3) Equity.

- **Report 2** provides illustrative data to support the themes identified to answer the question, "Who should engage in transforming food systems?" Data are organized into five key thematic areas: (Theme 4) Multistakeholder Partnerships, (Theme 5) Value Diversity and Engage, (Theme 6) Primacy of Government: Responsibility and accountability, (Theme 7) Engage Collaboratively and Amplify and (Theme 8) Empower Historically Excluded Voices.
- **Report 3** provides illustrative data to support the themes identified to answer the question, "How should the transformation of food systems be undertaken?". Data are organized into the 6 themes: (Theme 9) Apply Systems Thinking, (Theme 10) Recognize Complexity, (Theme 110 Guarantee the Right to Food, (Theme 12) Support Nature-Positive Solutions, (Theme 13) Contextualise and Localise, (Theme 14) Education about Food Systems: Shift Perspectives, Revise Narratives and Change Mindsets, and (Theme 15) Innovate and Integrate What is Already Working. *(This report).*
- **Report 4** provides illustrative data to support the themes identified to answer the question, "What success factors are key to transformative results?" Data are organized into the remaining seven themes: (Theme 16) Generate Financial Resources Sufficient to Accelerate Transformation, (Theme 17) Align and Integrate Coalitions and Solutions, (Theme 18) Ensure Openness and Transparency, (Theme 19) Act with Urgency, (Theme 20) Facilitate Conflict Resolution and Negotiate Trade-offs, (Theme 21) Build Global Transformation Momentum Across Systems: Generate mutually reinforcing acceleration of solutions across food, climate and health systems toward transformational critical mass and tipping points, and (Theme 22) Learn and Adapt Through Ongoing Evaluation.

These four supplemental reports do not include all the quotes identified, read, and considered for the September report. Rather, these four reports provide an illustrative set of quotes that support the 22 identified themes. The BME team encourages reading of the Dialogue Reports for a more in-depth understanding of these themes.

Quotes for Guiding Themes 9-15

How should the transformation of food systems be undertaken?

Guiding Theme 9. Apply Systems Thinking

Systems approach

Sustainable development of food systems is a cross-cutting topic that affects not only the priorities of individual industries and sectors of agro-business, but also many adjacent industries, in fact, the entire national economy.Therefore, when making decisions regarding the development and regulation of the agro-business and the consumption of agricultural products, one must consider cross-sectoral positive and negative effects, including the human well-being trends, the quality and availability of products manufactured, returns to scale, etc.[1]

It is necessary to pay more attention to a comprehensive solution not only to the production problem, but also to the processing and destruction of generated waste, as well as to increase the deep processing of products (fish, aquaculture, etc.), while considering the tasks and needs of all key agro-business sectors and consumers. At the same time, manufacture and supply of products with higher added value and processing to international markets should not replace current ones, but supplement them, while contributing to expanding the supply and forming more favorable conditions for product consumers.[2]

Need to unite food with public health.[3]

Achieve internal consistency and inter-sector integration carried out by the state both in agriculture and processing industry and in the field of education, science, etc…[4]

[1] 507:1 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

[2] 507:5 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

[3] 513:5 ¶ 237 – 244 in 090a_May_29_21_Theunissen D_Eng

[4] 519:20 p 7 in 106a_June_18_21_Nurgaziev R_Eng

Information system for exchanging skills and services: Take an inventory of residents' skills and strengths; what we do and what we produce; an inventory for linking producers with transformers.[5]

BIPOC small farmers have the ability to increase and be successful in our environments, communities, on our small farms enterprises, and to work together to grow diverse nutritious food systems. [6]

Shift from linear approaches to research in food systems toward more interlinked and interdisciplinary process of food system research and analysis.[7]

This session emphasized that food systems are a wide and cross-cutting topic which are at the same time locally specific. Instead of focusing of individual components of food systems, such as food security, nutrition, vulnerability etc., the concept of food systems has sensitized the stakeholders about the need for a holistic approach, and discussions are expanding from commodity to systems, from activity to chains, from actors to stakeholders, from consumption to health, from present to future generations.Systems thinking is becoming more widespread. There is a paradigm shift from dealing with problems only inside 'silos', towards addressing problems in their entirety. Working across sectors and disciplines can be destabilizing but the dialogues are making stakeholders more comfortable with this approach and are understanding that food systems are key for the achievement of the SDGs. Increasing production is necessary but not sufficient as there is a need to simultaneously look at production, distribution and consumption in a systemic approach.[8]

Achieving sustainable food systems requires an integrated approach…[9]

That nutrient-based approaches (deficiencies, fortification, reformulation) are balanced with a holistic approach including the consequences of food processing and food systems.[10]

The need to act together and to give a direction for the food systems transformation proposed by the UN Summit towards sustainability emerged from the debate. It was highlighted the complexity of the food systems environment, and how interconnected and interdependent challenges facing the transformation of food systems towards require to be addressed through a systemic integrated sustainable approach. It was pointed out that food systems transformation and ecological transition should be jointly achieved by taking into account environmental, economic and social issues in an integrated way.[11]

Session 1: Towards a sustainable food system Social, economic and environmental changes of recent years, together with the current COVID-19 pandemic, have highlighted a global vulnerability of food systems. This vulnerability needs to be faced through an

[5] 526:11 p 7 in 124a_July_18_21_FEA Hatillo_Eng

[6] *356:51 p 7 in 409_June_13_21_Mone S*

[7] *358:15 p 6 in 402_June 10_21_Ekwamu_El Dukheri*

[8] *359:19 p 7 in 403_June_10_21_ESCAP_Multi*

[9] *359:28 p 8 in 403_June_10_21_ESCAP_Multi*

[10] *361:29 p 8 in 405_June_10_21_NCD Alliance*

[11] *386:9 p 6 in 429_July_05_21-CIHEAM Bari*

integrated approach for a food systems transformation towards sustainability, in which Italy can make an important contribution within the Summit in tracing the direction of this transformation.[12]

The systemic view on health must also take into account the nutrition and microbiota of soils, given the direct relationship between soil health and plant nutrition. It was mentioned that school meals, for example, should prioritize regional foods, also with the support of the PNAE. A big challenge is to make industry and popular restaurants do the same. Not every healthy diet is sustainable, healthy diets may also generate waste.[13]

Ambassador Bugailiskis shared examples of Indigenous-government collaborations, such as the new Food Policy in Canada, which acknowledges how historic government policies disrupted the food systems of Indigenous peoples. It ensures, she explained, "that the unique rights, interest and circumstances of the First Nations, the Métis Nations and Inuit are acknowledged, affirmed and implemented. It supports Indigenous food self-determination, meaning the ability of Indigenous peoples to define their own food systems and it takes a holistic approach that acknowledges that food is more than a product for Indigenous peoples.[14]

Recognize the Holistic approach: food sovereignty and right to self-determination.[15]

In ensuring physical and economic access to safe and nutritious food, a holistic approach involving stakeholders from all spheres across the food system is required.[16]

Governments should adopt a systems approach to developing policy, recognising the relationships and reciprocal links between food and water systems.[17]

Strengthen common understanding of and political commitment towards sustainable food system development at regional and country levels, through a holistic and multi-sectoral approach.[18]

A systems approach when researching food systems is necessary.[19]

Policies on self-sufficiency tend to concentrate on certain species only, encouraging uniformity vs. diversity in species, thereby ignoring healthier and nutritious food options and placing stresses on the environment and threatening biodiversity.[20]

A more holistic human capital development is required to build the agricultural workforce, from production, to research and innovations, as well as entrepreneurship. African

[12] 386:18 p 7 in 429_July_05_21-CIHEAM Bari

[13] 389:59 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[14] 390:17 p 8 in 432_Dec_15_20_UNPFII_FAO

[15] 394:39 p 10 in 436_June_16_21_GIYC_Multi

[16] 397:20 p 7 in 439_June_17_21_INAI

[17] 402:10 p 6 in 443_May_09_21_GIGH

[18] 403:20 p 8 in 444_May_25_21_FAO_UNICEF_Multi

[19] 407:19 p 7 in 448_Feb_25_21_IFAD_Multi

[20] 408:35 p 17 in 449_March_08_21_Wild Foods_Multi

universities are pivotal in designing and implementing human capital development programmes.[21]

The discussion presented connections between food systems, diet, the pandemic, and national security, among other concerns, indicating a need for a systems perspective when creating solutions. Panelists explained the need to incorporate gender and local culture in decision making and to seek opportunities for collaboration between the public and private sectors. Most importantly, all three panelists agreed that food is a human right and that it needs to be made affordable, accessible, and appropriate to local cultural and environmental context.[22]

Further, a systems approach is considered appropriate in acknowledging that food choices extend beyond individual decision-making.[23]

Holistic approach to growing food – what does this mean for people?[24]

For farm policy, adopt a comprehensive and inclusive approach that includes experts in human nutrition, farmers/producers, and climate experts.[25]

In the meantime, most participants insisted that a systematic approach is crucial in any food system-related challenges and isolated solutions are definitely not the best.[26]

Recommendation 1: Developing an enabling environment needs to be based on a systems perspective that includes a change in power structures (land rights), farmers empowerment (through farmers organization) and economics (access to capital).[27]

Sustainable production - More sustainable production and shorter supply chains will link producers and consumers more closely.[28]

Instead, investment should be allocated to reform the entire value chain, integrating different aspects of agriculture into a system that promotes food sovereignty. We agree in focusing first on systemic interventions, knowing that capital would naturally flow in the food system when there is an enabling environment to properly manage it, not necessarily to generate high profits, but rather to effectively achieve food security and equitable prosperity whilst protecting people and the planet.[29]

[21] 416:18 p 8 in 457_May_20_21_Ekwamu_A

[22] 423:10 p 5 in 464_June_10_21_IFAD_UNFSS_Multi

[23] 426:18 p 7 in 467_June_17_21_NWGN_Multi

[24] 427:23 p 11 in 468_June_18_21_Mayne A

[25] 429:90 p 18 in 470_June_17_21_Burian_Multi

[26] 444:31 p 14 in 027_Feb_02_21_CBCGDF_UNFSS

[27] 457:75 p 14 in 120_Apr_27_21_Mauderli_U

[28] 459:61 p 14 in 125_May_11_21_Mauderli_COSUDE

[29] 460:120 p 18 in 131_May_25_21_IISLA Ventures

To increase the contribution of GI to sustainable food systems, participants emphasized the importance of supporting a more comprehensive approach, including social and environmental pillars, with emphasis to their link to cultural heritage.[30]

…we recognized that the food systems are complex, thus, to tackle existing issues requires holistic approaches, cross-sectorial efforts, both when it comes to policy making and actions.[31]

Business is increasingly looking at the necessity of having a systems approach. On this level, we need to understand the true value of food, and also the true cost associated with it: the social and environmental cost.[32]

Overcoming these diverse impacts requires adaptive, holistic management of the resources that we depend upon.[33]

Embrace a One Health approach that addresses the deep interconnections between humans, animals and the environment.[34]

Adopt a systems thinking approach to deal with the complexity inherent to sustainable food systems.[35]

Participants also highlighted the importance of holistic analysis to understand and prepare for trade-offs and areas of synthesis/reinforcement. Participants agreed that food systems must become more sustainable while also ensuring continued sufficient nutrient-dense food supplies that are safe, accessible, affordable, and appropriate to diverse consumer needs.[36]

A more open, predictable, rules-based global trading environment with fewer barriers will facilitate more efficient movement of agriculture and food products, including to regions suffering from malnutrition and food insecurity.[37]

Integrated farming systems needs to be boosted.[38]

Animal agriculture should be viewed as a part of a broad, diversified system – and as a solution rather than a problem. Its benefits in high-quality protein and in providing nutrients to and management of the land are essential parts of the circle of life.[39]

[30] 462:23 p 10 in 133_May_27_21_CIRAD_Multi

[31] 485:17 p 6 in 288_May_20_21_GAN_Multi

[32] 486:90 p 14 in 291_May_21_21_Polman_Prabha

[33] 500:22 p 7 in 396_June_01_21_Arttijeff_Multi

[34] 501:15 p 6 in 397_June_04_21_WHO_Multi

[35] 1:5 p 6 in 072_Mar_09_21_Sibanda L

[36] 4:7 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

[37] 4:12 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

[38] 7:19 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

[39] 8:9 p 6 in 169_Apr_6_21_Shea E

Systems-based agricultural research that is energized and integrated with SDG goals. Integrated research agendas should advance a systems approach to ensure health.[40]

To build on that point, the group talked about what a full transformation of our food system could look like. Communication around sustainability is important because each person or region's definition might vary slightly, and practices look different across the globe. Our producers emphasized the importance of avoiding the one-size-fits-all approach. The food system is fragile, so transformation must be approached cautiously and include the voice of farmers.[41]

There needs to be a focus on how tweaks to the beef production system – better health, better genetics, better grazing, better feeding – as they can improve productivity. We need to recognise that we are dealing with complex biological systems and need tools to help deal with unintended consequences of single topic decision.[42]

Everyone should do something: we need a systemic transformation and there are so many actions needed. We have to change our eating habits, and one step is to change school lunch more plant-based. This should done urgently and it is a political decision.[43]

The participants of the dialogue stressed that the WEF nexus approach requires a shared vision for water and food security in the Central Asian region, and one that is facilitated by improved policy coherence and institutional coordination. Stronger collaboration and cooperation across and between governments and its multiple tiers is needed to achieve this, along with strengthening policy synergies with the private sector and civil society. The strong interdependency between water, energy, food and climate change in arid and semi-arid regions such as Central Asia calls for robust interventions, i.e. an approach that integrates management and governance across sectors, and where conventional policy and decision-making in 'silos' gives way to an approach that reduces tradeoffs and builds synergies across sectors in line with the global UN SDGs and climate targets. There is required to develop the long term regional limited planning for water allocation between sectors. Regional programs like the regional program for the basin of the Aral Sea is still rather sectoral and has only limited nexus elements. Also, the problem of the original programs is that they are developed mainly by water and ecology experts without referring to knowledge from other sectors like energy and agriculture.[44]

The existing role and influence of communities on the policy in the field of renewable economic activity are very different in different countries (they are at different stages of development). Therefore, action planning should be maximally adapted to the situation in each individual country. The realistic goal is to raise the status of communities in the planning and implementation of the WEF policy in the country by one step. At least to the role of an "observer", it is better to the role of a "participant in the process" with an

[40] 8:15 p 6 in 169_Apr_6_21_Shea E

[41] 8:30 p 11 in 169_Apr_6_21_Shea E

[42] 11:3 p 6 in 184_Apr_14_21_Genever_Multi

[43] 13:6 p 7 in 207_Apr_28_21_WWF Finland Youth

[44] 17:2 p 6 in 164_Apr_15_21_Anarbekov_Akramov

advisory vote, ideally to the status of a "full member" of a collegial body for shaping the national policy of the WEF.[45]

Our current systems are structured in a linear fashion, with the primary focus on resource production and extraction. There is very little emphasis, if at all, on sustainable systems or community focused systems. These systems should become more circular, and activities such as regenerating clean water and putting it back into the system should become the norm.[46]

Comprehensive approaches/strategies that engage all sectors (i.e. agriculture and environment; production and farming; delivery and processing; marking, distribution and purchasing; consumption and waste; etc.) are essential for change. Honing in on a social movement was recommended to transform a food system that is unsustainable and has negative health impacts. A whole-of-society approach is needed. A social movement will restore, rediscover, revive and reconnect people with their food heritage. A concrete example: the Pacific Island Food Revolution, a reality television cooking show featuring local cuisine of the South Pacific was effective, entertaining and showed evidence of impact in consumption patterns of participants and viewers.[47]

How we will do it Comprehensive approaches/strategies that engage all sectors (i.e. agriculture and environment; production and farming; delivery and processing; marking, distribution and purchasing; consumption and waste; etc.) are essential for change.[48]

Some progress is being made on "circular economy" thinking and practice, but the system as a whole has not kept up with people's ideas and plans. Linking food, agriculture and health policies was particularly discussed.[49]

At the same time, 'food as medicine' should be embedded within national public policy on health promotion. This involves formalising links between the food system and the health system to reduce highly prevalent non-communicable diet-related diseases and build consumer demand for high-quality, affordable food. Increased support for green prescribing is also called for, including in the management of certain chronic diseases.[50]

They stressed the importance to reconnect with food traditions, retouch cultural values, invest on social capital, connect the food we eat with its environment, conceptualize new ways of planning territories and use the urban areas as connectors to build a more dense and interconnected system.[51]

The reactions of the two external speakers were interesting, as they underlined and shared the important message of the Bites of Transfoodmation community. Indeed, they felt inspired and considered that rethinking our societies through a food perspective is a key

[45] 17:33 p 13 in 164_Apr_15_21_Anarbekov_Akramov

[46] 18:6 p 6 in 114_Apr_19_21_Maurer H_Roskruge N

[47] 19:4 p 6 in 115_Apr_24_21_Foronda_Multi

[48] 19:26 p 6 in 115_Apr_24_21_Foronda_Multi

[49] 20:22 p 10 in 116_Apr_21_21_Hein JR

[50] 20:23 p 10 in 116_Apr_21_21_Hein JR

[51] 22:4 p 7 in 191_Apr_16_21_Donati L

aspect. Sara Roversi stated that food should not be seen as a commodity, food it is much more than that, it is care and sharing. They all mentioned that we have lost the real value of food and that education can lay a considerable role in recovering from this situation. It has been also said that a food system is like a living organism where everything is interconnected and it works well only if everything else is in harmony. Christian Frutiger has also underlined the importance of the reciprocity concept between people and their habitats.[52]

The main requests of the young changemakers were that diversity should be considered as a unifying factor along the entire chain of future food systems, in the sense that a dense network of deeply connected small and different realities leads to more resilience and better collaboration.[53]

He continued by stressing the importance of not only looking at food systems from the production side – the sustainability perspective – but also from the consumption side – the social and inclusiveness perspective.[54]

Concerning the youth, Christian Frutiger highlighted the importance of "getting the science right" in order to have true definitions. He felt like the Food Systems Summit will be the beginning (and not the end) of a journey of change of food systems, even though he wished something like an IPCC of food systems as the outcome of the Summit. For this, Frutiger stressed the importance of involving all sectors from academia, the public sector, the private sector, the multilateral system (IOs, IFIs), governments, civil society, etc.[55]

One key outcome that emerged from this first SFS-MED Dialogue was the need to strengthen a common understanding of sustainable food systems and their complexities, through a holistic approach, specfic for the Mediterranean context. It was recognized that the multiple challenges of the Mediterranean, further exacerbated by the effects of the COVID-19 pandemic, are deeply interrelated. Food system transformation is a very complex and dynamic process that requires considering food systems in their entirety, linking production and consumption, and in a cross-sectorial as well as inter-disciplinary manner. The importance of the nexus approach, which allows to connect and valorise the connection among different aspects and areas related to food, was also acknowledged. To this effect, it was recognised that: green, blue and circular economy are pivotal to food systems transformation; mainstreaming biodiversity and sustainable land and water management are key issues to climate change resilience; sustainable fisheries and aquaculture are also central to improve the sustainability of food systems; cities and local food policies play a critical role in moving towards more sustainable food systems. [56]

The solutions discussed for the above mentioned concerns included strengthening the local, circular economy, ensuring better price realization for farmers and creating equitable systems of production. This will involve knowledge generation at the grassroots

[52] 22:6 p 7 in 191_Apr_16_21_Donati L

[53] 22:11 p 9 in 191_Apr_16_21_Donati L

[54] 22:21 p 10 in 191_Apr_16_21_Donati L

[55] 22:24 p 10 in 191_Apr_16_21_Donati L

[56] 23:19 p 6 in 205_Apr_27_21_CIHEAM_Multi

level, enterprise development and infrastructure, all of which would require public investment.[57]

This group began the discussion by recognizing the complexity of the interconnections between various aspects of food systems. The importance of learning from nature, linking indigenous knowledge to modern science and disseminating it with the help of digitalization were also acknowledged.[58]

Adoption and integration of an ethical approach to food systems transformation through the promotion of ethics of respect and stewardship for nature especially for ecosystems relevant to food and agriculture productions will significantly accelerate food systems transformative process. [59]

We have to transform our culture of exploitation and promoting the Rights of Nature can drive forth the cultural realization that humans are part of nature and the environment and cannot be view separately.[60]

Engaging in circular economy activities such as the recycling of biomass (composting) and livestock waste (biofuels) can add great value to our environment, once done right.[61]

Adoption of a food systems approach that acknowledges inter-system and intersectoral linkages and the multiple outcomes of the food system: food security and nutrition, environmental, social and economic.[62]

It finally stressed the necessity of taking actions in a collective and holistic manner and not only individually.[63]

Holistically identify critical areas of development and missed opportunities within the agricultural sector. This will justify an increase in budget allocation to the agriculture sector or departments within. e) Education of the general populace on the importance of the agricultural sector.[64]

Food security needs a holistic food perspective with bottom-up and top-down action. Macro-economic policies need to be created at a university and national level to support the most vulnerable on campus.[65]

A systems approach to the food system and its supply chain is an imperative.[66]

[57] 26:33 p 10 in 023_Jan_29_21_Bharat K S

[58] 27:42 p 10 in 044_Feb_18_21_Bharat K S

[59] 29:9 p 7 in 066_Mar_5_21_Nkenglefac T

[60] 29:18 p 7 in 066_Mar_5_21_Nkenglefac T

[61] 35:98 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[62] 36:9 p 6 in 096_Mar_29_21_ESCWA

[63] 39:20 p 9 in 175_Mar_16_21_Donati L

[64] 44:33 p 11 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[65] 48:5 p 6 in 078_Mar_11_21_Cadogan T

[66] 50:2 p 6 in 087_Mar_20_21_Chinapoo C_Multi

Complexity: We recognize that food systems are complex, and are closely connected to, and significantly impact, human and animal health, land, water, climate, biodiversity, the economy and other systems, and their transformation requires a systemic approach.[67]

It is important to take a larger perspective, embracing the whole value chain from production, transformation, distribution, and consumption.[68]

Proposal: Promotion of a holistic view, focusing on local agriculture as a primary provider of food security, with emphasis on quality and not only quantity and eco-friendly agriculture.[69]

Holistic approach: the environment and people's behaviour should be targeted simultaneously, through a mix of complementary mandatory and voluntary interventions, while considering socioeconomic and health aspects, and having in mind the 'triple wins' of sustainability - health, planet and economy.[70]

However, points critical for food systems transformation came to the surface, including: - the need for comprehensive definition of sustainability; - acknowledgement of complexity & interdependency of food systems; - the need for holistic, cross-sectoral, multi-level approaches to multifaceted complex issues; - the lack of education on healthy lifestyles, and especially on healthy sustainable food systems; - the need for comprehensive, interconnected, evidence-based policy; - the lack of data as key hurdle, and integration of key performance indicators; - the need to improve representation of businesses/industry, as well as of farmers & citizens in the FSSD, who all must be part of the solution; - existence of vested interests, and the polarisation that they can lead to; - the need to recognize the true cost of food; - the need for tradeoffs between local and global food systems; - the need to recognize differences in production, consumption, and the different needs of the food systems transformation between Global North & South.[71]

Food systems are complex. It is not just an issue for a Minister of agriculture. Food systems define our health. Food systems define our environment. Food systems are central for the future of our young people and this complexity, this interdependence, is often hard to manage - but if you come to a city, to a village, to a landscape; this complexity becomes manageable. So, while framework conditions need to be created from the top down, it is even more important to build from the bottom up, the communities of practice we want to work with.[72]

So it is important to think across the food systems value chain, but also across different sectors - from environment to water sanitation to land use. Soil regeneration is very important so that no one solution adversely affects another part of society.[73]

[67] 53:43 p 2 in 001_Nov_5_20_CGIAR

[68] 59:15 p 5 in 020_Jan_26_21_IFAN

[69] 64:15 p 6 in 041_Feb_17_21_Adler D

[70] 66:80 p 14 in 052_Feb_25_21_EUFIC

[71] 66:89 p 15 in 052_Feb_25_21_EUFIC

[72] 74:9 p 8 in 189a_April_16_21_Ateneo de Manila

[73] 74:40 p 37 in 189a_April_16_21_Ateneo de Manila

There is no single solution for continuing to strengthen the Mérida food system. We need to develop a set of actions simultaneously that are going to attend to the challenges and opportunities of the Mérida food system. [74]

In the area of urban planning, it is essential to have a coherent food governance that includes a reflection on how to secure in the medium-term – 20 years- fresh food availability and identifying the fresh food actors that can do this as to increase the ability to supply growing Asian populations. For instance, governments should plan where to develop wholesale markets, positioning them in such a way that their reach and connections are extensive in the best way possible. Food security can be improved through farming in peri-urban areas with systems as central to a holistic approach to proximity, logistics, and planning.[75]

Many agricultural projects focus on farmers and their production and productivity. Without processing industry and more developed markets, improving production and quality doesn't change the system. Action needs to be taken on the systems as a whole and competence development is necessary on all levels. It's important to increase jobs opportunities in the whole food system, not just in farming. Project support that progresses in 3-5-year cycles doesn't give enough support for long-term change.[76]

The key aspect is the key word "relationship" because the main target of the food system transformation is, indeed, provided by a set of relationships. FEBA Annual Convention 2021 "for a sustainable future food system" tried to identify the most important challenges for this transformation, recognising their complexity. Food systems are very complex entanglements of relations, some of them are visible, but many of them are hidden and they should be recognised in order to face this challenge. It emerged how food system transformation is a process of democratisation, a process that needs to blur the boundaries between the different actors, the public and the private sectors and the civil society. (…) Four pillars have been recognised in this respect: bringing together the social and the natural, creating or strengthening positive flows and interactions within and between food systems, making space for pluralism and connecting food with other public goods (health, well-being, the environment, the welfare system). [77]

The food supply chain is broken and needs to be changed: following the transition from a linear to a circular economy, it is now needed to use this momentum as an opportunity to re-design and move to a food system model with future resilience. On the other side the problem of food insecurity in Europe is growing with millions of people in precarious situations and in need. Moreover, there is a climate emergency and many analyses declared that governments around the world will not meet the Paris Agreement's targets without tackling food loss and waste. (…) The first game changer is about the private-public partnerships and the links between governments and businesses that work in the food supply chain to adopt all the measures necessary to get the targets. In this relation, the European Union is working to build a solid framework to facilitate the cooperation and

[74] 75:2 ¶ 37 – 38 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[75] 77:19 p 9 in 108_Apr_13_21_Carrara E_Multi

[76] 79:43 p 10 in 118_Apr_21_21_Huvio T

[77] 81:1 p 6 in 145_May_6_21_Vandenschrik J_Multi

coordination between the stakeholders, the public authorities and the civil society organisations such as the Food Banks. Another crucial issue to look at to transform the food system is the level of food waste at household consumption and the consumers' education and the involvement of grass-roots organisations as Food Banks in this movement for change. Another important point is work to close the loop of food waste and to put in place the miracle of circular economy where Food Banks play a crucial role to redistribute food for human consumption.[78]

Panelists highlighted how the vast array of aquatic food systems, from ocean to inland water bodies, can produce diverse aquatic food species critical to the food and nutrition security of communities in low- and middle-income countries. Holistic knowledge and food system approaches are needed to ensure access to suffcient amounts of aquatic foods that is sustainably produced, nutritious and safe to eat and consumed as part of healthy diets for generations to come. The benefits derived from giving aquatic foods greater recognition in the food systems agenda can contribute to building the sustainability, resilience and inclusivity of aquatic food systems and related value chains.[79]

It is imperative to make systematic change visible. The benefits and successes of systematic collaboration should be made visible as it will inspire those who want to see a change in the food system to do so. Moreso, it will expose those who continue with the status quo and force them to change.[80]

Recognize interconnections: Multisector solutions depend on identifying interconnections across the food system. Participants wanted to bolster connections between farmers, schools, food banks and urban communities to build mutual support, understanding and resiliency. Specific to dairy, participants recognized the strong connections between animal welfare, environmental sustainability and social science to enhance consumer trust and support farmers' livelihood.[81]

Finally, this group also touched on food production and food insecurity. While millions of people across the United States go hungry each day, there are times when farmers are forced to dispose of surplus food. Participants cited the need for a cohesive system (vs. present ad hoc models) that connects farmers with hunger coalitions to identify mutually beneficial options that get surplus food into the hands of those that need it most. Dairy farmers expressed their strong and historical support for participating in such systems and referenced the work undertaken by the U.S. dairy community to support address food insecurity when COVID-19 disrupted the food system.[82]

Participants agreed that the link between environmental challenges, climate change, malnutrition and economic inequality is becoming clearer. Society is looking to the convergence of nutrition and sustainability for solutions. Change at speed and scale is essential to ensure global food systems can provide healthy, sustainable foods. There is a

[78] 81:19 p 13 in 145_May_6_21_Vandenschrik J_Multi

[79] 82:6 p 6 in 150_Apr_30_21_GANSFOIWFSN

[80] 83:4 p 6 in 152_Apr_29_21_Kubheka M

[81] 84:7 p 7 in 153_Apr_28_21_GCNF_Multi

[82] 84:26 p 10 in 153_Apr_28_21_GCNF_Multi

tremendous – and essential – role for the private sector to play in delivering innovation, collaboration and transformation for food systems. Participants believe the aquaculture sector has proven experience mobilizing responsible production progress. It shows how a sector can work collaboratively to identify and implement solutions to environmental challenges at a global scale. This experience is transferrable to other sectors.[83]

Participants emphasized that progress cannot simply occur in a private sector silo. There's a critical need to link science-based regulations, knowledge transfer from big to small companies, and holistic business policy frameworks. Ideally, this approach will enable momentum, collaboration and accountability from the United Nations as well. Participants saw a clear role for private sector to partner with the United Nations and public institutions; they recognized that each of these groups has a unique and vital role to play.[84]

The Dialogue highlighted the need for bottom-up approaches and by affording those affected a say in necessary changes. This includes discussing how food should be incorporated in urban planning, such as considering the primary modes of transportation a locality uses, geographic barriers, and zoning plans. Improved quality in food pantries and incentives for cheaper pricing and wider selection of healthy options in grocery stores (and improved profitability) can improve consumption patterns in America. Finally, food justice should be deliberately incorporated into sustainable consumption and urban planning as it relates to food policy.[85]

The Lancet Commission's six planetary boundaries best describe nature-positive production. The boundaries are climate change, biodiversity loss, land system change, freshwater use, and nitrogen and phosphorus flows. It is significantly diffcult to consider these boundaries separately, as they often affect or are dependent on one another. Promoting soil health and carbons sequestration through regenerative practices can address these boundaries. Unfortunately, economic, and political lock-ins incentivize chemical-dependent, high-yield, monoculture agricultural practices, further complicate these issues. Therefore, major reform must include additional research on agricultural methods that balance both the financial and environmental goals of farmers and a general deconstruction of the economic and political lock-ins that continue to promote current American agricultural. Factors to consider include: • Planetary boundaries as interconnected elements.[86]

The need to make rural areas livable was acknowledged. To this end, it is important to consider holistic development initiatives that permit mitigation of problems such as emigration; reduce chronic child malnutrition; and improve the situation of access to water and sanitation.[87]

It was highlighted how the absence of an articulation of shareholders does not allow overcoming the challenges the region faces. Therefore, addressing the issues of rural

[83] 85:3 p 6 in 160_20_Apr_21_GSI

[84] 85:5 p 6 in 160_20_Apr_21_GSI

[85] 86:8 p 6 in 162_Apr_16_21_Fountain G

[86] 86:9 p 6 in 162_Apr_16_21_Fountain G

[87] 89:18 ¶ 79 in 186a_Apr_15_21_Caballeros_eng

development from a more holistic perspective is considered important, which should result in better training, access to basic services, and new jobs.[88]

Of note, participants flagged that not all sustainable opportunities require trade-offs (i.e. food waste) but where trade-offs exist, there is a role for government in reducing them by ensuring policies are created through a holistic 'food-system' lens.[89]

The F2F strategy can be the answer but it will be a challenge to implement all the ambitions. We need to start thinking about the food system as a whole.[90]

Fostering a holistic and systemic approach along with the multidimensional nature of food (FAO 10 elements of Agroecology).[91]

So it is important to think across the food systems value chain, but also across different sectors - from environment to water sanitation to land use.[92]

Embracing a systems approach and catalyzing non-State Actors (private sector, farmers, NGOs) Improving a food system necessarily calls for a systems approach which in turn entails devising an institutional mechanism for the relevant actors to work systemically.[93]

Due to the complexity of the issues for farmers and farm households (different viability challenges for different cohorts (age, system, region)), it was agreed that actions must involve systems solutions.[94]

Adopting a systems approach will support a move from silo thinking to bringing all elements together. These actions will also support capacity development, leading to diffusion of learning among rural communities.[95]

Water, energy, and food security is necessarily cross-cutting, and requires an integrated, systems approach to navigate through trade-offs and competing industries that exist, and to leverage positive interlinkages and ways to make the WEF nexus more functional.[96]

Regional coordination, alongside the systems approach, can help avoid issues of inward-looking policies that may be detrimental to a country in the long run.[97]

Over half a million women die annually due to maternity complications. Therefore there is need to understand the linkages between women's empowerment, decision making power and maternal health care. Better information and messaging for vulnerable groups is required. Better investment, better education, more health workers and nutritional services

[88] 89:21 ¶ 83 in 186a_Apr_15_21_Caballeros_eng

[89] 90:12 p 8 in 206_Apr_27_21_CCANCC

[90] 99:24 p 8 in 285_May_20_21_TFFF_Multi

[91] 103:43 p 31 in 007a_Dec_18_20_NAAGD

[92] 103:68 p 37 in 007a_Dec_18_20_NAAGD

[93] 111:30 p 6 in 070_Mar_09_21_Akinbamijo,O

[94] 112:34 p 9 in 074_May_18_21_O'Mara_Teagasc

[95] 112:41 p 9 in 074_May_18_21_O'Mara_Teagasc

[96] 117:43 p 12 in 109_Apr_13_21_Jacobs-Mata I

[97] 117:45 p 12 in 109_Apr_13_21_Jacobs-Mata I

are needed to cover these vulnerable populations. A system approach that involves schools and educational departments can help integrate maternal health education into curriculums.[98]

There is need for holistic approaches that foster access to extension services by women. Private-public alliances that promote the extension of knowledge and new technologies to women must be fostered. Consideration should be given to who should approach women farmers, depending on country, customs, religious contexts.[99]

Gender smart programs require a holistic approach based on comprehensive ecosystem of global and local partners. There is need to have women representation along the entire value chain and not just at the production level. Women farmers must be supported to foster entrepreneurship in a holistic way, facilitate access to productive farming resources, information, technology, capacity...[100]

'Food as medicine', as a core strategy for healthier islands through sustainable food systems is a holistic approach to the prevention and control of non communicable diseases like diabetes and risk factors like hypertension and obesity --- as environmental modifications focus on food as a solution and not a cause of ill-health by ensuring that all people in all islands have access to healthier, affordable and locally produced and gathered food from sustainable resources.[101]

"We are what we eat" - articulates a holistic view of culture and identity in relation to a holistic view of food.[102]

Synergize roles of local authorities, organic enterprises, farmers and academe, to lead people into community action through systemic solutions to food systems problems.[103]

This is a complex topic and understanding the risks and benefits of adopting a circular economy cannot be achieved by working solely on our areas of interest and in isolation. We need to adopt a nexus approach bringing together expertise in food, energy, sanitation, environment, human health, and policy. Collaborative thinking will require funding mechanisms to be put in place support future interdisciplinary research initiatives.[104]

A holistic approach and reliable database on water resources and their use across Pakistan is the key to achieving food, water, and energy security in the fifth most climate-vulnerable country in the world, participants of the UN Food Systems Summit Independent Dialogue (Pakistan) have reported.[105]

Moreover, a systematic approach is needed with much more information for balancing tradeoffs. While making a decision, consider a link between managing the canal and

[98] 120:14 p 7 in 127_May_13_21_IAFN_CWFS

[99] 120:19 p 7 in 127_May_13_21_IAFN_CWFS

[100] 120:23 p 7 in 127_May_13_21_IAFN_CWFS

[101] 121:3 p 5 in 130_May_22_21_Foronda R_Gloria C

[102] 121:8 p 5 in 130_May_22_21_Foronda R_Gloria C

[103] 122:34 p 8 in 135_June_08_21_Calub_Gregorio

[104] 124:3 p 6 in 142_May_11_21_Carter L_Dennis S

[105] 127:1 p 7 in 159_Apr_21_21_Hafeez M

groundwater, and determine the impacts and implications of canal risk management. Canal management is an intervention tool, for recharging groundwater. Conservative water management is important that is already happening in Pakistan however, there is a need to further improve the traditional water management to adopt a water balancing system approach and to understand the availability of resources to be used efficiently. In summary, a systematic approach is required to improve productivity by integrating packages that include pumping, storage, effcient irrigation systems, tools, technologies/techniques/practices, etc. to increase productivity–isolated solution does not work sustainably.[106]

Taking a systems thinking approach that includes looking at communities, cultures, ecology, and arts. These are systems that allow the community to continue to function, and food systems are one vital component of the entire system.[107]

On tackling malnutrition, we must look at all aspects of the food systems, including WASH, Health, social protection and livelihoods; this came out strongly from IFPRI and IDS research.[108]

Exploring an integrated or combination approach is critical given that gender is a cross-cutting approach, and it involves different institutions and stakeholders.[109]

Actions that focus on going back to basics – systems thinking and systems innovation, taking into account externalities and systems solutions.[110]

Improving nutrition security requires a systemic approach, which combines for example creating demand with improving the enabling environment and the supply of nutritious foods. This makes it more complex and is why it is not always easy to deliver outcomes at the level of improved diets (i.e. which are more diverse, safe, healthy, and affordable). But it is also why working through a multistakeholder approach is promising.[111]

Address those challenges the participants stressed the importance of a holistic approach - integrated landscape management, which involves a whole region and all stakeholders. The leadership and participation of all actors are key in that approach, as is the use of validated methods and tools and neutral facilitation.[112]

Altering "one size fits all" policies that work well in certain areas but poorly in others.[113]

[106] 127:56 p 15 in 159_Apr_21_21_Hafeez M

[107] 129:14 p 10 in 179_Apr 01_21_Livingston_Way

[108] 131:17 p 8 in 190_Apr_16_21_Cullen N

[109] 137:13 p 6 in 212_May_04_21_Akinbamijo Y

[110] 138:20 p 9 in 214_May _05_21_50by40

[111] 141:27 p 13 in 229_May_18_21_NFP_Rabobank_Multi

[112] 141:51 p 16 in 229_May_18_21_NFP_Rabobank_Multi

[113] 143:40 p 11 in 231_May_19_21_MCD

Build a stronger partnership between the public, private sectors, farmers' associations, civil society, research, and universities, to ensure that inclusive approaches are used across the agricultural value chains.[114]

It is important to shift from a sectorial approach to a systemic one. By supporting cities and local governments, a systemic approach can be progressively built, connecting markets to other food systems components.[115]

Analyse incentives and disincentives for different users of land resources through participatory approach and manage rangelands to get better achievements.[116]

Primary agriculture should adopt a larger food systems perspective and explore opportunities to further engage in food systems conversations to pursue a more integrated and comprehensive approach and understanding.[117]

Ensuring interconnectedness of academe, policy, research, and governance to provide holistic approach/system on food systems.[118]

Adopting the landscape approach, looking beyond the farm, and taking a more holistic approach to sustainability. [119]

Delivering an integrated and holistic approach in curriculum design in agriculture, food systems, and innovation.[120]

It further prescribed the agricultural innovation systems approach to and the best research to development partnership model.[121]

Eight nine percent of the participants agree that innovations systems approach is the best research for development model to be used.[122]

Incorporate a system thinking approach to food systems.[123]

Integrate the systems approach with the end-user being the community member. Critical to engage them to learn about their pain points in order to create solutions (don't assume).[124]

[114] 150:15 p 6 in 253_Apr_29_21_AFDB_Multi

[115] 151:9 p 7 in 261_May_03_21_Carrara_Le More

[116] 152:36 p 8 in 262_May_04_21_ILC_Multi

[117] 153:27 p 10 in 263_May_06_21_CCGA

[118] 157:28 p 6 in 278_May_18_21_Gregorio B

[119] 157:53 p 9 in 278_May_18_21_Gregorio B

[120] 157:68 p 11 in 278_May_18_21_Gregorio B

[121] 159:23 p 7 in 287_May 20_21_Akinbamijo_Y

[122] 159:27 p 7 in 287_May 20_21_Akinbamijo_Y

[123] 163:73 p 10 in 300_May_27_21_Alesso_Pommeret

[124] 163:154 p 19 in 300_May_27_21_Alesso_Pommeret

But we also need to find ways to encourage the farmers to take a whole-of-farm system approach (within the local, regional and global food system) to manage their livestock in a commercially relevant way[125].

This last dialogue aimed to identify mutually beneficial solutions for food systems transformation, promoting a systemic approach to sustainable food systems through closer collaboration between producers and consumers.[126]

An integrated system approach, where we work collectively and leverage all available tools, to advance sustainable development has tremendous potential.[127]

More involvement of medical & health care community.[128]

The discussion was opened by Daniela Ropelato, Director of the Doctoral School of the Sophia University Institute, who asserted the "culture of care" (Laudato Si', 231) as the necessary paradigm for holistic and collective action. Engaging political processes relating to food systems through the lens of care, would allow for the appreciation of the complementarity between men and women in political processes and forge necessary alliances in decision-making. Afterwards, Lola Castro, Regional Director for Southern Africa, World Food Programme (WFP), urged audiences to move beyond the interpretation of women as victims of an unsustainable, unjust and fragile food system, and recognize them as "agents of change" and leaders in the reformulation of systems. She reiterated the need to formally recognize their contributions across all stages of food systems, and enhance their participation in political processes destined to shape them. She stressed the importance of increasing the involvement of women in early prevention and response strategies to food crises, and increasing their representation in leadership positions. [129]

Innovation must come from people coming together, both in an international multi stakeholder setting as well as at the grassroots level. We have to acknowledge the intricacies of each of these issues.[130]

Why are we, as a global society, allowing for the continuous oppression and execution of indigenous communities and cultures? Around the world these communities are denied of a voice- whether that be because of a lack of access to technology, visibility, or because of more violent systems of oppression. In the Amazon and Andes, indigenous communities are disenfranchised and displaced. In many of the regions where human rights are violated, it is the state and private companies denying that are denying these communities of what is inalienable. We must enforce a system of accountability to ensure that people are given the right to their land- allowing for ancestral and nature positive production to flourish. In light of the boycott coming from indigenous and peasant farming, we need to make sure that their message is heard at the upcoming Summit. We need to propose to the UNFSS a

[125] 175:20 p 8 in 333_May_25_21_GMA_Multi

[126] 178:5 p 6 in 336_May_26_21_CI_WFO

[127] 188:12 p 5 in 346_May_31_21_CANEUS_Multi

[128] 198:7 p 8 in 357_Apr 14_21_Harfouche S

[129] 200:7 p 6 in 359_May 17_21_FAO_IFAD

[130] 204:7 p 8 in 363_May_26_21_Mehta_Bautista

simple message: everyone must see their role in food systems transformation, not just multi-national corporations and neoliberal civil society organizations.[131]

It is crucial that everyone, no matter their political or economic clout, can see their role in food systems change because urban communities and consumers hold power in demanding food systems change with their actions. Reciprocity between producers and consumers; land and mouth; rural and urban connection is crucial. We must build networks of relationships. We must move forward in a way that food- good food, is a commons, land is protected, and small farmers are empowered.[132]

Superfoods are being used as a marketing strategy while making products less accessible to indigenous populations. We must implement alternative systems that challenge our capitalist model by consulting local communities and creating resiliency to truly decolonize our plates.[133]

Dr. Esben Larsen, fellow in Food, Forests, and Water Program, World Resources Institute (WRI) proposed; i) a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North, ii) guarantee the Global South real access to technology, and iii) increase opportunities for vocational training in agri-food production to equip workers to optimise the use of available technologies.[134]

Finally, Bishop Paul Tighe, Secretary of the Pontifical Council for Culture urged the adoption of a systemic approach to technology, capable of recognizing its impacts on social and natural ecosystems. Technology, such as artificial intelligence and big data, can help achieve a more nuanced judgement of how the use of technological innovations impact food systems as a whole by constructing data sets that comprise diverse disciplines, wisdoms and local knowledge. The adoption of this approach at global level can provide the necessary framework for local initiatives to thrive and promote an awareness of individual participation and responsibilities in food systems.[135]

Finally, Sr. Helen Alford outlined the role and responsibility of the Church in guiding international debates towards the common good. The universal church must be active in mobilizing its resources to connect COVID-19 recovery plans with the people who need support and enrich global discussions with values that can promote systemic change towards the achievement of the Sustainable Development Goals once and for all. [136]

Need for a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North.[137]

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[131] 204:8 p 8 in 363_May_26_21_Mehta_Bautista

[132] 204:9 p 8 in 363_May_26_21_Mehta_Bautista

[133] 204:25 p 10 in 363_May_26_21_Mehta_Bautista

[134] 205:6 p 6 in 364_May_26_21_DPIHD

[135] 205:9 p 6 in 364_May_26_21_DPIHD

[136] 205:12 p 6 in 364_May_26_21_DPIHD

[137] 205:16 p 9 in 364_May_26_21_DPIHD

Work collaboratively with African universities and other actors in and outside Africa to marshal the needed response to strengthen Africa's food systems and for scaling out best practices. There is need to bridge the disconnect between academia and government and between technocrats and politicians who allocate resources to support food systems enhancement.[138]

Foster global partnerships to develop more sustainable, inclusive, and resilient food systems that consider the needs of smallholder farmers and youth.[139]

Encouraging the building of national and international farm to fork strategies, encompassing areas such as environmental standards to also have a food safety component.[140]

He highlighted the need to bring the voices of vulnerable communities to the center of international political debates, promote circular models of food production and consumption, enhance local and traditional knowledge to ensure better protection of natural resources and reform present-day technological and financial structures to support the transformation of food systems.[141]

The participants understood that "We are all in this together" type problems (such as the pandemic) require strong public institutions at national and supranational levels.[142]

The participants discussed the needs for cross-country research to promote One Health • The participants discussed the needs for a systematic global effort to monitor pathogens emerging from animals.[143]

Decision-making: prioritizing, cooperating, systems thinking.[144]

To build resilience, the focus must be on food systems and not on farming systems. The food system incorporates wider food resources beyond the farm, for example from forests, wetlands, and home gardens – and therefore spreads risk and improves the ability to cope with shocks and stress.[145]

Participants emphasized that systems thinking is required to embrace the Summit's Principle 'Recognizing Complexity'. Systems thinking, as part of comprehensive food systems evaluations, can illuminate how natural, human, social and produced capital linked to food systems are interconnected. Systems thinking requires that game changing solutions are not considered in isolation within their action tracks but that capital impacts and dependencies of solutions are assessed across all action tracks.[146]

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[138] 206:8 p 7 in 365_May_27_21_Ekwamu A

[139] 206:9 p 7 in 365_May_27_21_Ekwamu A

[140] 207:17 p 8 in 366_May_27_21_Cumbers S

[141] 210:2 p 6 in 369_May_31_21_Holy See

[142] 212:6 p 9 in 371_June 01_21_Güngören A

[143] 212:7 p 9 in 371_June 01_21_Güngören A

[144] 215:17 p 12 in 376_June_04_21_IFAD_Multi

[145] 219:21 p 12 in 380_June_08_21_Shakya_Chettri

[146] 220:1 p 6 in 381_June_08_21_UNEP_Multi

The private sector calls for the creation of a measurement matrix that values both positive steps but also targets negative interventions. This will allow different stakeholders to compare each of these diverse aspects and make decisions based on more 'complete' information, not just between businesses, but across the full value chain from farmer to consumer.[147]

Funding international schemes. Innovation helps better manage water, but there is a need to fund innovation also in poorer countries. One of the obstacles to this solution is to find ways to convince wealthier countries to act internationally even in a situation where the emergency could be still hard to grasp within their own national borders.[148]

The regional "Central American" aspect under the integration process, complemented in turn by the actions being developed nationally in each country since we are stronger united as a region • The "public-private partnership," in which the skills and abilities of each country and their productive sectors are coordinated.[149]

It is necessary to broaden the view of agriculture since it has a multidimensional effect on health, nutrition, food security, the environment, and biodiversity and is therefore an important factor in transforming food systems to achieve the 2030 SDGs.[150]

It is important to have a systemic view that integrates the intersection between human, animal, plant, and ecosystem health. Improving the relationship between soil and food quality has an impact on national and international food security. Likewise, agriculture cannot be thought about independently, without considering economic, environmental, geographical, and social issues.[151]

To address the challenges of these issues in education and training, it is extremely important to detect those regions and rural areas that are most vulnerable to climate change and natural disasters. In the case of the Caribbean, it is important to work together with other regions.[152]

World food systems are tools for the fight against hunger and severe malnutrition in the world, and for this reason it is considered that it would be meaningless or unjustified to totally or partially replace food systems, such as livestock-meat, which are widely implemented worldwide and with maximum and proven capacity as a supplier of abundant foods with high nutritional potential and that are safe. Regarding the nutritional point of view, animal source foods are a very rich source, unique in some cases, of several micronutrients (essential) and bioactive compounds and their restriction can lead to health problems without prescribed and constant supplements. There is no sense in trying to substitute, totally or partially, the animal source proteins with alternative proteins such as artificial synthetic ones obtained in the laboratory, whose real food or nutritional potential

[147] 220:8 p 9 in 381_June_08_21_UNEP_Multi

[148] 224:15 p 9 in 385_June_09_21_Lazzaris S

[149] 235:1 p 6 in 276a_May_13_21_CCIE_English

[150] 236:1 p 6 in 277a_May_14_21_IICA_English

[151] 236:3 p 6 in 277a_May_14_21_IICA_English

[152] 236:9 p 6 in 277a_May_14_21_IICA_English

is unknown, and whose ability to contribute to solving the serious problem of hunger and malnutrition in the world is as unknown as it is unlikely.[153]

Several speakers also stressed the importance of the cultural and "human" dimension of food in the region, with the Mediterranean diet as an opportunity to build healthier and more sustainable food systems. In this context, there was a call to switch to sustainable consumption and production models, noting that often consumption and production are still treated separately by policies and stakeholders, and recognizing that only a systemic approach would allow moving towards sustainable food systems.[154]

By taking into account the interconnected social, environmental, economic and nutritional and health-related challenges present in the Mediterranean, it was stressed that it is crucial to adopt an integrated approach, people-centered and specific to the Mediterranean context, to provide a better understanding of the multidimensionality of the sustainability of food systems, by linking the sustainable management of natural resources with the sustainable food consumption and production (SCP). In this context, the Mediterranean Diet could act as a sustainable lever to bridge the gap between consumption and food production in the region. [155]

The role of consumers in also driving responsible consumption was emphasised to increase resilience. It is important to take a holistic approach when addressing resilience issues, considering how global dynamics play out at a local scale. Every ingredient needs to become resilient to have a resilient supply chain. A local solution might not work for a global system.[156]

Countries could consider establishing "Food Ministries", rather than having separate ministries for agriculture and fisheries, to ensure holistic food policies. This can also be established through cross-governmental task forces.[157]

To close the opening forum, convenors reiterated the need to restructure food systems towards delivering healthier diets, economies, and environment through a holistic food-land-water approach and repurposing public support for agriculture to prioritize nutrition, deliver public goods like research and extension, and reduce market distortions and inefficiencies to ensure meaningful and equitable participation in the agri-food system. In this discussion group, participants agreed that there is a general lack of communication about sustainability, as well as sustainable standards. This group strongly felt that a holistic approach is needed, which includes all stakeholders.[158]

Consumers need to be involved in the paradigm shift for more sustainable practices, as they have the biggest effect on food production through demand - however, there is a lack

[153] 237:11 p 11 in 284a_May_19_21_INTERPORC_English

[154] 244:15 p 8 in 480_June_21_21_CIHEAM_Multi

[155] 244:22 p 9 in 480_June_21_21_CIHEAM_Multi

[156] 245:26 p 11 in 481_June_23_21_Global Counsel

[157] 251:14 p 7 in 487_June_29_21_Selwyn_Multi\

[158] 254:12 p 6 in 490_June_22_21_Yasmi Y

of education on our food system and on which practices are actually sustainable or unsustainable.[159]

An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the challenges holistically, avoiding trading off one aspect against another b. Design/test for - and commit to - scaling up, at speed c. Cater to more different individuals and communities and unmet needs d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving and supporting mindset and cultural shifts e. Decentralise access to good food f. Empower people through food skills and knowledge.[160]

Interconnected considerations for approaches to plant-based innovation to help catalyse a just transition to better diets. To be more transformative, that innovation needs to: Address the challenges holistically, avoiding trading off one aspect against another (eg human health vs the environment) or ignoring some issues altogether (eg living wages for food workers).[161]

There is a shift happening within organisations from dealing with the emergency response, to a more holistic approach which aims to consider the drivers and looking on an individual basis at how to bring people into a state of food security.[162]

Apply a systems-based approach to support self-understanding of challenges, needs, and solutions[163]

A food system approach does not just happen. For scalability to happen analysis is needed in order to match solutions with the most urgent needs. Change makers need to be identified, supported and connected.[164]

Regenerative agriculture is a holistic approach to farming which takes into account the biophysical environment of the soil, but also the broader efficiency of land use[165]

The importance of taking a holistic system view is at the heart of the debate, which encompasses environmental, social and economic indicators, and potentially not disparate indicator, we need to think of it more broadly across the food system as well.[166]

In order to make holistic and systemic changes we need to agree on a more holistic vision for nutrition science and food system transformation. We need to identify the people who have agency to come in and endorse definitions.[167]

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[159] 256:19 p 9 in 492_June_23_21_Liu JA

[160] 259:3 p 6 in 495_June_23_21_Forum for the Future

[161] 259:10 p 8 in 495_June_23_21_Forum for the Future

[162] 260:5 p 6 in 496_June_23_21_Tradewell C

[163] 263:16 p 6 in 499_June_25_21_GANSF

[164] 263:34 p 8 in 499_June_25_21_GANSF

[165] 273:8 p 6 in 509_June_30_21_FFA_Nestlé

[166] 273:76 p 12 in 509_June_30_21_FFA_Nestlé

[167] 280:43 p 9 in 516_July-01_21_Anastasiou K

Scaled policies and good practices can crystalize solutions to ensure needed impacts at territorial levels and bring everyone in the system together. These can be designed into context-specific projects and programs but also provide cross-cutting solutions relevant in several contexts. While locals build good practices, continued effort is needed for flexible, replicable models and knowledge-sharing networks.[168]

Rebuild local knowledge systems to have a systems approach. We need knowledge-based systems rather than science-based solutions with academia as an active partner to co-create and share knowledge within sectors and across similar territories.[169]

Municipalities and local governments have a series of tools to support the re-territorialization of food systems, such as public procurement (e.g. for school meals), zoning (eg. for public markets and community gardens/kitchens) or strategies to restore nature and culture. But the challenge is to integrate top-down and bottom-up approaches. The public sector can regain a role through the participatory construction and implementation of local food policies shifting from sectoral approaches to integrate all dimensions of territorial systems.[170]

Food Systems are complex; we need more complex approaches that recognize intersectoral linkages for the development of risk assessment systems for more effective response. Comprehensive policy responses must consider environmental, social protection, health and food security factors in a contextual, evidence-informed way. The precarity of the informal sector has deepened and addressing this will be key to fostering more resilient food systems.[171]

Food literacy needs to happen both at school and at home. Drawing parallels between Africa and Ireland, sometimes even when children are educated at school, they go home and all the effort is lost as the parents either do not understand or cannot afford to eat more nutritious food. We have to take a holistic approach looking at the whole picture.[172]

We call upon the UNFSS to embrace the idea and practice of Farmer Research Networks (FRNs), where adaptive learning, diverse evidence such as farmer's traditional and Indigenous knowledge, and the recognition that holistic understanding of food systems impacts are all essential. This should also include well-planned participatory methodologies of disseminating research findings coming from undertaking research based on community needs.[173]

Ensure integrated, participatory, rights-based approaches to governance and policymaking at all levels to address the structural inequities and power imbalances in food systems. Build processes and policy platforms on democratic principles, transparent

[168] 299:26 p 8 in 535_July_08_UNESCO Chair on Food

[169] 299:44 p 9 in 535_July_08_UNESCO Chair on Food

[170] 299:45 p 9 in 535_July_08_UNESCO Chair on Food

[171] 302:7 p 7 in 538_July_09_21_IDS_Multi

[172] 308:23 p 8 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[173] 309:17 p 7 in 545_July_13_21_Mbenya R

deliberations, shared power, and inclusive participation to ensure that policies are driven not only by evidence but also by ethics and the broader public interest.[174]

The dominant framing of dietary guidelines is on personal responsibility, leaving food choices in the hands of individuals. However, dietary habits are influenced by multiple factors from age and gender to education, income and health status, food environments, culture and nutritional and cooking knowledge. There must be a reframing to recognise that policy and business bear key responsibility for system transformation rather than the individual 'consumer'. This means: – Dietary guidelines must be reflected throughout food and nutrition policy at all levels of government. Healthy and nutritious meals should be showcased in settings such as educational and other public institutions, and promoted across the private sector, e.g. in workplaces and across food service outlets (noted that, in Brazil, many restaurants offer plant-predominant home-style buffet meals sold by weight that are healthy, convenient and affordable). Official public messaging must be consistent, so that dietary guidelines are the key reference document and not contradicted by other instruments (policy coherence). Educational curricula must incorporate the evidence and recommendations set by dietary guidelines. This requires delivery by appropriately qualified staff. Media and social media have a key role and responsibility to promote healthy and sustainable diets. Popular TV series such as Masterchef could be encouraged to showcase healthy plant-based and/or plant-rich dishes.[175]

The urgency and complexity of food systems transformation underscores the need to consider multiple perspectives and pathways.[176]

Reducing food loss and waste in food systems requires systematic thinking and approaches, with additional policy attention to developing effective market systems, especially for perishables. The market access could be improved by supporting the formation through farmer groups, cooperatives, associations and link them to markets, encourage contractual farming and long-term contractual agreements between growers and processors. Improve infrastructure for roads, energy and markets especially in rural areas where most of the production occurs, is critical in facilitating the transformation of local food systems.[177]

Reducing FLW in food systems with systematic approaches from pre-harvest farm-level losses to post-harvest losses, where additional policy concerns are given to vegetables, fruits and the perishables wastes which accounting for 20-30% of total FLW, not merely the grain losses.[178]

Whole value chain approach for FLW reduction and increase of grain production while aiming at carbon neutrality approach. Develop anti-food loss regulations and rules to

[174] 309:21 p 7 in 545_July_13_21_Mbenya R

[175] 312:20 p 9 in 548_July_14_21_Genoni A

[176] 313:36 p 11 in 549_July_14_21_Meah N

[177] 315:5 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[178] 315:17 p 8 in 551_July_15_21_FAO_ESCAP_Multi

cultivate consciousness of saving food and supervise the implementation of laws from the government level.[179]

For many farmers, particularly smallholders, lacking financial means to implement food loss-reducing investments such as better storage solutions is a major impediment. One of the key actions needed in the food system to reduce food loss is therefore to financial innovation and incentive mechanisms. Since 1994, the Agriculture Development Bank of China (ADBC) was set up as one of China's Policy Banks with a set mandate to contribute to agricultural development and poverty alleviation. ADBC has introduced a loan system that covers every segment of the food supply chain, which includes a series of credit products to serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc. All these advancements have the potential to reduce food waste through making processes more efficient and streamlined. Furthermore, ADBC implement preferential credit policies to support and further incentivize reduction of grain waste and losses.[180]

Participants emphasized cooperation throughout the Dialogue. There is an inherent interdependency in the food system, and each player impacts others' capacities to act. There is a need for more coalitions and collaborations not only between food businesses but across the entire food and agriculture system. Together, these individual players can have a much larger positive impact.[181]

The Dialogue also identified the challenge of communicating the interdependence of all food system players in a way that is easy to understand. At the consumer level, sustainable food businesses need to make it convenient and easy for eaters to think about eating not only for human health but planetary health. New labels, for example, can frame carbon footprints similar to calories on food packaging. Companies must find simple ways to show that their products are part of many solutions to a large, interconnected problem.[182]

Participants highlighted that sustainable food businesses have an opportunity to challenge the status quo. Multi-stakeholder business models that value the planet, community, workers, eaters, and natural resources can help move the focus from a singular devotion to profit. Large companies have the scale, resources, and ability to influence change that smaller businesses don't have. But as these smaller businesses demonstrate financial and cultural success and find ways to engage with larger multi-national food companies, they can influence how large companies operate, helping to create greater impact.[183]

Some of the ideas in transforming the society beyond feeding the society is as follows: 1. Developing community-based agriculture that leverage on local biodiversity. 2. Developing opportunities for indigenous communities, including on being part of the organic food production. 3. Building an ecosystem with incentives to foster multi-stakeholder effort. 4. Urban farming as a solution for the urban poor to obtain some

[179] 315:18 p 8 in 551_July_15_21_FAO_ESCAP_Multi

[180] 315:27 p 10 in 551_July_15_21_FAO_ESCAP_Multi

[181] 316:7 p 6 in 553_July_15_21_Food Tank_Oatly

[182] 316:15 p 7 in 553_July_15_21_Food Tank_Oatly

[183] 316:16 p 8 in 553_July_15_21_Food Tank_Oatly

nutritious food items, requiring policy action and civil society movement. 5. Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.[184]

Evaluation tools and frameworks have to be adapted to address and to analyze the complexity of the food systems and make a difference. This is already happening and participants shared two examples moving in this direction: i) The CGIAR is developing its new research programme cycle, in which they revised methods used, approaches, areas to analyze, among others. This revision led to enhancing the way in which evaluations should be carried out, and what they should prioritize. ii) The Nourish for flourish diagnostic evaluation/needs assessment, provides an example of a diagnostic evaluation to determine food security needs, carried out at the provincial level in Cape Town in partnership with Academia and other stakeholders, leading to a multilevel stakeholder discussion, which enhanced the engagement among stakeholders towards food systems key areas of improvement. Outcomes were taken by the provincial government to develop a strategy for improving food systems. This exercise, which can be seen as a process use evaluation, helped create community and government led groups to discuss and address food security issues.[185]

Regarding specific tools and methods that evaluators can use to address the complexities of food systems and their transformation, Theories of Change were mentioned, and in particular new nested approaches to Theories of Change design, which are important for bringing stakeholders together. In the toolbox of evaluators, there should also be a place for Stakeholder mapping, and in order to deepen and expand on specific stakeholders input and influence, influence mapping in decision-making.[186]

It is important to advocate for strengthening the evaluation culture and to balance accountability and learning, aiming for evaluation to become everyone's business. Evaluators come from different educational and professional backgrounds, and addressing systems, complexity, and uncertainty may require a mindset shift, as we are not evaluating a linear process. Linked to this is the choice of appropriate methods, making a case for non-traditional and creative approaches to be encouraged: this may be difficult sometimes for evaluators to select and promote, though we need to move away from the notion of a gold standard to appreciating participatory, developmental, adaptive approaches. - "in complex systems, it's really difficult to be an independent evaluator with a fixed set of questions and say this is right and this is wrong – participatory approaches need to be embedded in the evaluation" – said a participant The context for applying "new" methods does not always exists and we need to have key elements on leadership, resources, donors' flexibility and organizational culture as mentioned earlier.[187]

In addition, while applying new tools and methods more suitable to addressing systems transformation and complexities, it will be important not to lose track of quality. All of this

[184] 319:10 p 7 in 556_July_15_21_Von Goh_GenTan

[185] 320:8 p 7 in 557_July_15_21_EvalForward_FSRD

[186] 320:11 p 8 in 557_July_15_21_EvalForward_FSRD

[187] 320:14 p 9 in 557_July_15_21_EvalForward_FSRD

calls for having capacity development for all actors to understand and for evaluators to be confident in proposing methods and approaches.[188]

However, one solution to this issue maybe to persuade State Governments to do more to dissuade their populations and businesses from putting everything into an economic context and focusing much more on the human and environmental impacts that this current model is having. It was suggested by participants that we need to shift from GDP focussed development to quality of life and sustainable development.[189]

The food and land use system offers a critical opportunity to achieve multiple goals, or potential for a win-win-win scenario: alongside climate and emissions reduction outcomes, nature-based solutions offer the ability to achieve broader environmental goals (including healthy soils, sustainable water use, protection and restoration of biodiversity) as well as supporting regional livelihoods and healthy diets.[190]

The need for coordinated action across stakeholders and at different scales to achieve multiple goals, and to realise win win-win scenarios, where outcomes across climate and emissions reduction are achieved alongside nature and broader environmental goals, as well as supporting regional livelihoods and healthy diets.[191]

There are many powerful tools available to reduce methane emissions from livestock such as feed additives, manure management, and animal efficiency. While reducing enteric methane emissions is promising it is not the only strategy. In fact, reaching 50% methane reduction will be an uphill battle with feed additives as our only weapon. There is no silver bullet for farmers. We must look at the system as a whole and make reductions along the supply chain at every chance we have. If we zoom out and look at the whole system we can begin to identify inefficiencies. We then must communicate these efficiencies to the whole supply chain.[192]

Establish an integrated, multi-sectoral strategic approach to nutrition, specifically inclusion of hygiene awareness.[193]

Articulation of an integrated, multi-sectoral nutrition strategy.[194]

Complexity of the issue/need to integrate complementary programs to school meals, especially with governance structures such as CONSEA or the Food Procurement Program.[195]

[188] 320:15 p 9 in 557_July_15_21_EvalForward_FSRD

[189] 323:32 p 11 in 560_July 19_21_Arbuthnott_Multi

[190] 326:5 p 6 in 563_July_20_21_ClimateWorksAustralia

[191] 326:13 p 8 in 563_July_20_21_ClimateWorksAustralia

[192] 328:7 p 9 in 565_July_20_21_Mitloehner_Kebreab

[193] 330:69 p 13 in 568_July_21_21_Cooper-Liverpool M

[194] 330:78 p 13 in 568_July_21_21_Cooper-Liverpool M

[195] 339:35 p 9 in 393a_June_01_21_Food of Tomorrow_Eng

The availability of healthy and nutritious food for all requires actions at the levels of supply, operation-transportation/conditioning/distribution, and demand from individuals and States that purchase food for vulnerable populations).[196]

Training of rural extension system operators on the practices necessary to change from the current production systems to the proposed ones, and thus have a favorable impact on climate change factors. Importance of co-innovation due to its contribution within the territory, but which must necessarily be accompanied by development policies that help to lift the limitations that are being found in the systems for their redesign and progress towards more sustainable systems. Think about innovation in other dimensions beyond productive practices, generating more proximity and involvement of other actors: Create an extension department in agroecology for example in FAGRO or in other careers such as nutrition, psychology, CCSS, innovation in machinery, industrial design, e-commerce, etc.[197]

Food sovereignty was defined as a principle of struggle which will lead to the food security nations of the world aspire to. The strategies that will mark this route will be adherence to a comprehensive and mainstream agrarian reform and agroecology as a guarantee of healthy, diversified daily production. This is what can impact all stages of the agri-food chains.[198]

Make joint efforts, from the Government, companies, agro-industries and other stakeholders, so that it can be produced in a sustainable way and with the nutritional elements required by the diet of the Dominican population, contemplating adequate planning of what is produced, imported and exported.[199]

Nutrition requires a multi-layered approach; it is necessary to promote the consumption of foods with specific socio-environmental, cultural and nutritional characteristics. Intersectoral and interministerial partnerships are required in order to ensure Food and Nutrition Security.[200]

A plan among local governments for promoting access to food through holistic actions is necessary.[201]

For successful engagement and favourable political economy framework, we need:

A change from the current top-down approach to a bottom-up approach is needed. Sustained civic education on food policies, regulatory framework, and food systems interventions in general for more meaningful participation and involvement of everyone. Strengthening of the regulatory framework guiding various aspects of food systems.[202]

[196] 340:2 p 7 in 406a_June_10_21_COPROFAM_CLOC_Eng

[197] 340:28 p 12 in 406a_June_10_21_COPROFAM_CLOC_Eng

[198] 345:3 p 6 in 419a_June_08_21_CLOC_Eng

[199] 350:20 p 8 in 424a_June_28_21_PROLIDER_Eng

[200] 351:1 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

[201] 351:3 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

[202] P 10 in 433_May_25_21_Welthungerhilfe_Multi

The inefficiencies of agricultural production can be solved through the integration and correct use of new and existing technologies, such as drones, NBTs, and precision agriculture, which can be measured by indicators: carbon footprint, efficiency in the use of water, nitrogen, phosphorus, potassium. This effort must be valued by the value chain that goes from the producer, the industry and the consumer, so that it can be consolidated. An integrated, articulated agriculture interconnected in sustainability will be a type of production that can evolve towards continuous improvement with measurable indicators. An integrated system also allows the triple helix, academy-industry-government, to provide solutions on a common goal, which is sustainable production. This requires a validator that allows integrating the system and a value proposition.[203]

Underpinning all of this is that is the need for governments to create a supportive framework for SMEs in a sector where producers (i.e., smallholder farmers) tended to be in the informal economy and therefore invisible and unaccounted for. Governments have to also create legal frameworks that make it easier for them to operate, transact, and access credit. There are peculiar legacy issues that could make it hard for SMEs to operate, like inability to collateralize leases on land. Governments should also make it easy for them to get themselves heard. All of this is fundamental to retain people in rural areas and reverse urban-rural migration that is depleting the sector.[204]

Reward Positive Outcomes. Our food systems are currently designed to reward the mass production of cheap calories. Different incentives are needed for markets to produce food that is more sustainable, nourishing and equitable. From impact investing to carbon credits, from product certification to sugar taxes, there are diverse mechanisms to reward positive outcomes and disincentivise negative ones. These must be designed and scaled in ways that work for SMEs, rather than adding complexity and cost.[205]

The importance of revaluing native diets, forgotten species, and underutilized crops (such as amaranth and quinoa) is recognized to promote the consumption of healthy foods and good eating habits. For the above, education and

communication play a very important role in re-teaching people to consume and produce in a healthy way, change the cultural perception of overvaluing foreign products, fried foods, highly processed products and rather promoting crops. healthy by publicizing their history, nutrition and presenting them with attractive packaging. It is important to consider that the value that the consumer places on food is based on perceptions. In this sense, it is important to support the producer of healthy products so that he can have brand registrations, good marketing campaigns and intellectual property for small producers. Another relevant aspect is the role of the State to promote the design and implementation of public policies that promote the consumption of healthy and fresh food. Likewise, the government must support SMEs in matters of human rights, environmental sustainability and provide tax incentives. It is important to manage knowledge and strengthen skills from cultural aspects, that is, to promote knowledge and information on indigenous products. It

[203] P7 in 301_May_27_21_CropLife Latin America

[204] P6 in 308_June_09_21_FAO_Pinduoduo_Multi

[205] P5 in 309_June_10_21_ICC_EIT_Multi

is important that consumers know what they are consuming. Return the focus to the entire supply chain, not just the primary production stages, and provide training.[206]

The Zero Hunger Pathways Project (ZHPP) is a collaboration that applies a systems approach to end hunger in the United States. The collaborative aims to chart equitable, resilient, and sustainable pathways to profoundly improve availability, accessibility, utilization and stability of healthy food for all.[207]

These issues include poverty, systemic racism, income levels, gender disparities, age gaps, and many other

societal factors. By addressing these and increasing access to resources, through a holistic and multidimensional approach to equity that takes into consideration people and their vulnerabilities, food insecurity is likely to decline.

Increasing multidimensional efforts at the community level will ensure that local buy-in is supported. Community efforts can include grassroots advocacy, community gardens, local health centers and locations where people are able to safely gather and learn about food systems.[208]

For example, it was learned during the national and district level discussions that even though some actors (e.g., nutrition) promote the consumption of some indigenous vegetables for improved nutrition (e.g., amaranth), the availability of such vegetables was limited to seasons. Unfortunately, agricultural research and extension activities pay minimal attention to promoting indigenous vegetables. Similarly, the environment group added that there is a need to promote the consumption of insects. However, they also observed that this required different sectors to be working hand in hand to make sure that the insects are available in all seasons. In appreciation of the complexity of the food systems, especially with regards to the multiplicity of the actors in the system, the participants to national dialogue noted the challenges to reach consensus on the foods to prioritize for consumption and production or investments. The challenges are due to differences in the interests and objectives to pursue in the food system[209]

Indigenous Peoples' practices and systems of knowledge are needed to restore healthy, balanced populations of native and non-native species in regions. To support the exchange of knowledge and practice with the native plant species, regulations are necessary to protect the intellectual property rights of Indigenous Peoples and protection measures and consultations/consent are needed to safeguard against further issues with invasive plant and animal species. We need to start supporting agroecological systems and Indigenous Peoples' food systems with the same way we support industrial production systems through comparable allocation of resources, extension services, trainings, research, and land designation. This would include increased localized production through market incentives for local economies of scale, incentives to promote agrobiodiversity working with local

[206] P6 in 312_June_15_21_FAO_ICC_ Multi

[207] P5 in 355_June_14_21_Daher_Multi

[208] P6 in 355_June_14_21_Daher_Multi

[209] P6 in 388_May_03_21_Kambewa_D

chefs, restaurants and markets, and increased support of conservation and biocentric production.[210]

Labour shortage, High rate of wages, Overuse of pesticides, lack of awareness on healthy food among farmers and

consumer level, Not available bio safety technology in remote area (Cox's Bazar). Bio safety technology is business viable as cost is high, Due to the small size of the land, smallholders don't get benefit from agricultural machinery.

Safe and nutritious food for all is a challenge in Bangladesh considering context, production system, awareness, poverty and financial capability, Farmers' representatives opined that they managed daily full 03 meals for their household members, but they have not enough aware about safe and nutritious food, a significant smallholder struggle to manage daily full 03 meals in between two harvests.[211]

Go beyond productivity and look at value addition or commercialization. Marketing strategies. Increase marketing and awareness creation by COCOBOD. Develop more markets beyond the local and traditional markets

Go beyond bulk cocoa production to specialty cocoa production. Accompanying policy implementation framework to ensure efficiency of the policy.[212]

Need to change the agrifood system. Actions to be taken at several levels. Food standards for all, appropriate equipment, training, technical support for SMEs, access to finance, land, creation of cooperatives. Concern about producing and distributing quality products, wastewater, packaging, worker hygiene, storage, etc. At all links in the value chains. SMEs must remain competitive and therefore need solutions and support.[213]

In contrast to dominant society, for Inuit and Sámi food is not just about calories or nutrients. It is a core part of our culture, identity, and pride. Our food systems provide the foundation of our existence and our holistic world view. Our distinctive and profound relationship with our lands, territories, waters and coastal seas and other resources includes the understanding that we are an integral part of the environment. As such, we must uphold our responsibilities to future generations in this regard.[214]

The dialogue reflected on how COVID-19 has exposed the fragility of our food systems as well as the interrelated challenges of public health, food security and labour. The root of many of the world's most pressing threats to human, animal, and planetary health have been unhealthy, inequitable and unsustainable food systems. "Building back better", reducing the risk of future pandemics, and building long-term resilience requires bold leadership and commitment to both global health security and food systems transformation based on an integrated approach, addressing multiple challenges in a holistic way. Now is

[210] P6 in 390_May_28_21_UNPFII_FAO

[211] P7 in 391_May_31_21_FAO_Multi

[212] P7 in 394_June_01_21_Egyir I

[213] P7 in 395_June_01_21_FAO_ICC_Multi

[214] P7 in 396_June_01_21_Arttijeff_Multi

the time to address the root causes of food systems failures and, together, strengthen the demands for transformation with health at the centre.[215]

Further, the Dialogue emphasized the importance of strengthening appreciation that healthy or unhealthy diets are not a personal choice but rather a consequence of the food environment that needs to be shaped and nurtured with collective and coherent decisions around these policy areas, and how the pandemic has also shown the need to invest more in sustainable food systems and environments. The environment must enable and facilitate healthy choices and it must be coherent also in the sense that marking restrictions, clear information on packaging and taxes of unhealthy products should be jointly promoted, while policies in areas such as trade, urban design and development and education should be complementary and coherent and not undermine the development of sound public health policy.[216]

On social entitlement front too, fishers are disadvantaged. Existing social schemes, various pensions and insurance schemes fall short to the need. This is simply because these schemes are not developed keeping fishers' issues/challenges in mind majority of fisherwomen are in fish vending with no hygienic and secured workplace at markets. They suffer from lack of transportation facilities (often local regular transport refuse to take them due to smell of fish and dipping water etc.), inadequate knowledge of market prices. Encroachment of big companies in the coast for industry, tourism and dumping of effluent etc. further impoverished poor fishers and they are losing their grounds fast. Increased price of fuel and other essential items have added to their misery. Last but not the least lack of coordination among different government departments (lack of apt policies) has slowed down the pace of serving poor fishers through existing schemes.[217]

"I do not believe in fast change". The only way to get change is to educate the whole society. Kids and teenagers are our future, so we have to ensure projects keep getting carried on in 20 or 30 years. Education is key. We need to teach kids how the food systems work, and how important the whole cycle is. We have to be conscious about what we eat.[218]

Need to be conscious of complexities in how individuals interact with food systems and deal with food insecurity- there is heterogeneity of vulnerability, and we need to look at it at different levels (community, household, and individual). Need to provide farmers with education on managing risk where it be weather, conflict, currency fluctuations, etc.- to make systems more resilient there needs to be more understanding of what the risks are and their impacts in the short, medium, and long term. Real change needs happen at the local level especially in conflict areas- component of basic start up support as well as education. Need to move from basic caloric intake needed to live to providing full/balanced nutrition and diverse diets with fruits and vegetables. Protracted crisis and conflict change food systems fundamentally, but we treat them as temporary; development is possible in areas experiencing protracted conflict, but local leadership is critical. Should adapt weather-related risk management systems to conflict and have financial

[215] P6 in 397_June_04_21_WHO_Multi

[216] P5 in 398_June_07_21_NCD Alliance

[217] P5 in 399_June_9_21_AFA_Multi

[218] P 13 in 400_June_09_21_Viera_Pollmeier

services that can work where there is a lot of uncertainty. Need early warning systems for other types of uncertainty than famine and some weather challenges.[219]

The pandemic has shown us that diseases which are nutrition related have led to the biggest number of hospitalizations and deaths. There is a correlation between diseases such as hypertension, diabetes and nutrition Food shouldn't be treated as a commodity but rather a basic human right. Unhealthy food options and processed food is cheaper for the consumer due to subsidies on foods like wheat, corn and soy. There is a need to subsidize healthy foods such as fruits, vegetables, and nuts. This would result in lowering the price of healthy food for the consumer. Farmers are the soul and heart of healthy food systems, and we must ensure that governments support them and ensure their survival and sustainability for the generations to come.[220]

The On Air Dialogues are one of many simple ways to engage small-scale farmers and other rural people in discussions about the systems that directly affect them. When given the chance, farmers are keen to contribute. As nations, organizations, and individuals, we must commit to creating inclusive, accessible channels for farmers to join the conversation—and be heard—no matter what work they do, where they live, or what language they speak.[221]

Building and investing in women's collective agency- Agency for poor rural women involves challenging multiple power hierarchies in the household, community, state policies and labour and product markets. Changing power relations and social norms requires collective action. Alongside traditional forms of sharing labour and resources, new models for exercising collective agency are emerging –such as self-help groups, cooperatives, and producer organisations. However, given the diversity of women's contexts, this process needs to be intentional and requires investment. Legal and policy frameworks that enable collective agency need to be operationalised through social mobilisation, dialogue and training.[222]

Links can be drawn between healthy diets and the quality of food. Biocontrol needs to sit within the context of a food company's sustainable nutrition strategy and healthy diets. Biocontrol is a long way from the consumer – so finding ways of linking biocontrol to consumer aspirations is essential to get consumer pull through.[223]

Challenges in addressing climate and disaster risks along the agricultural supply and value chain to build resilient food systems. Implement policy changes towards more inclusive and participatory actions. Build capacity of vulnerable communities by increasing the awareness of climate and disaster risks on food systems. Ensure better coordination between the government and the ground level individuals and all stakeholders in general. Build capacity on financial literacy of farmers and agricultural communities. Establish proper early warning systems and entrust its sustainability and

[219] P 11 in 465_June_16_21_Congressional Hunger

[220] P7 in 464_June_10_21_IFAD_UNFSS_Multi

[221] P 7 in 463_June_10_21_FRI_IFAD_Multi

[222] P 5 in 462_June_10_21_NISD_RySS_Multi

[223] P 9 in 461_June_09_21_IBMA_FFF

ownership to the community. Conduct comprehensive research and develop tools to broaden research prospects. Share knowledge and technology on innovations and global best practices including regenerative farming, mangrove restoration and agro-forestry that indirectly benefit agriculture; on alternative methodologies including hydroponics, micro irrigation etc that are not as water intensive and indigenous seed varieties. Conduct evidence-based research and share with all stakeholders. Encourage micro insurance and crop insurance among farming communities.[224]

Ensuring food security for the urban poor requires to adopt a more holistic approach that looks at community and regional level empowerment. The group reiterated that the urban poor were significantly more vulnerable to the food management issues such as food adulteration, access to nutritious food and occupational hazards related to food handling. The urban poor lack awareness about nutrition and food value. Besides, living expenses are generally higher in urban areas, including prices of foods. Food adulteration is harming the health of city-dwellers irrespective of their income level. However, the poor suffer more, as they can barely afford the expenses of treatments required to recover from diseases caused by intake of adulterated foods. Food adulteration is also causing many chronic diseases, treatment costs of which are making an entire family destitute.[225]

Education on healthy and sustainable food is important and should be integrated into sustainable, healthy food procurement. It can be observed a lack of integration between procurement and education policy and departments. As outlined by the legal expert, it can also be a way to circumvent the difficulty to purchase local food by using a healthy food education strategy to ensure e.g., that school trips to (local) production sites are offered.[226]

The future transformation of food systems in Africa requires innovative research, education, and training approaches that are rooted in local contexts. Universities in Africa need to adapt and create knowledge to strengthen and transform the food systems through strengthening links and improving production, processing, storage, transport, food quality, and businesses that link them and consumers. Universities must play a crucial and more effective role in anticipating the skill sets and knowledge demanded by rapidly changing food systems, and provide these skills and information in ways that trickle through the entire economy. In turn, the universities need to translate knowledge created into innovations that transform and develop potential to drive their own and Africa's food system transformation. Now is the time to reassess and redesign the African universities and assist them to build their capacity to deliver Africa's food system transformation.[227]

Transforming Africa's food systems to promote well-being across all sectors from production to consumption is an important imperative that needs to be undertaken. In order to realise this, there is need to: (i) harness Africa's strengths including vibrant cultures, agro and natural biodiversity, youth, growing markets, cooperative, society-driven norms; (ii) harness technological advances to overcome lack of relevant technologies and the lack of economies of size, (iii) build capacity and work together with

[224] P8 in 460_June_03_21_Ekanayake S

[225] P11 in 459_June_01_21_Rashid Md J

[226] P8 in 458_May_31_21_Madsen BB

[227] P6 in 457_May_20_21_Ekwamu_A

human capital development for research and innovation being central focus for sustained growth; (iv) exploit the technological advances to aggregate outputs, improve market linkages and make the information rapidly available at scale.[228]

*Below are outcome from the dialogue and action we recommend: * Improve farm to market roads* Link farmers to buyers *Subsides farming * Stop using chemicals* Review past policies on agriculture and update farmers list* Create more awareness on women's land right* Support and involvement of different gov ministries. * Value addition *Plant what you eat* Establish cooperatives*Build storage facilities *Digitalize farming *Monitor farmers for compliance*[229]

Growing local food is one of the best ways to increase nutrition security, reduce carbon footprint, build prosperity and create economic conditions for community. Integrating the Food Summit Dialogues tracks will make a difference in rebuilding neighborhoods with a sense of belonging and social connections[230]

The first prominent issue the panel identified was the fragmentation and fracture of the sector, investors, there is a need for a greater understanding of different institutions and opportunities. The second major issue that was discussed in the panel was it is important to not assume that investment opportunities and finance are connected or lead to one another. These investment opportunities need to be designed, prepared for and tended to. Another issue is private capital is moving away from this kind of investment, which is a big problem as we continue to look to invest in these solutions and put food systems at the center of the solutions set for many of the issues we are facing. Many funders focus almost exclusively on short-term horizons, and there is a need to focus on long-term horizons. Another prominent problem identified was risk, and the multiple dimensions of risk. The last issue identified was power differentials, there is a need to understand that they are very prominent within the financing world in particular. Power differentials are present in terms of who has a seat at the table, who is a part of the decision-making process, and solutions need to address how to balance representation at said table.[231]

Conversations about food systems need to be held at a global level because it is a matter of humanity and sustainability, and it is vital that these conversations include different perspectives. To be more resilient and 'build back better', we need to shift ideals to focus on sustainability, and how to build a sustainable planet. The problem is not just finances; but preparing communities. Finance and public policy must be combined with action, science and evidence. Food issues can be connected to free trade agreements, and it is vital to be able to balance international commitments with national needs.[232]

Food is a public good and it is essential. This point must override every conversation around the UN FSS and food systems transformation. Equity and inclusion are core principles for transformation. Women and Indigenous peoples are essential to sustainable

[228] P 6 in 456_May_17_21_Ekwamu_A

[229] P7 in 454_May_12_21_Dunor-Varney_Multi

[230] P5 in 453_May_10_21_Kerr_Divine

[231] P7 in 452_Apr_27_21_IFAD_Multi

[232] P6 in 451_Apr_06_21_IFAD_Multi

food production and biodiversity preservation; however, land tenure systems make both groups particularly vulnerable. Not only do we need to recognize those who have no choice or "plate" at the table, we need to co-create solutions with them. A focus on social contract and moving beyond the economic system is necessary to think about food systems from a new angle, with priorities beyond profit and short-term goals.[233]

Wild foods and biodiversity. The sustainable use and harvest of wild foods and other natural resources supports biodiversity. Rich biodiversity in turn supports forests and other life systems. Wild foods and agrobiodiversity are important resources that contribute to systems resilient to climate and market shocks. Communities that are strong and have sustainable practices on natural resources governance and management have areas where biodiversity thrives and is kept intact. However, threats to biodiversity endanger a food secure future.[234]

There is a lot of knowledge being held in different jurisdictions and communities. It is important to increase connections between top-down and bottom-up approaches - between universities/research bodies, governments, and communities to allow for the proper transfer of knowledge and learning from one another. There needs to be collaboration between researchers and other stakeholders and increased funding to allow the research results to be implemented on the ground. Creating strategic alliances and networks will be critical to bridge the gap between different actors and research bodies involved in food systems and connecting producers to consumers. This is necessary for better integration of research and food systems transformation.[235]

Communicating information has never been more difficult. There was frustration around false or incomplete facts or facts that are not scientifically proven creating an increasingly polarized world. There is a diversity of perspectives that become increasingly more dangerous through factors such as filter bubbles and echo chambers, where individuals encounter only information and opinions that conform to and reinforce their own beliefs, as well as oversimplification driven by social media, hysteria, hyper-connectivity, and large distances (in both geographic distance and use of digital technology) between food producers and consumers. Oversimplification is especially harmful as it is easily shareable on social media, makes logical sense, and breaks down complex points into one that is very simple to understand, removing any nuance. In this way, information consumers are not receiving complete information and will in turn not make optimal decisions, which harms food systems even further.[236]

At the same time, it was discussed that influential stakeholders are not explaining to consumers what is happening in agriculture, from the issues such as monocultures to the opportunities offered by agtech and genetic engineering. More needs to be done to explain the potential benefits of agricultural innovation to consumers and not engaging with new and innovative food systems ideas is a missed opportunity. There is a need to start explaining general food systems trends, the "big picture", to consumers and engage with

[233] P 6 in 450_Mar_11_21_IFAD_Multi

[234] P 11 in 449_March_08_21_Wild Foods_Multi

[235] P6 in 448_Feb_25_21_IFAD_Multi

[236] P 6 in 446_May_27_21_Lyons_Gould

them more on the topic of sustainability to reduce information asymmetry and polarization. There is also a will to motivate this communication. Retailers, food distributors, and the hospitality industry have a voice and want to get their messaging right as they have a financial stake in consumer trust - loyal consumers make sure these industries are resilient to current and future food systems shocks such as COVID-19.[237]

Guiding Theme 10. Recognize Complexity

The theme of the dialogue was Digital Agriculture and its contribution to the transformation of food systems. In framing this theme, the need and urgency for transforming food systems and the contribution that currently available and future digital technologies can make was raised by the participants. The topic was broached by recognizing the complexity of food systems and proposing that Digital Agriculture is a necessary development, but it is not sufficient on its own to create positive transformation. In the same vein, it was proposed that Digital Agriculture can offer great benefits for achieving more sustainable, healthy, and inclusive systems, but that it also poses risks that need to be considered and minimized (this was reflected in the title of the dialogue: "...How to maximize the benefits and minimize the threats"). With respect to how the dialogue was organized, the invitation call was public (disseminated through social networks) with special invitations sent to various public and private actors in different countries who can make significant contributions given their expertise in the subject. The guidelines invited participants to reflect on actions and possible collaboration between different actors. The dynamics of the dialogue were designed to ensure the contribution of all participants in a framework of mutual respect and trust, which was encouraged by the dialogue facilitators. In the group sessions, 5 minutes were given to each individual for reflection and the facilitator then gave each participant the opportunity to share his or her thoughts. While the rest of the time was used for open exchange, respecting the order in which the participants were asked to share their views.[238]

Acknowledged the fact that Inequalities in food systems are complex issues underpins by poverty, beliefs, and climate change. It must be tackled by addresses the root causes which are more or less country-specific.[239]

We established a working group in our women's association with weekly meetings in which we prepared the Dialogue. In these we inform about the principles of engagement and discuss them. All organizers and facilitators were briefed on the orientation sessions organized by the UN. We attended the virtual trainings (very motivating), and we proposed to our work team to participate in at least one session. In the search for participants, we took into consideration that they had to

[237] P8 in 446_May_27_21_Lyons_Gould

[238] 509:5 pp 1 – 2 in 073a_May_18_21_IICA_Eng

[239] 512:1 p 6 in 088_May_28_21_Divine NTF

be of diverse origins and with different points of view. The participation form was very useful to identify the sectors and propose possible participants. [240]

Be respectful: presentation and discussion of different findings and evidence, promoting fluid dialogue and the coexistence of opinions among the panelists. Recognize the complexity: space to recognize, evidence and communicate the complexity of the obesity pandemic in Chile and the problems associated with the Covid-19 pandemic in food insecurity contexts. Adopt an inclusive multi-stakeholder approach: an instance that brings together different stakeholders, including representatives from the government, companies, international organizations, the scientific community and academia, making it possible to obtain different perspectives. Complement the work of others: an opportunity to share and enhance, create connection and exchange among different players. Build trust: Meeting that promotes a space for conversation and exchange of opinions in an atmosphere of trust and mutual respect.[241]

In addition to promoting trust, recognizing complexity and greatly respecting the position of the various multi-stakeholders throughout the production chain up to the consumer, I believe it is extremely important to adopt an inclusive multi-stakeholder approach.[242]

In light of having a multi-stakeholder inclusive Dialogue, we didn't just hear from those who were most vulnerable and affected by shocks, and who then developed the resilience to overcome their challenges, our speakers were invited to participate in the dialogues. Invited not as a "beneficiary" but as an equal and an expert in resilience. Geographically, we had 7 countries represented in the stories from different regions around the globe from Latin America to the Middle East. The participants of our Dialogue also included young artists and activists that drew, and a variety of countries and ethnic origins were present. We held a safe space for listening where we managed to build trust through empathy and respect for one another.[243]

Official Feedback Form Food Systems Summit Dialogues Official Feedback Form Dialogue title Date published 28 June 2021

UMNAGRI has been careful from the beginning to choose a relevant theme for its dialogue, shared by all the countries in the region. This is a necessary condition to ensure the involvement of all member organizations in the organization and work of this dialogue. All theme definition stages of the dialogue, speakers, and organization were the subject of participative exchanges between UMNAGRI members. UMNAGRI has insisted on the principle of diversity and inclusiveness in its communication to all parties involved in the organization and work of this dialogue. Thus, members and facilitators were encouraged to involve stakeholders

[240] 513:24 ¶ 153 in 090a_May_29_21_Theunissen D_Eng

[241] 515:13 ¶ 152 in 094a_June_09_21_Luchetti T_Eng

[242] 516:15 ¶ 154 in 098a_June_10_21_Caballeros C_Eng

[243] 518:11 p 3 in 102_June_16_21_Namjildorj_Multi

representing all parties and to respect possible divergent positions so as to enrich the outputs of the dialogue. [244]

One of the topics of the dialogue was the lessons learned in these times of crisis, which helped us understand the urgency to act. Topics about building resilience and transforming food systems to be more inclusive, equitable, diverse and sustainable helped us recognize the complexity. One of the discussion questions in all groups was to talk about personal and organizational commitments. To the extent possible, we try to include the greatest diversity of representatives from various stakeholders and sectors. During the framing of topics, there were presenters from academia, the private sector, and civil society who spoke on topics including food and nutrition security, the role of the private sector in times of crisis, and how to build more diverse and sustainable food systems. The group discussions began with presentations from the participants to build trust and understand each other's work.[245]

The dialogue had two complementary goals. More immediately, the dialogue's purpose was to explore the opportunities and obstacles of cooperatives and associativity in contributing to sustainable, inclusive and resilient food systems, but, above all, to identify strategies for action that allow promotion of those opportunities and mitigation of the obstacles with the aim of nurturing the more general Summit dialogue process. At the same time, the dialogue sought to be a situation for building trust and exchange among the stakeholders who are connected and interested in cooperatives and associativity in Chile, and would encourage action beyond the dialogue. To facilitate connection with the Summit process and respond to the urgency of the contribution, working groups were organized to focus on each of the Action Tracks established by the Summit. However, the complexity and interaction among the various dimensions addressed was acknowledged, by inviting participants to consider the thematic areas of the other Action Tracks. Despite having a strong thematic focus (i.e., cooperatives and associations), it sought to involve stakeholders from various sectors, public, private, social and academic, beyond coops and associations themselves.[246]

The sustainability, efficiency and adaptability of practices will vary across geographies and farming conditions.[247]

[244] 520:35 pp 1 – 3 in 107a_June_22_21_Trimarchi A_Eng

[245] 522:4 p 3 in 112a_June_30_21_Gonzalez C_Multi_Eng

[246] 525:18 p 3 in 122a_July_13_21_RIMISP_Eng

[247] 8:38 p 6 in 169_Apr_6_21_Shea E

Leveraging the science-policy nexus to understand interconnections and interdependences within Mediterranean food systems.[248]

The need to respect local/traditional knowledge vs. the need to adapt practices in the face of climate change.[249]

The need to acknowledge (and even celebrate) progress vs. the need for continued urgency in further innovation.[250]

There is Need to move from talk to more robust systems and action. Systems that support ongoing not one off engagement, systems that support thinking together, working together, learning together and implementing together, Systems that support ongoing grass root action and fund community led initiatives without intervention of state and government agencies.[251]

To have an inclusive conversation and truly embrace diversity, thus avoiding a Eurocentric (or romantic?) vision of the future, we must discuss and dive deeper into the topics of inequality, power concentration and accessibility.[252]

Systems Mapping. The fundamental principles and practices of systems mapping are universal. It is important to identify and map the elements of 'things' within a system and understand how they interconnect, relate and act in a complex system. Insights and discoveries can be used to develop interventions, shifts or policy decisions that will dramatically change the system in the most effective way.[253]

It is a very complex environment where build awareness is a key. The lack of understanding, where complexity is the enemy, can be damaging and limiting the future growth.[254]

Recognize interconnections: Multisector solutions depend on identifying interconnections across the food system.[255]

In order to continue on that journey food systems must continue to embrace complexity, foster stakeholder involvement and collaboration to identify solutions.[256]

Context matters: Vulnerable communities will require more livestock-derived foods. In many resource-poor settings, availability, affordability and accessibility of safe, quality livestock-derived foods are challenges to be addressed.[257]

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[248] 23:5 p 5 in 205_Apr_27_21_CIHEAM_Multi

[249] 28:3 p 12 in 064_Mar_4_21_Farming First

[250] 28:4 p 12 in 064_Mar_4_21_Farming First

[251] 52:2 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[252] 60:2 p 6 in 021_Jan_27_21_Donati L

[253] 74:43 pp 18 – 19 in 189a_April_16_21_Ateneo de Manila

[254] 81:25 p 9 in 145_May_6_21_Vandenschrik J_Multi

[255] 84:41 p 7 in 153_Apr_28_21_GCNF_Multi

[256] 90:31 p 11 in 206_Apr_27_21_CCANCC

[257] 93:73 p 9 in 227_May_18_21_Tarawali S

Interconnectedness. Systems thinking requires a shift in mindset, away from linear to circular. The fundamental principle of this shift is that everything is interconnected. Humans need food, air, and water to survive.[258]

Feedback Loops. Since everything is interconnected, there are constant feedback loops and flows between elements of a system. Basically, the two types of feedback loops are reinforcing and balancing.[259]

Systems Mapping. The fundamental principles and practices of systems mapping are universal. It is important to identify and map the elements of 'things' within a system and understand how they interconnect, relate and act in a complex system. Insights and discoveries can be used to develop interventions, shifts or policy decisions that will dramatically change the system in the most effective way.[260]

Coordinating across multiple companies to share information requires not just the commercial representatives but technical staff…Conversations prior to this dialogue stalled between these organizations due to the commercial-only focus.[261]

The collection of Sundanese food commodities will be carried out by representatives of farmers in each area in West Java in collaboration with student agriculture, biology, nutrition, environment, forestry, and youth communities to conduct ethnofood mapping.[262]

Major global trends linked with population growth, climate change, new consumer expectations and novel technologies suggest that the next 10 years may be incredibly disruptive for food systems everywhere.[263]

Embracing a systems approach and catalyzing non-State Actors (private sector, farmers, NGOs) Improving a food system necessarily calls for a systems approach which in turn entails devising an institutional mechanism for the relevant actors to work systemically.[264]

Also, the urgent need to formulate and implement a¨rmative actions for youth in relation to access to knowledge, land, ¦nancial services, green jobs, and markets was highly recommended to be looked at in Africa's quest to harness the potential of its youth to participate in AR4D.[265]

Adopting a systems approach will support a move from silo thinking to bringing all elements together. These actions will also support capacity development, leading to diffusion of learning among rural communities.[266]

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[258] 103:72 p 17 in 007a_Dec_18_20_NAAGD

[259] 103:73 p 18 in 007a_Dec_18_20_NAAGD

[260] 103:74 p 18 in 007a_Dec_18_20_NAAGD

[261] 104:22 pp 3 – 4 in 051a_Feb_24_21_Google

[262] 106:19 p 6 in 004_Nov_30_21_Kustipia R

[263] 107:13 p 6 in 047_Feb_19_21_O'Doherty M

[264] 111:50 p 6 in 070_Mar_09_21_Akinbamijo,O

[265] 111:55 p 7 in 070_Mar_09_21_Akinbamijo,O

[266] 112:115 p 9 in 074_May_18_21_O'Mara_Teagasc

In summary, the group agreed three elements for sustainable rural livelihoods in 2030. Firstly, there must be support for the diversity of emerging sustainable livelihood strategies, including maximising productivity/ e¨ciency from a single enterprise, portfolios of farm enterprises (including the environmental enterprise) and a blend of farm/non-farm activities.[267]

Tensions and challenges will need to be managed, however. These include the viability of farmers at different prices, the CAP reform process, control of the market and the cost of food, which is currently too cheap and leading to intensification.[268]

We must develop continental, regional and country frameworks for agricultural digitalization with a component on internal & external data sharing.[269]

Balancing food production and nature conservation may result in trade-offs, and these could occur at different scales. On the other hand, we need to move beyond the false dichotomy of either prioritizing conservation OR food production – we can and should do both.[270]

Secondly, the package of solutions to farmers may be too di¨cult to adopt. Solutions do not come as silver bullets, but as a package. There is a need to assess if these solutions are not too difficult for the famer to adapt to local environments, by using applied research and testing together with agricultural innovation and putting knowledge in hands of farmers.[271]

A key message was that we need to work with a transdisciplinary focus.[272]

Furthermore, the participants laid stress on the need for sizable interdisciplinary projects to realise true systems transformation and WEF nexus operationalization through pilot projects in the Indus Basin of Pakistan that hosts one of the world's largest contiguous irrigation networks.[273]

The third segment provided the Conclusions and Recommendations, emphasizing seven Guiding Principles that came out as essential for building Food Systems Resilience in the face of shocks and stresses. These principles were: i) Maintain diversity and redundancy, ii) Manage connectivity, iii) Manage slow variables and feedbacks, iv) Foster complex adaptive system thinking, v) Encourage learning, vi) Broaden participation, and vii) Promote polycentric governance systems.[274]

The results of UCC's research 'Women's Economic and Nutritional Empowerment: Gergera Watershed Project, Tigray, Ethiopia.' were presented. The study was conducted by applying the commonly used Abbreviated Women's Empowerment in Agriculture Index (AWEAI) and the WENI along with a series of food security, diet and health metrics. The

[267] 112:116 p 9 in 074_May_18_21_O'Mara_Teagasc

[268] 112:118 p 10 in 074_May_18_21_O'Mara_Teagasc

[269] 113:52 p 8 in 075_Mar_10_21_IFAN

[270] 117:93 p 15 in 109_Apr_13_21_Jacobs-Mata I

[271] 118:78 p 11 in 117_Apr_22_21_Dinesh D_Multi

[272] 124:28 p 6 in 142_May_11_21_Carter L_Dennis S

[273] 127:86 p 7 in 159_Apr_21_21_Hafeez M

[274] 133:26 p 5 in 196_Apr_20_21_Attah-Krah K

objective of the research was to illustrate the complexity in measuring women's empowerment and the links to nutrition.[275]

All presentations added the conclusion that both separately women's empowerment and nutrition are determined by a multitude of driving factors. What was proven to be even more complex is trying to promote both increased women's empowerment and improved nutrition in a multi-disciplinary manner.[276]

All actions must be transdisciplinary, inclusive, and aligned with rights-based approaches to achieve equitable food systems transformation.[277]

There is a growing recognition that complex and multi-dimensional issues such as achieving sustainable food systems require innovative, cross-sectoral, and holistic approaches, pooling together the resources, knowledge, and perspectives of different stakeholders. Participants concur that collective stakeholder engagement is indispensable to bring about the policy changes and investments required to achieve sustainable food systems.[278]

Altering "one size fits all" policies that work well in certain areas but poorly in others.[279]

Restoring degraded land and protecting ecosystems while connecting farmers to markets produces better social, economic, and ecological outcomes.[280]

Whether it can be timely and effective depends largely on how the vegan community utilizes systematic thinking, integrates issues of humanity, international policies, and modern scientific research methods to promote plant based diet and lifestyle creatively.[281]

…systems thinking: to change system we need to go back to the roots of the issues, back to basics and prepare for perhaps needed uncomfortable moments and questioning to move forward better.[282]

Incorporate a system thinking approach to food systems.[283]

A core area, which sounds very obvious, concerns the promotion of cross-cutting national food policies. Very few countries have actually adopted policies with common priorities at national level covering not only health, environment and agriculture, but also trade policy, economic growth, education, which -although seemingly unrelated- affect the food system. Aligned governmental guidelines are urgently required across countries, regarding effective parental nutrition labelling, regulation of misleading claims or marketing practices, where there is certainly a role for responsible businesses, but also the need for a

[275] 136:17 p 8 in 211_Apr_30_21_Chisholm N_Multi

[276] 136:19 p 9 in 211_Apr_30_21_Chisholm N_Multi

[277] 138:41 p 8 in 214_May _05_21_50by40

[278] 141:59 p 6 in 229_May_18_21_NFP_Rabobank_Multi

[279] 143:59 p 11 in 231_May_19_21_MCD

[280] 144:29 p 9 in 232_May_20_21_Schwartz A

[281] 145:14 p 5 in 233_May_22_21_CVS_Multi

[282] 146:46 p 5 in 235_May_25_21_Gonzalez B_Multi

[283] 163:9 p 10 in 300_May_27_21_Alesso_Pommeret

governmental framework to support these efforts. We're dealing with global supply chains and global companies across many different jurisdictions. It's really crucial, therefore, to harmonize national laws.[284]

The presenters highlighted economic, environmental, technological, nutritional, social and cultural challenges within their sub-regions.[285]

The UNDFF proposes a set of coherent, inter-connected policies and actions to address the environmental, economic and social dimensions of rural development and provide a bridge between emergency relief, recovery, and development contexts while placing family farmers at the center.[286]

Ensuring both human and planetary health will depend on several factors and possible solutions, including: - decision making based on systemic approaches and cooperation; - generation and use of evidence for decision making; - political will and action, combined with stronger accountability; in particular, systems of mutual accountability are needed to ensure that actors and institutions involved in food systems contribute fully to the common goal of achieving a sustainable diet for all; - empowerment - negotiation and provision of incentives - data to inform and predict future scenarios.[287]

For a transition towards more sustainable food systems, it is essential to adopt a horizontal approach, going beyond the sectoral one, for integrated food policies that are able to be implemented in line with the peculiarities of each context.[288]

Having both human and planetary health depends on and needs the following: Decision-making: prioritizing, cooperating, systems thinking - Evidence: generating it, sharing it, using it - Political will and action: being cautiously bold, learning from the past - Empowerment: of who, for who, and with balance - Negotiation: providing room to move and incentives - Data: to inform and predict future scenarios of decisions - Sharing the planet: global citizenry and sustainability.[289]

Food systems refer to the entwined relationships between humans and natural biophysical resources in systems. It is important, therefore, to have trained professionals who can: 1. Listen and understand other disciplines; 2. Discuss clearly with stakeholders, and 3. Present ¦ndings and participate effectively in policymaking. The lack of transferable skills in current professionals in the space (i.e., listening, discussing, and presenting) constitutes a capacity gap.[290]

Food systems refer to the entwined relationships between humans and natural biophysical resources in systems.[291]

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[284] 171:2 p 6 in 329_May_19_21_CI_WFO

[285] 172:2 p 5 in 330_May_19_21_RYFP_UNMGCY

[286] 214:14 p 6 in 374_June_03_21_DG INTPA

[287] 215:22 p 6 in 376_June_04_21_IFAD_Multi

[288] 215:23 p 6 in 376_June_04_21_IFAD_Multi

[289] 215:24 p 12 in 376_June_04_21_IFAD_Multi

[290] 216:18 p 10 in 377_June_07_21_Arden_Caucci

[291] 216:20 p 10 in 377_June_07_21_Arden_Caucci

There is also a need for agricultural policies to shift their focus from intensive agriculture to diversifying the food system, food ecosystem and food web, so that we can reduce poverty, hunger and malnutrition.[292]

Participants emphasized that systems thinking is required to embrace the Summit's Principle 'Recognizing Complexity'.[293]

Systems thinking, as part of comprehensive food systems evaluations, can illuminate how natural, human, social and produced capital linked to food systems are interconnected. Systems thinking requires that game changing solutions are not considered in isolation within their action tracks but that capital impacts and dependencies of solutions are assessed across all action tracks.

Thus, participants agreed that food systems are complex and interrelated and have a significant impact on human and animal health, land, water, climate, biodiversity, economy and other systems, and their transformation requires a systemic approach.[294]

t is essential to consider key environmental and ecological concepts as determining the quality of life of the indigenous peoples and local small farmers, helping to formulate the current economic model, defined on the basis of nature without limits.[295]

Develop agricultural policies that involve all aspects of food systems and demonstrate the existing interface. The gender perspective must also be considered.[296]

The dialogue emphasized on shifting one's consciousness and becoming aware of the interconnections in the food systems.[297]

The role for multistakeholder groups. The movement needs scientists, lobbying power, a good coalition of people, a good social media campaign, end purchasers, investors to provide risk capital for these folks to work together and be able to create new models that policy can build off of, and the need for a network of environmental justice communities that can work together as the same issues happen all over the place.[298]

In the food system debates, there is a need to connect land and ocean.[299]

Draw attention to the interconnectedness between public health, environmental health, and animal health and welfare.[300]

An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the

[292] 219:42 p 10 in 380_June_08_21_Shakya_Chettri

[293] 220:20 p 6 in 381_June_08_21_UNEP_Multi

[294] 229:15 p 3 in 226a_May_17_21_Oteyami O_English

[295] 234:43 p 9 in 273_May_12_21_ILC_FILAC_Multi_Eng

[296] 236:24 p 8 in 277a_May_14_21_IICA_English

[297] 247:11 p 8 in 483_June_24_21_Mandal_Goodman

[298] 249:43 p 15 in 485_June_22_21_Levesque_SD

[299] 251:23 p 6 in 487_June_29_21_Selwyn_Multi

[300] 257:20 p 6 in 493_June_23_21_Kevany_Van

challenges holistically, avoiding trading off one aspect against another b. Design/test for - and commit to - scaling up, at speed c. Cater to more different individuals and communities and unmet needs d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving and supporting mindset and cultural shifts e. Decentralise access to good food f. Empower people through food skills and knowledge.[301]

Advocating for policies, subsidies, regulation etc that recognise the connections between health, nutrition, food and the environment.[302]

A very complex environmental legislation moves farmers away from the discussion.[303]

Participants noted that the current decisions in the food system are driven by the 'global north' and powerful actors throughout the food system. If a global centric approach is not adopted, the dynamics needed to create transformative change won't work at scale. Dialogues need to be a truly participatory process and foster inclusive conversations.[304]

Facilitate evidence-based and guided experimentation and innovation of policies and accelerated science capacity for technical solutions supporting broad food systems change: There is neither one single policy nor a unique mix of strategies that can deliver change across all objectives of a food system. Rather, policymakers will be required to forge new pathways to build sustainable, resilient, and prosperous food systems that deliver healthy and nutritious diets, improve livelihoods, and protect the environment.[305]

Multi-sectorial collaboration: building a gender discourse on responsible production between industry, the Innovation Authority, and academia.[306]

Broad professional cooperation and dialog between industry, academia, health services, retailers, government ministries, and the regulator for the advancement of public health. Industry is a partner to the solution.[307]

Food Systems are complex; we need more complex approaches that recognize intersectoral linkages for the development of risk assessment systems for more effective response. Comprehensive policy responses must consider environmental, social protection, health and food security factors in a contextual, evidence-informed way. The precarity of the informal sector has deepened and addressing this will be key to fostering more resilient food systems.[308]

Food Systems are complex; we need more complex approaches that recognize intersectoral linkages for the development of risk assessment systems for more effective response. Comprehensive policy responses must consider environmental, social protection, health

[301] 259:25 p 6 in 495_June_23_21_Forum for the Future

[302] 259:29 p 9 in 495_June_23_21_Forum for the Future

[303] 261:7 p 11 in 497_June_24_21_Fontes_Multi

[304] 280:5 p 13 in 516_July-01_21_Anastasiou K

[305] 284:3 p 6 in 520_July_05_21_HE Sacko J_Multi

[306] 297:2 p 7 in 533_July_07_21_Gazit GS

[307] 297:3 p 8 in 533_July_07_21_Gazit GS

[308] 302:1 p 7 in 538_July_09_21_IDS_Multi

and food security factors in a contextual, evidence-informed way. The precarity of the informal sector has deepened and addressing this will be key to fostering more resilient food systems.[309]

The urgency and complexity of food systems transformation underscores the need to consider multiple perspectives and pathways.[310]

Embrace the complexity of food systems transformation and other global challenges – such as climate change and its impact, which require integrating systems thinking and dealing with uncertainties.[311]

Guiding Theme 11. Guarantee the Right to Food

Access to food is a human right; all barriers to that right must therefore be eliminated. Indigenous right to food examines critical questions of access to healthy, culturally appropriate food, as well as issues of ownership and control of land, traditional knowledge, governance, etc. Debate on food security and food sustainability led by indigenous peoples advocates not only for access to healthy food, but for an end to the structural injustices. Exploitation of indigenous lands and industrial projects ctivities are needlesly distructive and have an enormous impact on traditional fishing, hunting and harvesting areas relied on by indigenous communities.[312]

1. Recognize the rights of Indigenous Peoples within the framework of Human Rights and the obligations of the United Nations Charter, regardless of the population size of the people concerned. Member States must recognize the criterion of self-identification. Indigenous Peoples right to self-determination in all aspects affecting their food systems should be duly respected. 2. Recognize the customary law of Indigenous Peoples over our territories and the ancestral ties with our lands and territories; we Indigenous Youth are the current and future custodians of our lands and territories. 3. Meaningfully engage with Indigenous Youth in the Action Tracks and Action Areas, recognizing Indigenous Youth as experts on resilience and sustainable food systems, keepers of first-hand experiences with extreme climatic changes, and holders of rich cultural traditional knowledge of our food systems. 4. Fully integrate an understanding of the characteristics of Indigenous Peoples' food systems into the Summit process, as well as an understanding of the importance of these food systems for food system transformation towards resilience and sustainability, into the development of new game changing solutions, policy proposals and commitments. 5. Consider Indigenous Peoples' food systems a game-changing solution in themselves, for their unique characteristics and holistic nature, as well as the lessons to be learned by the rest of the world from our food systems. 6. Value Indigenous Peoples' traditional knowledge equally as scientific knowledge. We, Indigenous Peoples, are the local

[309] 302:7 p 7 in 538_July_09_21_IDS_Multi

[310] 313:5 p 11 in 549_July_14_21_Meah N

[311] 320:1 p 6 in 557_July_15_21_EvalForward_FSRD

[312] 354:9 p 6 in 407_June_10_21_CSIPN_Aborigen Forum

observers and experts of the environment. The value of our traditional knowledge also calls for equitable inclusion, and very importantly, fair compensation as established in the Nagoya Protocol on access to benefit-sharing to traditional knowledge. 7. Work with Indigenous Peoples to establish intercultural education programmes; recognising Indigenous Youth need to learn about our traditional food systems, cultural heritage and key knowledge to sustain our food systems. 8. Develop Intellectual property legislative frameworks recognizing and protecting Indigenous Peoples' traditional knowledge systems. Guarantee Indigenous Peoples' control over our Traditional Knowledge for effective intergenerational transfer of our knowledge, without the risk of misappropriation or misuse by third parties. 9. Biocentric ecological restoration must be urgently prioritized by Member States and relevant stakeholders, as it is the insurance for our collective future on the planet and the surest way to mitigate the impacts of climate change. 10. Develop emergency preparedness, response and climate change adaptation plans with us, that respect our traditional governance and decision-making processes. We have agency in our preparedness and responses…[313]

Demilitarization, decolonization, decriminalization.[314]

Food is a public good and it is essential. This point must override every conversation around the UN FSS and food systems transformation.[315]

City governments should develop initiatives to protect rights of people employed in different e-commerce based food businesses and related services, as this is an emerging and rapidly growing sector.[316]

During the Dialogue as well as the breakout sessions the following findings emerged: Blended financing mechanisms could enhance small projects/initiatives locally owned by women and youth Systematic approaches need to be utilised for effective risk analysis Innovations could help to ensure food security including community gardens utilising vertical farming tools Enacting food as a public good could help to ensure universal food access Implementing climate risk profiling, using AI to tailor local weather patterns with soil/agricultural practices.[317]

The discussion presented connections between food systems, diet, the pandemic, and national security, among other concerns, indicating a need for a systems perspective when creating solutions. Panelists explained the need to incorporate gender and local culture in decision making and to seek opportunities for collaboration between the public and private sectors. Most importantly, all three panelists agreed that food is a human right and that it needs to be made affordable, accessible, and appropriate to local cultural and environmental context.[318]

[313] 394:11 p 6 in 436_June_16_21_GIYC_Multi

[314] 394:62 p 12 in 436_June_16_21_GIYC_Multi

[315] 409:11 p 6 in 450_Mar_11_21_IFAD_Multi

[316] 418:39 p 9 in 459_June_01_21_Rashid Md J

[317] 419:2 p 6 in 460_June_03_21_Ekanayake S

[318] 423:10 p 5 in 464_June_10_21_IFAD_UNFSS_Multi

Food shouldn't be treated as a commodity but rather a basic human right.[319]

Encouraging food sovereignty and the food as a right and not just a commodity.[320]

The program should also address animal rights/welfare and other social and labour issues.[321]

Corporate food systems are the elephant in the room. Our silence actually affirms their role and their ability to advance. In the South, it is very difficult to get the needed accountability. Radical partnerships looking after food-water-energy nexus are needed. The indigenous peoples know the best water sources in the mountains; they can be empowered to sustain those. Transforming corporate food systems can also include: ● Reassessing the partnership agreement with the World Economic Forum ● Establishing clear and strong safeguards against conflicts of interest in all processes and ensure public interests over private ● Fostering a holistic and systemic approach along with the multidimensional nature of food (FAO 10 elements of Agroecology).[322]

A mother's nutrition during pregnancy and the nutrition a child receives in the ¦rst two years of life are vitally important in§uences in determining good health both now and into the future. These first 1000 days of life set us up for good health across our lives. Public health and nutrition education (also using local knowledge) should be incorporated into school feeding programmes which are also a point of entry into communities. There is need to stimulate and increase public private partnership for collaborations to improve nutrition & health.[323]

Malnutrition at birth, due to lack of nutrient reserve of the mother (that is already developed in adolescence) is very di¨cult to correct. So, timely interventions are key and increasing focus on adolescent women is welcomed. Adolescent age is a key window of opportunity to intervene timely to ensure a healthy pregnancy and good infant health outcome that will last until later in life.[324]

Changing the narrative around the notion of health and the relationship of food systems to population health is of critical importance. We de¦ne "health" as not just what is physical, but it includes the mental, social and spiritual dimensions of being. "Eating for health" therefore, is about food that meets the nutritional needs of the body, but also reinforces the "connectedness" of our sustenance to the land, the sea and the seasons. [325]

Unhealthy diets and food insecurity are urgent and serious threats to health and survival to more than 63 million people who live on islands.. There are signi¦cant data gaps in knowledge about unhealthy diets and food insecurity in island populations.It has been di¨cult to characterize dietary intake in islands due to research biases in dietary

[319] 423:15 p 7 in 464_June_10_21_IFAD_UNFSS_Multi

[320] 424:33 p 9 in 465_June_16_21_Congressional Hunger

[321] 35:16 p 9 in 095_Mar_27_21_Chinapoo C_Multi

[322] 74:45 pp 31 – 32 in 189a_April_16_21_Ateneo de Manila

[323] 120:63 p 7 in 127_May_13_21_IAFN_CWFS

[324] 120:71 p 19 in 127_May_13_21_IAFN_CWFS

[325] 121:49 p 5 in 130_May_22_21_Foronda R_Gloria C

assessment of locally consumed food. Islands have been excluded from the determination of the nutritive content of indigenous food. The US Dietary Guidelines do not contain commonly found food in islands (e.g. "ulu" (breadfruit), jackfruit, sugar apples, "Jacks" (small ¦sh), cassava). The guidelines affect how health advice is given to patients, how institutions purchase food and design meal plans, and how families are fed during emergencies.[326]

Currently 3 billion people can't afford the least-cost healthy diet recommended by national Governments.[327]

What Actions can be used to improve Affordability? Problem 1 is low and variable incomes of poor households: rational management of such incomes drives households to choose staples and cheap, often less healthy options. Potential solutions include women-led enterprise for neglected crops, nutritious social safety nets and school food programmes. Problem 2 is that nutritious foods that people want to eat are more expensive. Potential solutions include investment in infrastructure for nutritious foods and expansion of food at work actions. Problem 3 is that there may be low-cost nutritious foods available which are perceived as having low value,(e.g. millets). Potential game-changing solutions include developing an innovation platform for SME manufacturers of convenient nutritious foods. Problem 4 is the perception that nutritious foods are more costly when they may not be. A potential solution is public awareness campaigns with commercial knowhow. Problem 5 is the wide availability of appealing "ultra-processed" sugary drinks and snacks, fried street foods, oils and sugar, which people are willing to pay for even when they may be more expensive than more nutritious alternatives. Potential solutions include clearly de¦ning "unhealthy food", a package of food environment policies, and disincentives for unhealthy food marketing.[328]

Nature positive production gives people living in regions with high insecurity and uncertainty the agency and capacity to produce their own food and livelihoods.[329]

Our food systems are currently designed to reward the mass production of cheap calories.[330]

Finally, shame and inequality were two major themes to emerge from the breakout room sessions. Participants felt that hunger was stigmatized within communities, and noted that this would be a challenge to overcome the burden of malnutrition. Participants also recognized inequality, and in particular, gender inequality, as a challenge to food access; it was stated that girls and women were not prioritized for meals, and that disparities in school attendance could also prevent girls from being empowered to participate in advocacy and agriculture through education.[331]

[326] 121:52 p 7 in 130_May_22_21_Foronda R_Gloria C

[327] 131:36 p 6 in 190_Apr_16_21_Cullen N

[328] 131:38 p 10 in 190_Apr_16_21_Cullen N

[329] 161:6 p 6 in 296_May_25_21_Battista W

[330] 164:4 p 5 in 304_June_02_21_FAO_Multi

[331] 167:1 p 6 in 311_June_14_21_NCD Child

Finally, home gardens and livestock farming, linking to markets for surplus trading to enhance access to foods, and the language and positioning of the issue of hunger were all identified as areas for impact. In particular, participants noted that the issue of hunger should be positioned as a human rights issue, to mitigate the stigma/shame associated with hunger.[332]

Other challenges noted by the participants included: low visibility/understanding of the right to nutrition when compared to the right to health, lack of women's empowerment in food systems, and the absence of platforms for youth to share their ideas on nutrition-related topics.[333]

Further, it was said that the right to food is not understood well enough for community members to hold their governments accountable.[334]

Participants stated that before the COVID-19 pandemic the cost of food prices had increased, especially healthy and nutritious food compared to processed food, and that availability of nutritious food vs. processed food was also a challenge in some regions.[335]

Food security. Ruminant livestock have unique value, particularly in LMIC, as a portable wealth store able to be utilised when required to fund essential and often critical needs such as health emergencies or access to education. Local livestock supply chains are critical for food security in LMIC with over a billion small holder farmers dependant on livestock for survival.[336]

Healthy food is a human right issue. Too often quality and nutrient food is expensive and nutritionally poor food is cheap, which is a real threat to the health of our children globally.[337]

Refugee youth experience many issues that are related to food systems in their context. Too often, people who are living in poverty or areas of conflict end up in refugee situations. Refugees should not be living in subhuman conditions. They should have access to food, water; as basic minimums. Beyond that, it is a basic human right to have a home and a means of food production or a livelihood.[338]

Food is a basic need as well as a human right for everyone. Everyone needs adequate food in terms of quantity, nutrition, and safety. Thus everyone can live a healthy and productive life. In addition, food is also a symbol of cultural development and human relations with nature. The current pandemic situation is causing the threat of food insecurity and hunger. Disrupted supply chains and declining purchasing power make food di¨cult to access, especially for vulnerable groups. The food system, as an integral part of the activities of production, processing, distribution, and consumption as well as food waste management.

[332] 167:3 p 9 in 311_June_14_21_NCD Child

[333] 167:4 p 9 in 311_June_14_21_NCD Child

[334] 167:6 p 10 in 311_June_14_21_NCD Child

[335] 167:7 p 12 in 311_June_14_21_NCD Child

[336] 175:2 p 11 in 333_May_25_21_GMA_Multi

[337] 178:2 p 9 in 336_May_26_21_CI_WFO

[338] 180:4 p 6 in 338_May_27_21_UNHCR

The food system includes the actors and institutions involved in it, with various interests and benefits derived from it. The challenges of the current and future food system are meeting food needs with the challenges of population growth, climate change, and ecological vulnerability, as well as socio-economic inequality, especially small-scale farmers, poor consumers, and other marginal groups. This requires a more just, sovereign, and resilient food system transformation. Strengthening the food system is seen as a means to significantly reduce hunger, malnutrition, and poverty, as well as strengthening global efforts to deal with the pandemic.[339]

Africa is ranked second to Asia as the continent with the most malnourished children in the world. Within Africa, Nigeria suffers the brunt of malnutrition with the most significant proportion of under-nourished children.[340]

Participants identified the need to provide access to clean water and healthy foods to developing populations and populations in refugee encampments.[341]

Food systems have been hijacked by convenience (drive-thrus and gas stations on reservations), dominance of unhealthy foods: While some areas are dealing with high prices and low supplies, other Indigenous communities in the United States and Canada, are dealing with a dominance of unhealthy foods in their food environment, where gas stations and fast food drive-thru restaurants are the only nearby options. This is especially true for Indigenous communities on the reservations in the United States. We are experiencing a dominance of unhealthy foods. This adversely affects our individual and collective health.[342]

Food affordability for consumers.[343]

Secure land tenure rights lead to planned food systems based on individual or collective community choices and community driven demands. Land tenure rights for a given duration empowers deciding on efficient, scheduled, appropriate and suitable cropping system and serve as a strong foundation for economic empowerment. It is the basis of human dignity of all communities including indigenous peoples, pastoralists, local communities and landless farmers forming the pathway for right to food among these communities and beyond.[344]

Nutrition and access to food within the city: obesity and malnutrition were identified as key concerns as well lack of su¨cient food within the city.[345]

Renew recognition of food security as a fundamental human right and empower local communities as key drivers of change.[346]

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[339] 185:5 p 5 in 343_May_28_21_Abdullah_S

[340] 193:1 p 5 in 351_June_03_21_CIF_Multi

[341] 195:6 p 7 in 353_June_07_21_Blum N

[342] 197:17 p 6 in 356_Apr_08_21_Livingston_Way

[343] 198:51 p 10 in 357_Apr 14_21_Harfouche S

[344] 199:54 p 5 in 358_May_11_21_ILC_Multi

[345] 201:24 p 6 in 360_May_18_21_ICLEI Africa_Multi

[346] 205:27 p 10 in 364_May_26_21_DPIHD

UFSS to renew political action to affirm access to food as a fundamental human right, and increase investments into the development and empowerment of local communities affected by food conflicts.[347]

From a nutritional perspective we eat wrong in Sweden, and companies have a strong responsibility here. They often refer to that consumers want to have choices, but deny that they are a part of the problem.[348]

The participants understood that the multiple burdens of malnutrition are massive in the ECO region and universaland the double burden of malnutrition is rising in low- and middle-income countries.[349]

Transforming the current food systems to reach the SDGs requires an approach that responds to the fulfillment of the basic human right to safe and nutritious food. For IPs, this translates to the formal recognition of their rights to their lands, territories, resources and the practice of their culture, traditional knowledge and to determine their development, including food systems . The recognition of these rights is an indispensable instrument for evolving equitable and sustainable food systems.[350]

IP Perspective vs. "other" 1) Food and health are basic rights vs. Food and health are becoming commodities and a privilege which IPs, generally, cannot afford.[351]

Everyone agreed that water, as a basic human right, should remain a public resource and should not be privatised.[352]

The dialogue's main discussion centered on the Right to Food in Chile and possible implementation strategies.The theme context is related to the current Chilean socio-political process that led to drafting a new constitution starting with a blank sheet. On the other hand, the national nutritional epidemiology context, evidenced in the high obesity levels and overweight throughout people's lifecycles, poses a challenge to the country in the coming decade. Lastly, the pandemic has increased food insecurity and hunger, especially among the most vulnerable groups. These three contextual factors, similar to other Latin American countries, drive the inclusion of the Right to Food in the new Constitution in which it's a human right and part of economic, cultural, social and environmental rights.In this scenario, deliberation on defining the Right to Food and specifying adjectives that must accompany the right is necessary; for example, healthy, safe, relevant, sustainable, etc.[353]

Guarantee access to healthy and nutritious food for all. Course of Action 1 will work to end hunger and all forms of malnutrition and reduce the incidence of noncommunicable

[347] 210:18 p 8 in 369_May_31_21_Holy See

[348] 211:20 p 9 in 370_June_01_21_WWF Sweden

[349] 212:10 p 7 in 371_June 01_21_Güngören A

[350] 221:31 p 6 in 382_June_08_21_AIPP_Multi

[351] 221:44 p 12 in 382_June_08_21_AIPP_Multi

[352] 224:30 p 6 in 385_June_09_21_Lazzaris S

[353] 227:4 p 5 in 220a_May_10_21_ODA_English

diseases, ensuring all people are fed and healthy. This goal requires that all people have access at all times to sufficient amounts of nutritious and affordable food.[354]

A sustainable food system is one that guarantees food security and nutrition for all in such a way that their economic, social and environmental foundations are not endangered for future generations.[355]

Food is a human right, not only enough quantities of food, but also nutritious food that nourishes the body and regenerates soil systems.[356]

Reducing the stigma associated with food insecurity is a primary goal and necessary step in delivering on zero hunger and building healthy food systems. When people associate shame with food insecurity, they are more likely to hesitate to come forward and receive what they need in order to raise healthy children, maintain quality of life, and address the other challenges they face.[357]

This requires communities to understand and dismantle the assumptions we hold about poverty and food insecurity. For instance, childhood food insecurity is an adverse experience that can contribute to trauma, having lifelong effects. Food emergency systems must recognize the importance of how we address and ensure that young people receiving food know that they can look to their future with pride.[358]

Food is a basic right - access, grow, and share their food; public gardens and use public spaces (community gardens and space, indoor production; opportunity to get municipal government involved) Many first nations are without accessible and appropriate food Many food systems create waste and infrastructure are needed to prevent waste.[359]

Human rights should be the centre of all discussions and an equitable food system is the goal.[360]

Considering the alarming, advancing numbers of malnutrition and hunger in Brazil - which will still worsen due to a number of factors, including the especially critical situation of the covid-19 pandemic in the country - superimposed on the increase in environmental degradation due to production of agricultural products and food (including those that are not intended for national consumption or direct human consumption, as raw material for animal feed) it is possible to affirm that there is a latent inconsistency in Brazilian food systems: agricultural production does not meet nutritional needs of the population, as well as contributes to the non-achievement of national and global goals related to climate change and loss of biodiversity, for example.[361]

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[354] 231:2 p 2 in 269a_May_11_21_MinAgri_English

[355] 233:5 p 5 in 271a_May_11_21_JAD_English

[356] 249:41 p 6 in 485_June_22_21_Levesque_SD

[357] 252:8 p 6 in 488_June_22_21_Harrison_CC

[358] 252:9 p 6 in 488_June_22_21_Harrison_CC

[359] 257:23 p 11 in 493_June_23_21_Kevany_Van

[360] 280:2 p 6 in 516_July-01_21_Anastasiou K

[361] 290:1 p 5 in 526_July_06_21_WWF-Brazil

Food is not only considered as a nutrition, but it is something that touches emotions ("makes you feel happy"); for example, colour, flavour and substantial which touched emotions. The joy of eating is not for health, but includes happiness. Fermented foods are a part of human cuisine culture, and the fermented foods are essential for regenerative agriculture.[362]

Providing greater accessibility and lower prices for foods that promote a healthy life style.[363]

Access to safe and nutritious food amidst human rights and needs.[364]

Food Justice and Sustainable Food Systems. Food justice needs to be centred in food systems discussions and food system transformation.As youth conveners, we used a food justice lens: acknowledging that several forms of oppression (e.g. racism, colonialism, classism, sexism) have formed and are embedded in our current food system. Food justice is a call to dismantle inequities in the food system. Food injustices are a result of policies, actions, and rules by institutions and systems that hold the most power. Some examples of food injustices are the dispossession of land, hunger as a weapon, prevalence of higher food insecurity rates in Black and Indigenous households, and poor working conditions for migrant food workers.[365]

A just food system should provide culturally-appropriate foods that are easy to access, which includes seed sovereignty in order for citizens and farmers to grow their own culturally-appropriate foods. Therefore, food sovereignty is a key contributor to a just food system. Participants agreed that freedom means not relying on (predominantly Westernized) grocery stores for food.[366]

A sustainable diet should be financially accessible to everyone.[367]

Recognizing that agriculture plays a fundamental role in ensuring the right to food to all, mitigating climate change, and promoting employment and social stability.[368]

…integration, participatory and rights-based approaches to governance and policymaking at all levels to address the structural inequities and power imbalances in food systems.[369]

Recognizing that agriculture plays a fundamental role in ensuring the right to food to all, mitigating climate change, and promoting employment and social stability. However, industrial agriculture with its narrative centred on increasing productivity to feed the growing population and solving the problem of hunger in the poorest countries is responsible for biodiversity loss, environmental pollution, and grabbing of natural

[362] 294:2 p 11 in 530_July_07_21_NSTDA_IBG-2Plant

[363] 297:4 p 8 in 533_July_07_21_Gazit GS

[364] 306:1 p 5 in 542_July_12_21_Prota_L

[365] 307:1 p 5 in 543_July_13_21_YRYFC

[366] 307:4 p 7 in 543_July_13_21_YRYFC

[367] 307:11 p 13 in 543_July_13_21_YRYFC

[368] 309:1 p 6 in 545_July_13_21_Mbenya R

[369] 309:4 p 5 in 545_July_13_21_Mbenya R

resources, including more and more land for non-food production (biofuel, feed for intensive livestock, carbon sequestration).[370]

Overall, participants stressed the importance of access to healthy, nutritious, safe AND affordable food as a "must" for all people in Kosovo and future generations but also as an inextricable part of Kosovo's efforts to achieve progress on long-term development and shared prosperity.[371]

Food production is about transforming the society, beyond feeding the society: Throughout the discussion, food production cannot be just about producing enough food for the population. Instead, food production is intricately interlinked with incomes, livelihoods and nutrition provided to the society. Food producers come from many different communities, some coming from vulnerable and poor groups such as indigenous communities in rural area.[372]

Food is a basic human right. As is access to food. Each nation has the right to produce its own food while maintaining its cultural and productive diversity. A direct democratic intervention is needed, but it must understand the issues at hand; especially those of the small farmers. Therefore, it is of utmost importance that we put those who produce, distribute and consume food at the heart of food systems and policies rather than agribusinesses.[373]

It included status, risks, challenges and opportunities along the food systems and proposals to ensure protection and resilience.[374]

environmental and economic impacts. 5. Financial incentives and monitoring from richers countries to support shift to sustainable agriculture in low[?]*resource countries/regions*

Access to affordable nutrition

Access to safe and nutritious food.[375]

Foster innovative approaches to expand the availability and affordability of traditional African vegetables.[376]

Healthy and nutritious food available at affordable prices that delivers safe and nutritious outcomes for all consumers.[377]

We can ensure access to safe and nutritious food for all by involving manufacturers in the decision-making dialogues to ensure nutrition in food is maintained even while on the

[370] 309:5 p 6 in 545_July_13_21_Mbenya R

[371] 310:2 p 6 in 546_July_13_21_INDEP

[372] 319:1 p 6 in 556_July_15_21_Von Goh_GenTan

[373] 323:1 p 5 in 560_July 19_21_Arbuthnott_Multi

[374] 221:1 p 6 in 382_June_08_21_AIPP_Multi

[375] 3:2 p 7 in 099_Mar_31_21_FAO_IFPRI

[376] 16:5 p 7 in 251_Jan_25_21_World Vegetable Center

[377] 34:3 p 7 in 089_Mar_22_21_Gee S

shelf. We can also do this by empowering more persons to participate in farming at home that way they can guarantee how it has been produced.[378]

The link between true value and well-being was underlined and the need for providing consumers with more and more easily accessible information highlighted. The group also talked about the multi-dimensionality of affordability which not only refers to the financial capacity of a consumer to access a good but also embeds awareness, education, information,… eventually relating to inequalities.[379]

There are a number of initiatives on UCC campus helping students struggling with food, including food banks and now with covid, food vouchers, but when working on solutions we must ensure that not only are gaps plugged but that there is not a need for these food banks or initiatives in the first hand. [380]

Consider alternative means of payment for food, like meal tokens, to increase access and reduce friction especially for fresh, healthy food.[381]

There is a need to give preference to sourcing healthy nutritious and affordable food.[382]

Actions to provide end-to-end solutions to transform food systems should include access to healthy food, consider young people in agriculture, strengthen local supply chains and economic incentives through innovation systems.[383]

Support healthy and sustainable climate-friendly diets. 5. Ensure that high nutrient foods are accessible and affordable to underserved communities.[384]

Improve access to affordable, nutritional food.[385]

Change the narratives on food choices to support the adoption, focus on practical and easy things to engage and empower. Availability, pricing and convenience • Impact the choices o Consumers' choices are influenced by marketing, pricing and accessibility; both policy and industry practices must strive to influence them towards healthier and more sustainable; o Nudges should be used in creating healthier food choices o the economic means should be ensured to help consumers break through their choice patterns and make them more sustainable. • Encourage behaviour change o by making it feasible and practical • Use pricing is a driver of food choices o particularly for people from challenging socio-economic backgrounds: strike the balance right to interest them in healthier diets, without neglecting the economic hurdles they face.[386]

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[378] 35:83 p 11 in 095_Mar_27_21_Chinapoo C_Multi

[379] 39:19 p 9 in 175_Mar_16_21_Donati L

[380] 48:4 p 6 in 078_Mar_11_21_Cadogan T

[381] 49:29 p 9 in 086_Mar_20_21_Rosatan B

[382] 52:6 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[383] 53:22 p 7 in 001_Nov_5_20_CGIAR

[384] 54:13 p 5 in 002_Nov_19_20_CGIAR

[385] 54:23 p 6 in 002_Nov_19_20_CGIAR

[386] 66:49 p 11 in 052_Feb_25_21_EUFIC

School food policies: it is important to ensure that fresh and healthy foods are affordable and accessible, replacing highly processed and meat-based products. o Education: consumers must be equipped with knowledge on how to prepare healthy plant-based foods. o Accessibility: plant-based diets need to be accessible for the lower income families, which might entail a different, targeted approach, counteracting negative influences, such as unhealthy marketing/food environments.[387]

Panelists agreed on the importance to enhance the accessibility and affordability of healthy diets as a core issue of regional agri-food system. It implies the promotion and investments in high quality infrastructure for healthy food distribution to respond to the growing urbanization and demand for fresh food products in cities, shortening the distances between rural and urban areas. In addition, reduce the number of intermediaries, which could promote accessible prices for a larger part of the population. Participants agreed on the role of wholesale markets to achieve this goal.[388]

Another key action is to democratize the food system and promote richer and more diversified food ecosystems, by increasing the availability of healthy, sustainable food options.[389]

Seventh, promote short supply chains, learning from present practices, for example, promotion of street markets that offer a wide variety of fresh products with a discounted price at the end of the market, facilitating access to healthier diets for lower income households. Another example is Florence wholesale market where leftover fresh food is sold for a lower price to the public twice a week.[390]

Even though we have a wide array of information regarding nutritious food, problems regarding access to nutritious food still exist and need to be identified. Lack of nutritious food may be caused by poor soil that does not contain important minerals or iodine. Along the same lines, vitamin deficiencies can be caused by poor diet. Within households, the level of food security can vary, which is a reminder that the nutritious needs of the most vulnerable groups, such as pregnant women, children and the sick, should be focused on. They are often neglected due to their inferior position in society, lack of influence and lack of knowledge.[391]

Because children spend a lot of time at school, school meals are an essential part of strengthening children's nutrition.[392]

Many factors: peoples income is too low to afford it, prices to high, need to work on that from the production side to the retail side, low demand might be due to worries about many issues such as safety, taste etc. There are worries about sustainability.[393]

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[387] 66:68 p 13 in 052_Feb_25_21_EUFIC

[388] 76:8 p 8 in 103_Apr_8_21_Carrara E_Multi

[389] 78:4 p 7 in 110_Apr_14_21_Carrara E_Multi

[390] 78:12 p 8 in 110_Apr_14_21_Carrara E_Multi

[391] 79:15 p 7 in 118_Apr_21_21_Huvio T

[392] 79:66 p 7 in 118_Apr_21_21_Huvio T

[393] 82:5 p 6 in 150_Apr_30_21_GANSFOIWFSN

Participants urged coherent strategies to eliminate the stigma of receiving free and reduced-price school meals and other forms of food assistance.[394]

Food social safety nets should aim to address persistent inequities in food access for low-income, minority, and rural households, as well as improve consumption patterns. Programs should serve people living in food deserts and other nutrition-deficit localities. Two improvements include providing food with a higher nutritional value in food pantries and lowering the qualification threshold to food pantries to improve access.[395]

We suggest that, in addition to improving existing programs, new non-means-tested nutrition programs be created to address the access gap for healthy food. Regardless of income level, most Americans are malnourished. An example of such a program is a food bank (with healthy food) in schools. This food bank would not be means-tested, which would help reduce malnutrition among students of various socioeconomic backgrounds. States should also increase the budget for school lunch and breakfast programs. These should be offered and accessible even when school is not in-session, such as over summer and winter breaks, and students should be allowed to take food away from the programs to be consumed (at home or at school or to share with their family members). Finally, school food programs can be more effective in their implementation by engaging in a bottom-up approach, such as by including students and parents in the food selection process, bringing students to farms, allowing students to "try out" various new food, and generally making the nutritional standards more appetizing and appealing to children.[396]

Hunger and diet-related disease are almost always due to economic inequality, those in power need to be re-humanized and see all lives as valuable and that food is a human right. All human beings are holy, and food is holy. All people should have the right to safe, healthy and culturally appropriate food.[397]

In addition, there should be improved access to nutritious foods (of local varieties) in communities that continue to experience the disparities caused by colonization and apartheid.[398]

For less-wealthy countries and populations, improving access, availability and affordability of quality, safe, livestock-derived foods could make a significant, positive difference to nutritional wellbeing (and its wider ramifications for stunting, cognitive development etc), especially for the most vulnerable (pregnant and lactating mothers, children in the first 1000 or even 3000 days, elderly).[399]

[394] 84:52 p 7 in 153_Apr_28_21_GCNF_Multi

[395] 86:13 p 8 in 162_Apr_16_21_Fountain G

[396] 86:14 p 8 in 162_Apr_16_21_Fountain G

[397] 91:11 p 6 in 217_May_6_21_Schwartz A

[398] 91:16 p 6 in 217_May_6_21_Schwartz A

[399] 93:4 p 6 in 227_May_18_21_Tarawali S

Beyond emphasizing food for all, the strategy needs specific actions that emphasise access to affordable healthy, safe and nutritious food for all especially the vulnerable populations beyond food aid.[400]

Letting markets work means better food security. Achieving food security is necessary, but not sufficient, to end malnutrition.[401]

…the best way to reduce food waste is to not produce it at all and the best way to end hunger is to have a fair market based system that is priced for access.[402]

Ensure access to safe and nutritious food for all, because Sundanese food commodities can reach the nutritional value needs of every age group and Sundanese people have their own ethnicity that does meet the standards of dietary requirements and nutritious food if processed or consumed directly.[403]

Sundanese food must be available and cheap.[404]

Initiatives to address this include school nutrition programs, income floors and other forms of social protection that guarantee every Canadian has a basic standard of living.[405]

However, significant efforts are needed to ensure that safe, nutritious and affordable food produced in environmentally sustainable systems is available and enjoyed by all, rural livelihoods and areas are protected and value is distributed equitably.[406]

Second, agriculture and rural development programmes need to prioritise reducing the cost of vegetables and fruits, and protein-rich foods including dairy, in ways which improve livelihoods and the environment.[407]

This entails a need to increase the availability of safe and nutritious food, making food more affordable and reducing inequities in food access.[408]

To empower key actors in food systems, the focus on accessibility and affordability as well as the guarantee of technical and financial support provided for the implementation of actions are essential.[409]

…advocating for all people to have access to affordable, good food.[410]

Policies impact the role of accessibility to food and they need to be in line with healthy standards. Policies need to promote affordable healthy diets and authorities should have

[400] 101:11 p 7 in 325_May_19_21_ICLEI Africa_Multi

[401] 103:17 p 16 in 007a_Dec_18_20_NAAGD

[402] 104:12 p 4 in 051a_Feb_24_21_Google

[403] 106:2 p 5 in 004_Nov_30_21_Kustipia R

[404] 106:14 p 7 in 004_Nov_30_21_Kustipia R

[405] 108:3 p 6 in 059_Feb_26_21_O'Doherty M

[406] 112:5 p 6 in 074_May_18_21_O'Mara_Teagasc

[407] 131:9 p 7 in 190_Apr_16_21_Cullen N

[408] 136:9 p 8 in 211_Apr_30_21_Chisholm N_Multi

[409] 138:14 p 9 in 214_May _05_21_50by40

[410] 142:6 p 6 in 230_May_19_21_Allen K

more food governance capacity-building to be able to think and plan healthy regular supply of food for the next 10 years in their country.[411]

Participant envisaged a food system that will be development focused that prioritizes healthy diets and affordable nutrition that is inclusive, efficient, resilient, and sustainable while working for everyone, especially the government.

Enhancing welfare payments, such as those introduced during the COVID-19 pandemic, that will allow low income and indigenous Australians to afford well-balanced diets rich in fruit, vegetables and low-fat dairy for their families.[412]

Another relevant issue concerns prices and access to affordable food, where the dilemma revolved around being able to produce sustainably at a price that is not prohibitive for consumers.[413]

Ensure that food is affordable because production is sufficient.[414]

Food affordability for consumers.[415]

It is essential that we democratize access to good, local food.[416]

Low consumption of fish by the poor and low income households, who usually, experience high malnutrition levels. Therefore, urgent actions have to be undertaken to increase sustainable production, ensure access of safe and nutritious aquatic foods, promotion of nutrition-sensitive aquaculture and fisheries policies, and measures to tackle malnutrition.[417]

Good food at a fair and affordable price: safe/nutritious food accessible to everyone without burdening the farmer.[418]

School meals: Ensure access to free healthful meals for all in schools.[419]

Difficulties around food access and nutrition from food swamps, people being failed by profit and drug and surgery centered medical systems, marketing of the cheapest and most affordable foods that destroy physical and mental health, lack of nutrition education available to people (e.g. understanding the difference between feeling full and having nutritious foods), the lack of affordability for healthier and responsibly grown food.[420]

[411] 151:17 p 8 in 261_May_03_21_Carrara_Le More

[412] 156:48 p 11 in 275_May_13_21_Dornom H

[413] 171:10 p 6 in 329_May_19_21_CI_WFO

[414] 180:38 p 10 in 338_May_27_21_UNHCR

[415] 198:14 p 10 in 357_Apr 14_21_Harfouche S

[416] 204:14 p 9 in 363_May_26_21_Mehta_Bautista

[417] 208:1 p 6 in 367_May_27_21_Kachulu_Thilsted

[418] 228:21 p 8 in 222a_May_11_21_FTI_ZHI_English

[419] 228:44 p 14 in 222a_May_11_21_FTI_ZHI_English

[420] 249:17 p 9 in 485_June_22_21_Levesque_SD

Looking at accessibility and affordability where there is greater yield without GMOs.[421]

Universities in Africa can trigger food systems transformation to ensure safe and nutritious food for all, shift to sustainable consumption, boost nature-positive production, promote full and productive employment, as well as build resilience to vulnerabilities, shocks and stress.[422]

Ensure access to safe and nutritious food for all.[423]

Providing greater accessibility and lower prices for foods that promote a healthy life style.[424]

Address conflict between agriculture and trade values and priorities: Farmers must have viable livelihoods and consumers must be able to access a healthy/affordable food supply from local and distant sources.[425]

The second question was, what innovations make nutritious food accessible, affordable and desirable to all Rwandans? The answer to the second question focuses on the necessity to find out an innovation that makes healthy and nutritious food aspirational for consumers. This will lead to opportunities to market healthy food and guide consumers towards healthy foods. Overall, the FSIH will play a critical role in addressing all of these issues.[426]

Raise consumer awareness about buying in local markets and/or participating in producer-consumer or consumer-only cooperatives, to be able to gain access to sustainable food more cheaply (favoring value chains without intermediaries).[427]

Sustainable diets should be locally sourced, financially accessible and culturally appropriate for all Canadians.[428]

Indigenous and heritage varieties of food should be prioritised for subsidies by governments when they are more nutritious than rice and wheat. Indigenous food should also be included in school feeding program meals and communities should have a say in what food is used for these meals & be able to shorten supply chains using locally grown food giving children nutrient dense food and not empty calories just to fill their bellies. Providing school meals and school feeding programs is good, but the food also has to be nutritious as this has a direct impact on learning & concentration.[429]

Governments especially in parts of India and Africa need to look at subsidising and championing indigenous varieties of food such as millet and fonio which are more

[421] 257:17 p 11 in 493_June_23_21_Kevany_Van

[422] 276:2 p 6 in 512_July_01_21_Malawi President_Ekwamu

[423] 277:16 p 7 in 513_July_01_21_Weise S

[424] 297:32 p 8 in 533_July_07_21_Gazit GS

[425] 299:15 p 6 in 535_July_08_UNESCO Chair on Food

[426] 300:13 p 6 in 536_July_08_21_Musabyimana JC

[427] 301:15 p 7 in 537_July_08_21_ANP_WWF

[428] 307:18 p 6 in 543_July_13_21_YRYFC

[429] 308:12 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

nutritious than traditionally subsidised wheat and rice crops. This would make the the nutritious food more affordable and would support women who are often the smaller scale farmers.[430]

Furthermore, participants highlighted how the combination of economic, social and environmental principles are key to addressing both inclusivity and affordability issues around the topic of access to healthy, nutritious and safe food in Kosovo.[431]

Equity is a key aspect of sustainability. As such, dietary guidelines and associated policies must be developed with a view to redressing food inequities, by focusing on access to nutritious, culturally-acceptable food and implementing a program of effective measuring and monitoring of how dietary patterns compare to recommended patterns among socio-economic and cultural groups.[432]

One example was in the discussion on access to nutritious food. In Bangladesh, the FGD identified the development of biofortified staple crops as a priority, whereas in Odisha, the FGD advocated for the scaling of nutrient-rich and resilient traditional crops. The FGD in Nepal, on the other hand, focused on local food production as a means of improving nutrition while addressing rural reinvigoration.[433]

Participants saw an enormous opportunity for government and policies to better support sustainable and regenerative practices. Many companies are investing in farmers, but a system-level shift is needed. Farmers can be given the freedom to be brave, take risks, and make mistakes in the transition towards a better system. Better policies can properly compensate farmers and farm workers while keeping the cost of sustainably and ethically grown food affordable to all.[434]

Incentives/disincentives such as taxes and subsidies need to be put in place as a way of promoting the consumption of nutritious diets.[435]

Reduction in costs of nutritious foods.[436]

The Consumer group agreed on the importance to ensure the access and affordability of healthy and sustainable food that is good for the planet to all of the public.[437]

The choice of vulnerable families instead of all enrolled students undermined the principle of universal access to school meals…[438]

Create mechanisms that can guarantee the supply of fresh and seasonal foods, especially those coming from closed circuits that prioritize produce from traditional communities in

[430] 308:26 p 8 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[431] 310:9 p 6 in 546_July_13_21_INDEP

[432] 312:9 p 8 in 548_July_14_21_Genoni A

[433] 313:33 p 11 in 549_July_14_21_Meah N

[434] 316:19 p 8 in 553_July_15_21_Food Tank_Oatly

[435] 318:11 p 6 in 555_July_15_21_Zombe K

[436] 330:41 p 9 in 568_July_21_21_Cooper-Liverpool M

[437] 332:10 p 4 in 156a_Apr_27_21_Dong_Quyang

[438] 339:33 p 9 in 393a_June_01_21_Food of Tomorrow_Eng

the region, such as, for example, the use of Farinha do Babaçu (Babassu Flour) in school meals, which allowed communities to remain on their land, generating income and ensuring food security.[439]

Implement systems that make it possible to take advantage of food in an adequate state of preservation and with an expiration date that operators decide not to offer to consumers (for commercial reasons), through donations from private agents (wholesalers and/or retailers and/or industrialists) before they must be thrown away (not placed on the market), and count them as part of the payment of taxes at a lower value than the replacement value of the merchandise in order to promote it. The purpose of this measure is to direct these donations in favor of vulnerable populations with difficulties in accessing to food.[440]

Ensure access to healthy and nutritious food for all (making healthy food available to everyone).[441]

Therefore, we need to talk about food sovereignty, which is defined as people's right not simply to food, but to also ensure that what is consumed is nutritious and culturally appropriate, accessible, produced sustainably and ecologically, and that they exercise their right to decide on their own food and productive system. Employing this logic, young people play a leading role in transforming the way people think about the country and the practices developed there in the search to claim and guarantee these rights; that pursuing this will return it to a livable space, reducing multidimensional inequalities by creating space with decent living conditions and for producing, which in turn establishes food systems that are healthier and fairer.[442]

Efficient and conscious use of the resources in the agri-food chain stages is indispensable in guaranteeing the necessary conditions for the food production of future generations. For this, the training of agro-ecological militant groups and a return of the people to the country will have to happen extensively. Ensuring generational overlap in the country with a conception of agro-ecological production is the way to guarantee that food is healthy, nutritious and fairly priced so that everyone has access to it. However, decent living conditions must also be ensured in the country.[443]

Publicize the existing regulations on planting and harvesting cycles, as well as those related to commercialization both in the national and international markets, and those other regulations that can be used in terms of chains, public-private alliances, public purchases, incentives for agricultural and agro-industrial production. This is so that the public policies that influence the optimal planning of national agricultural production, both for planting, harvesting, and for the import of certain items, supplies and substitute and/or similar products are better known and implemented. • Update those policies and/or

[439] 339:38 p 11 in 393a_June_01_21_Food of Tomorrow_Eng

[440] 340:21 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[441] 341:8 p 9 in 408a_June_11_21_COPROFAM_CLOC_Eng

[442] 344:3 p 6 in 418a_June_18_21_CLOC_Eng

[443] 345:5 p 6 in 419a_June_08_21_CLOC_Eng

laws necessary to guarantee the implementation of the objectives of a properly planned production, oriented towards sustainability, and healthy consumption.[444]

In order to promote food security, it is important to achieve better coordination (governance) between the institutions responsible for the case.[445]

Access to food

Ensure access to safe and nutritious food for all people: 1. Direct provision of the population with high-quality food products to maintain a healthy and active lifestyle; 2. Economic accessibility to food for all social categories of the population, including the most vulnerable; 3. Physical availability of safe and nutritious food for all equally…[446]

It is necessary to correctly set goals and formulate priorities at the national and international levels in the course of the dialog with key market members. With the growing number of vulnerable people in terms of access to food, the priority is to ensure that the world's population has access to food. It is imperative to abandon the creation of additional rationally unjustified barriers that impede the provision of food with sufficient calories to population, which replace the objective needs with not quite obvious tasks associated with promoting unjustifiably expensive types of food that in no way offer a solution to the core problem.[447]

All rights are interconnected (human rights, natural rights, rights to a healthy and sustainable environment, etc) except for corporate rights which are frequently prioritized over the rights of people. We must move from theory to action by initiating practical pilot projects within our respective communities.[448]

• A general call for the recognition and full implementation of the rights to food and the right to a healthy and sustainable environment as a catalyst to the transformation of food systems • The need to view nature as a legal entity or person with inherent rights to exist, evolve, flourish and regenerate as well as the rights to restoration, recovery, and preservation.[449]

Human rights advocacy: Recognition and full implementation of the right to food and right to a healthy and sustainable environment. Most participants acknowledged the fact that our current food system isn't delivering on the human rights obligations to fulfill the right to adequate and nutritious food given the present millions of people still suffer from malnutrition and obesity globally. Our present food systems are causing incredible damage to the environment (increase GHG emissions, deforestation, water pollution, and the increased spread of infectious diseases). One of the powerful ways to achieving a just

[444] 350:11 p 8 in 424a_June_28_21_PROLIDER_Eng

[445] 351:29 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

[446] 519:2 p 5 in 106a_June_18_21_Nurgaziev R_Eng

[447] 507:3 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

[448] 512:2 p 6 in 088_May_28_21_Divine NTF

[449] 512:4 p 6 in 088_May_28_21_Divine NTF

and equitable food systems transformation is through the implementation of the rights to adequate food.[450]

Focus on what's in front of us: Reinforcing our basic human rights and ethics is key to creating the environment for building resilience: equal opportunities, labour laws, upholding agency and dignity, food security as a human right.[451]

In the context of the growing food crisis, the financing of initiatives led by rural women reveals its importance, being the essential instrument in any agricultural development policy. It is an essential condition for the impetus of any productive dynamic, provided that other constraints on agricultural development are equally addressed. It allows for increased investment to expand agricultural production to help reduce rural poverty and improve food security.[452]

Generate decent working conditions in food production. Young people have the role of denaturalizing the dynamics that encourage labor exploitation in this area. This is associated with better training to question practices and generate better labor scenarios and greater participation in the sector.[453]

Access to food is a human right; all barriers to that right must therefore be eliminated. Indigenous right to food examines critical questions of access to healthy, culturally appropriate food, as well as issues of ownership and control of land, traditional knowledge, governance, etc. Debate on food security and food sustainability led by indigenous peoples advocates not only for access to healthy food, but for an end to the structural injustices.[454]

Exploitation of indigenous lands and industrial projects ctivities are needlesly distructive and have an enormous impact on traditional fishing, hunting and harvesting areas relied on by indigenous communities.

To ensure full access to free traditional food and economic activities for people residing in the marginalized and geographically remote areas, and families which are economically and socially excluded and vulnerable to food and nutrition security (older persons, children, persons with disabilities, etc.)[455]

[450] 512:5 p 7 in 088_May_28_21_Divine NTF

[451] 518:5 p 7 in 102_June_16_21_Namjildorj_Multi

[452] 520:5 p 8 in 107a_June_22_21_Trimarchi A_Eng

[453] 523:5 p 7 in 113a_July_06_21_Fernandez I_Eng

[454] 354:9 p 6 in 407_June_10_21_CSIPN_Aborigen Forum

[455] 354:17 p 8 in 407_June_10_21_CSIPN_Aborigen Forum

BIPOC small farmers/underserved small farmers and their communities realize that it is important to increase production, small farm sustainability, access to fresh local nutritious foods, and a build resilient nutritious food systems.[456]

Ensure access to safe and nutritious food for all…[457]

promoting family farming a viable livelihood within the UN Decade of Family farming; pioneering actions to enhance consumers experience of food access and safety; reimagining global agriculture and increasing sustainability through value chains; coordinating to ensure and champion environmental sustainability at the food systems summit and beyond; improving rural development and food systems, with operational focus on climate change.[458]

To make sure that this evolution continues to grow, it is necessary to make sure to make food very affordable and to create solutions that are accessible to most people on the planet.[459]

The role of cities in providing solutions to improve the access to healthy foods, and the importance to involve different government levels in the implementation of an integrated national agenda were highlighted. Business leadership toward the food systems' transformation was mentioned as a means to strengthen public-private partnerships linked to the adoption of technologies by producers and industries, the role of retailers in consumer education, and the potential of joint initiatives involving distinct stakeholders aimed at mitigating food loss and food waste, and increasing access to healthy foods.[460]

6 - Uniting public and private sectors to delineate solutions to improve food access. The trade-off between developing value-added food products and improving the access of foods to low and lower-middle income consumers demands attention, and the focus should be on increasing the access to healthy foods since the per capita consumption of fruits and vegetables in Brazil is less than half of the amounts suggested by the World Health Organization. The legislative dimension was highlighted, and private and public sectors should discuss food donations bills and new legislation opportunities to strengthen, for instance, the role of food banks in food redistribution and/or the opportunities to foster new business models.[461]

Participants discussed that access to healthy and sustainable diets is dependent on the accessibility of sustainable production technologies, especially for small and medium producers that still lack the basics such as access to credit. Technical assistance must be

[456] 356:13 p 6 in 409_June_13_21_Mone S

[457] 357:21 p 7 in 401_June_10_21_Ekwamu_A

[458] 359:18 p 6 in 403_June_10_21_ESCAP_Multi

[459] 363:12 p 6 in 414_June_16_21_Le More_d'Antino

[460] 389:21 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[461] 389:24 p 7 in 431_June_22_21_CEBOS_EMBRAPA

expanded and improved, as well as rural connectivity, involving the government, companies and academia.[462]

Food systems need to be EQUITABLE and promote the livelihoods and NUTRITIONAL STATUS of the MOST VULNERABLE in food systems both in urban and rural areas (including smallholders, children, youth, and women) with a view to addressing their specific needs, access to safe, nutritious food, and enabling them to catalyze income generation to be drivers of change through their food choices. Investing in agri-food systems which make nutrient-rich foods available, at affordable prices for all, is needed in the region.[463]

Cities must integrate food access and resilience into adaptation and emergency planning, develop relationships with stakeholders across the food system to build resilience, and ensure at least some local food production for emergencies.[464]

1. For food insecurity in the past, we have mostly focused on yield, income, and very particular metrics, but we know that we also have to look at equity, health and access.[465]

Need to move from basic caloric intake needed to live to providing full/balanced nutrition and diverse diets with fruits and vegetable.[466]

The possibility for food security initiatives to cut across the African Continent This is possible because the demand for food is across Africa. Food insecurity is attributed to the deficit of science to drive our own agriculture.[467]

Improving food access for suburban areas.[468]

Social norms and influencing women's access (and allocations) to nutritious foods.[469]

The group on direct action focused on developing and growing our "Food Corps" team, which provides small-scale farmers with volunteering support and hungry urban communities with access to healthy food.[470]

Governance/Policy: The current pandemic context must be considered, where it has been shown that the consumption of fruits and vegetables reduces the risks of getting sick. We must start by implementing greater nutrition education from the first stages of life, accompanied by public policies that promote healthy eating and facilitate access to healthy food. We must demolish myths with powerful educational campaigns.[471]

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[462] 389:50 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[463] 403:11 p 7 in 444_May_25_21_FAO_UNICEF_Multi

[464] 404:48 p 11 in 445_May_26_21_ICLEI USA

[465] 423:11 p 6 in 464_June_10_21_IFAD_UNFSS_Multi

[466] 424:37 p 10 in 465_June_16_21_Congressional Hunger

[467] 425:33 p 7 in 466_June_17_21_Ekwamu A

[468] 428:22 p 7 in 469_June_17_21_de Silva R

[469] 430:11 p 6 in 471_June_08_21_van Liere M

[470] 464:35 p 16 in 185_Apr_14_21_Local Farm_Multi

[471] 474:18 p 6 in 246_June_09_21_Boza_Kanter

Access to safe and nutritious food Better education of consumers; monocultures do not necessarily produce more nutritious food; eliminate waste in consumption; water and food must be considered basic human rights.[472]

There were several outcomes or action items discussed among the group to help ensure access to safe and nutritious food.[473]

There is a need to focus on improving economic conditions, food access and living wages to work towards a future of equitable livelihoods.[474]

Therefore, government and relevant stakeholders need to develop and strengthen programs to improve knowledge and access to quality food, for the poor and marginalized groups.[475]

...food should be affordable for all and personalized nutrition should be part of the solution, so that everyone has access to healthy and nutritious food (right to food), by respecting cultural needs and traditions.[476]

Consider access to healthy food a basic right whereby states need to ensure safe and affordable access to healthy food.[477]

Review land and water tenure modalities to ensure equitable access to resources and allow land access to nomad Bedouins, make available different sets of food pricing to enable access to cheap food for the most deprived , and ensuring access to basic food as basic right for all.[478]

Strengthen effective social protection networks based on sustainable financial resources and enhance the concept of social security through the preparation and support of the food basket and food banks.[479]

The idea is to open up the nutritional options and to improve accessibility of these kinds of diets.[480]

Consider alternative means of payment for food, like meal tokens, to increase access and reduce friction especially for fresh, healthy food.[481]

Another key theme was that food security equates to national security. Private sector must ensure that nutrient-dense, responsibly produced food is accessible, particularly in the most vulnerable communities. There was clear recognition that private sector efforts must

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[472] 476:5 p 7 in 264_May_06_21_Arrell Food_Multi

[473] 487:21 p 7 in 293_May_22_21_City of San Antonio

[474] 487:42 p 10 in 293_May_22_21_City of San Antonio

[475] 10:11 p 10 in 181_Apr_8_21_Miranda

[476] 22:12 p 9 in 191_Apr_16_21_Donati L

[477] 30:12 p 6 in 071_Mar_11_21_ESCWA_FAO

[478] 31:14 p 7 in 077_Mar_09_21_ESCWA_FAO

[479] 36:44 p 10 in 096_Mar_29_21_ESCWA

[480] 39:8 p 7 in 175_Mar_16_21_Donati L

[481] 49:29 p 9 in 086_Mar_20_21_Rosatan B

go beyond food security and environmental sustainability, and support livelihoods and social equity.[482]

There are three main aspects: first, to strengthen food security and reduce hunger, so that everyone can get enough food; second, to reduce all forms of malnutrition and make it easier for people to have access to nutritious food, and to pay attention to food safety issues to ensure that everyone has access to safe food.[483]

Nutritional Trauma: Participants shared the need to address the on-going lack of access to healthy traditional foods or healthy foods. There was concern of the unhealthy food distributions in Native communities during the pandemic. This is a continual concern to address the food systems that can bring healing foodways and restoration.[484]

Commodification of food systems dehumanizes the food system. We must get back to a food system that services people, that lives within planetary boundaries, and ensures access to healthy food for all people.[485]

Panelists during this session discussed how to improve the role of local authorities in governing food markets and access to food markets both by consumer and producer and enhancing fresh food logistics to tackle issues as efficiency, accessibility and food waste.[486]

Ensure access to safe and nutritious food for all.[487]

Developing and providing access to affordable healthier food options that are also sustainably grown.[488]

…access to nutritious foods within communities.[489]

They should have access to food, water; as basic minimums.[490]

…access to healthy and nutritious food for all.[491]

Participants identified the need to provide access to clean water and healthy foods to developing populations and populations in refugee encampments.[492]

Create a system of accountability for appropriation and cultural theft that can make traditional foods accessible to everyone.[493]

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[482] 85:6 p 6 in 160_20_Apr_21_GSI

[483] 126:5 p 10 in 157_Apr_25_21_UNFSS-AT2

[484] 129:7 p 7 in 179_Apr 01_21_Livingston_Way

[485] 149:15 p 7 in 243_June_03_21_Schwartz A

[486] 151:28 p 9 in 261_May_03_21_Carrara_Le More

[487] 163:33 p 6 in 300_May_27_21_Alesso_Pommeret

[488] 163:119 p 16 in 300_May_27_21_Alesso_Pommeret

[489] 167:57 p 10 in 311_June_14_21_NCD Child

[490] 180:8 p 6 in 338_May_27_21_UNHCR

[491] 188:14 p 5 in 346_May_31_21_CANEUS_Multi

[492] 195:2 p 7 in 353_June_07_21_Blum N

[493] 204:26 p 10 in 363_May_26_21_Mehta_Bautista

...extend food assistance for the babies and senior citizens during disasters.[494]

Food emerges as a central theme in the pandemic, with the potential to impact local projects throughout the territory. It is urgent to ensure autonomy in the access to food, either by guaranteeing a minimum income or by encouraging local food production.[495]

Food is a basic right - access, grow, and share their food; public gardens and use public spaces (community gardens and space, indoor production; opportunity to get municipal government involved) Many first nations are without accessible and appropriate food.[496]

...An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the challenges holistically, avoiding trading off one aspect against another b. Design/test for - and commit to - scaling up, at speed c. Cater to more different individuals and communities and unmet needs d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving and supporting mindset and cultural shifts. Decentralise access to good food f. Empower people through food skills and knowledge.[497]

Decentralise access to good food making it more available out of hours, out of town, or for isolated/less mobile consumers, and easier to grow some fresh produce at home or nearby.[498]

Write school food programs into law. Brazil provides an example of success in food school program.[499]

Participants agreed that freedom means not relying on (predominantly Westernized) grocery stores for food. People should not need to rely on supermarket chains where culturally-relevant foods are sparse and nutritious foods such as fresh produce are expensive relative to cheaper, calorie-dense processed foods. People should be able to grow their own foods in response to the inaccessibility of nutritious foods due to financial or geographic barriers. Additionally, relatively expensive and inaccessible foods, such as whole vegetables and fruits that are recommended by the 2019 Canada's Food Guide, should be subsidized in order for the food system to reflect accessibility to a nutrient-diverse, healthy range of food for consumers.[500]

Promote nutrient-dense, whole-food diets underpinned by diversified food production adapted to different microclimates and sociocultural contexts. Create positive food environments that provide equitable access, healthy dietary guidance, controls on food advertising and marketing especially to children, a precautionary approach to new

[494] 218:17 p 6 in 379_June_08_21_KAMMPIL

[495] 228:42 p 14 in 222a_May_11_21_FTI_ZHI_English

[496] 257:14 p 11 in 493_June_23_21_Kevany_Van

[497] 259:3 p 6 in 495_June_23_21_Forum for the Future

[498] 259:14 p 8 in 495_June_23_21_Forum for the Future

[499] 299:74 p 12 in 535_July_08_UNESCO Chair on Food

[500] 307:21 p 7 in 543_July_13_21_YRYFC

products, and special consideration for vulnerable groups and women's role as agents of change.[501]

Give attention to emerging food insecurity – households prone to food insecurity – flexible safety nets at the municipal level.[502]

Creating and strengthening a local public market system improves health, reduces inequalities, improves livelihoods, and supports a more sustainable distribution of food throughout cities and regions.[503]

Governments need to use a spectrum of policies from voluntary to mandatory which include laws, acts or statutes in ensuring that people have physical and economic access to nutritious foods. Enforcement of such policies is crucial in achieving a healthy and sustainable food system that benefits all.[504]

Commitment to ensure that meals quickly reach students and their families, in particular through delivery of food parcels to students from the cities, with careful identification of the most vulnerable groups to ensure that meals arrive fast. The case studies were very similar, regardless of the size of the city; however, large cities had greater difficulty in obtaining fresh produce directly from family farms.[505]

Strengthening partnerships with government institutions, international organizations, civil society organizations and the private sector, as well as establishing common goals to clean up food systems will be essential to achieving the goals proposed in the Decade of Family Farming and the Sustainable Development Goals (SDGs), emphasizing the first two objectives: eradication of poverty and zero hunger.[506]

Consider quotas for the export of certain agricultural items, to guarantee food security in certain periods of deficit in their production.[507]

Guiding Theme 12. Support Nature-Positive Solutions Nature Positive Solutions

Agroecology

Climate action could be supported by expanding agro-ecological practices and promoting resilient food systems that produce healthy food.[508]

[501] 309:20 p 7 in 545_July_13_21_Mbenya R

[502] 310:19 p 7 in 546_July_13_21_INDEP

[503] 314:3 p 6 in 550_July_15_21_Danie_Verel

[504] 318:10 p 6 in 555_July_15_21_Zombe K

[505] 339:11 p 7 in 393a_June_01_21_Food of Tomorrow_Eng

[506] 345:4 p 6 in 419a_June_08_21_CLOC_Eng

[507] 350:21 p 8 in 424a_June_28_21_PROLIDER_Eng

[508] 359:11 p 6 in 403_June_10_21_ESCAP_Multi

Improving the use of biodiversity for nutrition is seen as an opportunity for Brazil to differentiate its food production, which is heavily based on the exports of commodities…[509]

We need to start supporting agroecological systems and Indigenous Peoples' food systems with the same way we support industrial production systems through comparable allocation of resources, extension services, trainings, research, and land designation. This would include increased localized production through market incentives for local economies of scale, incentives to promote agrobiodiversity working with local chefs, restaurants and markets, and increased support of conservation and biocentric production.[510]

Discussion topic : Agroecological farming and intact natural resources: an agroecological diversification of production and low-impact farming practices will reduce the use of fossil fuels and chemical inputs; switching to locally adapted landscape approaches will allow for (cost-)efficient food production.[511]

Discussion topic : Agroecological farming and intact natural resources: an agroecological diversification of production and low-impact farming practices will reduce the use of fossil fuels and chemical inputs; switching to locally adapted landscape approaches will allow for (cost-)efficient food production.[512]

To implement the proposed systemic interventions, participants saw the need for the UN to take the lead in the global advocacy on natural farming, and in providing guidance to member states in adopting agroecology and regenerative agriculture. The UN should also exert their influence over large agro-industrial companies to ensure that food security is achieved via the triple the bottom line approach (i.e. people, planet, prosperity for all).[513]

3. In contrast with industrial agriculture, the patchwork forest and farm landscapes of FFPOs and Indigenous Peoples routinely produce a wide diversity of subsistence agroforestry foods (including the wood energy to cook with, and the construction materials for shelter) alongside cash crops that together are constituting an integrated approach to food security (stable, nutritious, available, accessible and sustainable).[514]

The plan includes a package of interventions in agriculture (i.e., incentives for agroecology and small farmers, food loss, public procurement, regulation of glyphosate), health (i.e., targeting children's first 1000 days, revised dietary guidelines, public awareness campaigns), food environments (i.e., taxing unhealthy processed foods, front-of-pack warning labels, food advertising restrictions), and school environments (i.e., space, curricula, and nutrition standards).[515]

[509] 389:92 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[510] 449:15 p 6 in 390_May_28_21_UNPFII_FAO

[511] 457:123 p 27 in 120_Apr_27_21_Mauderli_U

[512] 459:96 p 27 in 125_May_11_21_Mauderli_COSUDE

[513] 460:84 p 9 in 131_May_25_21_IISLA Ventures

[514] 473:19 p 7 in 244_June_09_21_Macqueen_Multi

[515] 501:3 p 8 in 397_June_04_21_WHO_Multi

Positive production for nature.[516]

In order to improve access to food and food security, participants suggested that the current production systems need to change and adopt agro ecological approaches.[517]

Nature-positive Production - The shift to agro ecological approaches and nature-positive production systems (such as regenerative or conservation agriculture) needs to be taken up on a priority basis. This transition needs to go hand in hand with a change in the narrative around farming in the Global South. Agriculture is often associated with poverty, and adopting nature-based approaches could help change this to one of pride and joy.[518]

Build agency of local leadership and strengthen local food systems through the promotion of indigenous crops and traditional forms of agriculture.[519]

Use Rights of Nature as some of the tools to oppose prominent destructive agricultural practices which clearly are in violation of natural principles and values e.g criminalized ecocide. • Promoting and Supporting Indigenous Food Systems: Native seeds, smaller farms and agroecology generally produce more and healthier foods and the Rights of Nature can support governments to promote these types of Food Systems because doing otherwise means continuous devastation of nature. Based on these understanding, promoting rather displacing food sovereign communities is a good step in securing healthy and nourishing agriculture.[520]

Support and promote agro-processing in rural areas.[521]

Support agriculture and ecology and limiting the use of chemicals.[522]

The practice of Agroecology can offer many solutions and close the loops of linear production type systems as well as to enforce the linkages that build resilient agricultural systems. There is need for mechanism to support wider adoption of agroecological practices regionally.[523]

For Farmers: invest in beginning professional farmer training programs, free, transparent education for all farmers on agroecological practices that support the environment, especially in the face of climate change and severe weather patterns.[524]

[516] 3:9 p 9 in 099_Mar_31_21_FAO_IFPRI

[517] 26:17 p 7 in 023_Jan_29_21_Bharat K S

[518] 27:18 p 6 in 044_Feb_18_21_Bharat K S

[519] 424:10 p 6 in 465_June_16_21_Congressional Hunger

[520] 29:10 p 7 in 066_Mar_5_21_Nkenglefac T

[521] 30:15 p 6 in 071_Mar_11_21_ESCWA_FAO

[522] 30:30 p 6 in 071_Mar_11_21_ESCWA_FAO

[523] 35:48 p 7 in 095_Mar_27_21_Chinapoo C_Multi

[524] 49:15 p 6 in 086_Mar_20_21_Rosatan B

Create accountability for land stewardship through consumer tax programs that invest in regenerative land practices (ie a public utility model to develop agroecological practices that bene¦t the ecosystem in and around developed areas).[525]

There is need for an increase focus in agroforestry, as the practice reduces water utilization and improves yields whilst using less energy from utilities Wider use of urban farming techniques that build on the circular economy concepts and models in water, energy and waste utilization.[526]

Embed principles of agroecology in these incentives, policies, and priorities.Principles of agroecology are needed, and not just principles of chemical industry. Figure 18 shows what the principles of agroecology are in terms of scientific research approach to agro ecosystems, food ecosystems, with principles of enhancing resilience from the bottom up. It is also a socio-political movement; it is changing urban areas. Some years ago, people in Cagayan de Oro started with communal gardens. It is very important to have these examples so the youth can engage and take up the demanding issues because this is the challenge of the youth.[527]

Encourage agroecological production to reduce the use of pesticides and agrochemicals.[528]

One should pay attention to what is produced and how it is produced in order to save natural resources and species. For example, could new species replace rice, and could animal protein be replaced with plant-based protein? Encouragement towards agroecological and other environmentally friendly methods should be increased in order to reduce environmental damage. These are often location-based and require strong know-how to invest in. As any change in methodology is a potential risk for the farmer, the change processes must be supported and de-risked for sustained transition to take place.[529]

Possibly this instance (GFS 2021) can serve, rather than to spend or direct funds and resources of the countries towards these unsustainable initiatives or projects, to help ensure that they are directed in the first place to processes of high social impact and resolution of the problems of rural development, improve the quality of life, education and health and support the initiatives of independent science, which based on Agroecology (really the first support of what the UN at least calls in the papers, Solutions based on Nature), can come true.[530]

Financial incentives to communities to promote agro-ecology.[531]

[525] 49:22 p 6 in 086_Mar_20_21_Rosatan B

[526] 50:11 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[527] 74:29 p 30 in 189a_April_16_21_Ateneo de Manila

[528] 75:18 ¶ 85 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[529] 79:28 p 9 in 118_Apr_21_21_Huvio T

[530] 80:1 p 7 in 128_May_14_21_Pengue W

[531] 96:13 p 7 in 255_Apr_27_21_ICLEI Africa_Multi

Embed principles of agroecology in these incentives, policies, and priorities. Principles of agroecology are needed, and not just principles of chemical industry.[532]

As a conclusion on how agroecology can contribute to addressing major climate and food challenges in Nigeria, what emerged was building the knowledge of farmers, indigenous peoples, and pastoralists, this could be done by government through extension workers or other food organization. Increasing research and innovations and delivering it in the indigenous languages. There's also an urgent need to rethink and transform production models.[533]

Seed security is crucial to food security and livelihoods and is part of a community's disaster risk management, especially in the context of climate change. Together with agro-ecological practices, and farmers accessing weather information and collecting weather data themselves, farmers use plant genetic resources as part of their climate adaptation strategies.[534]

Promote agro-ecological approaches that complement the conservation and use of plant genetic resources for sustainable food production, and for the restoration of lost biodiversity, degraded soils, and water management. It should be the economic driver of food and nutrition security based on sustainability, resilience, and increased food production.[535]

Integrating and synergizing ecosystems; enabling conditions are needed to improve food systems and its sustainability using agroecological approach.[536]

Focus RDE directions on agroecosystem and landscape scale; long-term studies and observations of agroecosystems; alliances with local communities, NGAs, and private sector.[537]

HEIs need to set up incubators for green start-ups and other businesses that are much needed for enhancing the uptake of agroecology practices. [538]

There are already be a number of technologies and approaches that we could taking off the shelf - agroecology for example. Such technologies to address interrelated climate and water management risks such as irrigation are perhaps not ground breaking, but will be essential. [539]

[532] 103:39 p 30 in 007a_Dec_18_20_NAAGD

[533] 116:21 p 7 in 093_Mar_25_21_Adeboye_T

[534] 140:2 p 6 in 223_May_12_21_Mushita A

[535] 140:28 p 9 in 223_May_12_21_Mushita A

[536] 157:54 p 9 in 278_May_18_21_Gregorio B

[537] 157:58 p 9 in 278_May_18_21_Gregorio B

[538] 157:71 p 11 in 278_May_18_21_Gregorio B

[539] 158:4 p 6 in 279_May_18_21_Yoovatana M_Multi

Concerted efforts in participatory plant breeding to improve the adaptation of forgotten foods and forgotten foods to social, economic and ecological conditions, and nutritional value.[540]

Agroecology has been recommended as the best way to assist smallholder farmers especially regenerative agriculture and permaculture.[541]

Agroecology has been recommended as the best way to assist smallholder farmers especially regenerative agriculture and permaculture.[542]

Promote the protection of wetlands: The group was clear in the understanding that Wetlands provide vital ecosystem services. They supply water, improve water quality, support primary industries, provide food and storm mitigation, act as a carbon sink, provide habitat for biodiversity and threatened species, and provide communities with recreation and tourism.[543]

Shifting to nature positive production: (a) Identify intervention areas where farmers and other concerned actors to protect of natural ecosystem; (b) Assess the contribution of novel sustainable farming practices such as Agroecology; (c) State relevant measures for decarbonisation and resilience with innovation; (d) Suggest roles of the public and development sector in de-risking and funding the transitional period.[544]

Russian government needs to significantly step up its sustainability efforts and begin to implement mechanisms to address existing inequities. Today's decisive action in economic, social and environmental dimensions of food policy will be critical in ensuring that the decade ahead delivers a sustainable food future. There is there is little time to lose, today we are witness to the pandemic of mistreated biodiversity. We must urgently reconcile humans with surrounding environments and restore our relationship with the nature.[545]

To invest in the development of various types of protected areas, intact forests, projects on climate change adaptation and ecosystem recovery.[546]

Dialogues have been framed around the Summit action tracks or with a focus on country-relevant topics such as access to food, vulnerability to malnutrition, production of higher quality food, nature positive production systems for local farmers and fishers, resilience of food systems including interventions designed to ensure resilience at small farm level, making farmers' livelihoods stronger and secure, educate the public on nutritious and healthy patterns, and environment friendly and nutritious production.[547]

From Action 3 - it was acknowledged that Indigenous Peoples in their food systems have been the generational masters and experts on "nature-positive" production and food

[540] 159:9 p 6 in 287_May 20_21_Akinbamijo_Y

[541] 176:4 p 9 in 334_May_25_21_Buzingo_J

[542] 176:16 p 9 in 334_May_25_21_Buzingo_J

[543] 182:84 p 13 in 340_May_27_21_Mamba_L

[544] 183:14 p 5 in 341_May_28_21_Sewraj_KS

[545] 354:10 p 6 in 407_June_10_21_CSIPN_Aborigen Forum

[546] 354:25 p 8 in 407_June_10_21_CSIPN_Aborigen Forum

[547] 359:3 p 7 in 403_June_10_21_ESCAP_Multi

generation, as stewards to 80% of the world's remaining biodiversity on just 25% of the Earth's surface. Indigenous Peoples' natural resource management practices and food system designs have a great deal to show the world on how to create "nature-positive" food generation models and the critical importance of enhancing biodiversity through food generation, and the interconnected, systems approach to natural resource management.[548]

3. Boosting nature-positive production at scale: Sacred Relationship to Environment and the Critical Role of Lands, Territories, and Resources of Indigenous Peoples.[549]

BOOSTING NATURE POSITIVE production and building CLIMATE-RESILIENT solutions, including financing greening of agricultural production and value chains. Policymakers need to get as much information as possible to make sound decisions and see possible trade-offs.[550]

Additionally, this can be achieved through strategic alliances for the exchange of knowledge and technology, which allow for developments that are more nature-positive and build on local capacities.[551]

Recommendation 4: Promote greater agro-ecological production in adequate quantities without polluting the environment, without degrading nature, incorporating local practices (a recommendation specific to Spanish-language dialogues) Who: Government, UN, Farmer organizations, civil society How: this can be achieved by incorporating local seeds in the value chain, focusing on territorialisation of agri-food systems, and recognising local capacities and territorial complementarities between primary producers and processing (such as conditions and facilities for post-harvest processing and storage). Additionally, this can be achieved through strategic alliances for the exchange of knowledge and technology, which allow for developments that are more nature-positive and build on local capacities.[552]

Assessing the contribution of novel sustainable farming practices such as Agroecology: 1) Introducing green belts around vegetable ¦elds. This can help to act as wind breaks, but also attract pollinators; 2) Agro-forestry is also good practice as a good agricultural practice for both crop plantation as well as for rearing animals (grazing grounds). Over years, farmers have been encouraged to shift to organic farming, which is more ecological way to safer food production; 3) Engaging in sensitisation campaign not only to educate farmers but also to consumers is equally important as they are the one setting the demand aspect; 4) Organising seminars on different value addition methods; 5) Encouraging young farmers to implement new farming techniques to increase productivity and to ensure a sustainable production; 6) Developing soil regeneration programmes (F.A.L.C.O.N Association provides both theoretical & practical courses on soil biodiversity management)and that can only happen though controlled and minimal use of fertilizers

[548] 390:13 p 6 in 432_Dec_15_20_UNPFII_FAO

[549] 390:25 p 10 in 432_Dec_15_20_UNPFII_FAO

[550] 403:14 p 7 in 444_May_25_21_FAO_UNICEF_Multi

[551] 457:72 p 12 in 120_Apr_27_21_Mauderli_U

[552] 459:59 p 12 in 125_May_11_21_Mauderli_COSUDE

and other agro-chemicals that add to greenhouse gas emission such as nitrous oxides and methane.[553]

Assessing the contribution of novel sustainable farming practices such as Agroecology.[554]

Agroforestry maximises land use and allows the derivation of maximum bene¦ts from trees on agricultural land.[555]

In natural systems, the production follows functions. There is an urgent need to leverage technology, diversity, and indigenous knowledge to restore the ecological sound food systems for healthy diets, sustainable living and planetary health. Technology is manured enough to make a difference which requires collective actions for system-level. transformation- it must combine resilience, conservation, and restoration with co-benefits.[556]

The discussion was opened by Dr Agnes Kalibata, UN Special Envoy for the Food Systems Summit, who insisted on the need to address poverty and inequality, which are at the root of global con§ict and hunger. She called for deeper dialogue in light of the UNFSS, to emphasize the idea of human beings as a critical element of agroecology and the necessity to come through for the people who need it most.[557]

Medium and long-term plans – Revive the role of the Federal Government in the access to food, with public policies and educational processes at the center of the debate, thus enabling access to natural resources (land and water), agrarian reform, technical support for social technologies aimed at ecologically-based agriculture, policies aimed at agroecology, price floors for family farming, transport, and logistics structuring, and public food acquisition programs (for donations and building stocks), among others.[558]

The representations of family farming must work with town councils, prioritizing local systems, rethinking distribution and consumption mechanisms, and expanding the dialogue with consumers. Additionally, build a narrative that highlights the viability of ecologically-based agriculture to address the hegemonic narrative of commodity agribusiness, which is promoted in the mainstream media and the representatives of large producers.[559]

Introduce traditional knowledge and new agroecological production models, such as bio-inputs and family agroindustry for short circuits, in addition to products other than the conventional ones. Save native seeds, a symbol of agrobiodiversity preservation.[560]

[553] 183:15 p 12 in 341_May_28_21_Sewraj_KS

[554] 183:64 p 12 in 341_May_28_21_Sewraj_KS

[555] 183:97 p 16 in 341_May_28_21_Sewraj_KS

[556] 188:27 p 7 in 346_May_31_21_CANEUS_Multi

[557] 210:5 p 6 in 369_May_31_21_Holy See

[558] 228:2 p 8 in 222a_May_11_21_FTI_ZHI_English

[559] 228:27 p 8 in 222a_May_11_21_FTI_ZHI_English

[560] 228:66 p 20 in 222a_May_11_21_FTI_ZHI_English

Developing and scaling up new agricultural technologies and innovations to enhance the resilience of family farming systems, as well as to preserve the health of agro-ecosystems, animals, humans and biodiversity, and to reduce post-harvest losses.[561]

Alternative models, such as agro-ecology and small local farming, do not entail a loss of profitability for the local farming families. Moreover, they involve advancement of innovation processes, so that the community members who so wish can have access to market production levels, and those who do not can achieve effective sustainability for their communities.[562]

Agroecology in Agroforestry υSolidarity among farmers provide services to members that enables them to manage natural resources in an environmentally friendly manner, produce quality products that meet market demands, achieve fair and sustainable returns for their work and improve the wellbeing of all members of farming families.[563]

Increased awareness about agroecology and organic agriculture - The principles and practices of agroecology and organic agriculture are there, many farmers around the world are already practicing sustainable food production system that cuts across the challenges presented, it's just a matter of recognizing, promoting, supporting and directing resources into organic agriculture and agroecology by the national governments and international institutions such FAO.[564]

Stronger cooperation between members of INOFO in the promotion of agroecology and organic agriculture and for exchange of experiences, study and improving human resources. Farmers exchange and training to diagnose the problems and they are equipped with the technology & management techniques are able to assist with plant health in their communities.[565]

Proposal to support and scale up organic farming and agroecology through financial models for organic farming and maybe consider awards for farmers pursuing this. Push governments to create policy to reduce use of pesticides and chemical fertilizers. Ban these. Promote organic fertilizers. Policies that support small scale organic farmers to create favorable environment for them to thrive and become productive. It should include policy to introduce good post harvest facility for farmers. Subsidy not adequate. Some more support for farmers to store product to get better price for products.[566]

Priorities of the governments in many countries are misplaced, which are pushing small scale and marginalized farmers further in the periphery. The proposed solution are all in the agroecology framework of FAO, but as part of the output of the dialogue, there is a strong recommendation to include the political dimension, specially farmers right recognition, to bring the back the resources (land, biodiversity, knowledge, technology,

[561] 229:4 p 6 in 226a_May_17_21_Oteyami O_English

[562] 234:27 p 8 in 273_May_12_21_ILC_FILAC_Multi_Eng

[563] 250:7 p 7 in 486_June_23_21_AFA_Multi

[564] 250:11 p 9 in 486_June_23_21_AFA_Multi

[565] 250:12 p 9 in 486_June_23_21_AFA_Multi

[566] 250:17 p 9 in 486_June_23_21_AFA_Multi

market) into the hands of the farmers, as this is basic requirement to have a better food systems.[567]

Coastline Management: Mapping seaweed can be useful for managing the coastline better and understanding the biodiversity and ecosystems present in these areas. The coastline is one of the most vulnerable spaces to climate change.[568]

On this issue, the members suggested the need for research on agro-ecological zones to ensure suitability of inputs, the need for agro-ecological zoning to ensure that inputs are customized according to soil maps and the importance of creating awareness amongst farmers on the proper use of chemicals.[569]

Establish agroforestry landscapes with fruit trees and integrated with forest rehabilitation in Northwest Vietnam to reduce soil erosion, landslides, and extreme weather condition.[570]

Diversify the cropping system and other agro-ecological system research.[571]

Building a sustainable bridge between nutrition science and agriculture sector to achieve sustainable production systems (agroecology, regenerative agriculture) is vital to transform food systems. There are active and transformative things happening in agriculture right now, however they are only on a small scale and they need to be scaled up. [572]

Although results are mixed and further research is needed, a positive relation between agricultural diversification and diversified diets, is true for many different farming systems. Agroecology does not deliver immediate results. Different voices highlighted that despite the broad and holistic innovation strategy agroecology is offering, there is a need to address challenges such as the time lag be-tween the moment when agroecological measures are implemented and the moment when the effects become visible or measurable.[573]

Support for agroecological transitions through small-family agriculture projects and linking these to broader landscape-scale initiatives and international support organizations.[574]

Design public and private finance contextualized at a local level to support farmer and community transition to agroecology, processing and infrastructure with a wide variety of instruments and mechanisms: nature-positive subsidies, carbon credits/payments for

[567] 250:21 p 10 in 486_June_23_21_AFA_Multi

[568] 264:38 p 10 in 500_June_26_21_Edible Issues

[569] 270:7 p 8 in 506_June_29_21_EAFF

[570] 277:67 p 9 in 513_July_01_21_Weise S

[571] 277:68 p 9 in 513_July_01_21_Weise S

[572] 280:92 p 12 in 516_July-01_21_Anastasiou K

[573] 286:1 p 6 in 522_July_06_21_CNS-FAO_Multi

[574] 299:63 p 11 in 535_July_08_UNESCO Chair on Food

ecosystem services, agricultural/forestry insurance products, grants for development processes, technical assistance, equipment, longer-term tenure loans, etc.[575]

Participatory monitoring efforts with communities serve the double function of engagement, validation, and trust building; as well as measuring contextually established indicators for success (i.e. watershed restoration, has of riparian area restored, ha under agroecology, food production, etc.).[576]

Invest in agricultural production that integrates restoration actions (positive conversion) of ecosystems.[577]

Promote sustainable plant production, including for animal feed.[578]

Training & extension should focus on the coexistence of conventional and agroecology knowledge.[579]

As soil health is often neglected and is far from a renewable resource, regenerative agriculture should be a primary aim towards a just food system that supports future generations of farming.[580]

While SDG 2, Target 2.5 calls for maintaining the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species, we call for urgent attention to the critical role that indigenous seeds play in promoting and conserving our genetic resources. We, therefore, call for enhanced recognition and protection of farmer-managed seed systems including enabling legislative environments. We also call for stricter adherence to the safeguards enshrined in the Convention on Biological Diversity and its expansion to regulate new bioengineered technologies because of unforeseeable off-target effects, patent, and ethical issues associated with this evolving science.[581]

Agro-ecology as a concept should be integrated within the policy framework and educational curricula.[582]

The standardization and efficiency of field management could facilitate addressing the food loss in harvesting, which can be achieved by implementing quality standards for harvesting machinery, as well as operational norms for harvesting operations, planting and agronomic norms, with attention to promote land merging and appropriate grain varieties.[583]

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[575] 299:65 p 11 in 535_July_08_UNESCO Chair on Food

[576] 299:67 p 11 in 535_July_08_UNESCO Chair on Food

[577] 301:42 p 8 in 537_July_08_21_ANP_WWF

[578] 301:44 p 8 in 537_July_08_21_ANP_WWF

[579] 305:8 p 8 in 541_July_12_21_AEHT

[580] 307:24 p 7 in 543_July_13_21_YRYFC

[581] 309:16 p 7 in 545_July_13_21_Mbenya R

[582] 310:35 p 9 in 546_July_13_21_INDEP

[583] 315:8 p 6 in 551_July_15_21_FAO_ESCAP_Multi

Participants agreed that policy needs to catch up to forward-thinking companies' ambitions and the scientific consensus as to the impact of the current global food system on planetary and human health. The government has a big role to play in making necessary changes. Because policies support industrialized agriculture, affordability remains a main concern in scaling sustainable production practices, as well. Participants spoke about how better policies can support sustainable and regenerative systems by incentivizing farmers to experiment with different ways of farming. By supporting and scaling regenerative supply chains, farmers can make a living wage while companies gain better access to healthy ingredients and these products are accessible to all consumers. Policy may also reimagine how consumers interact with food labels and expand what those labels look like to include factors like carbon footprint and animal welfare.[584]

Participants noted that focusing on scaling-up the circular economy plays an important role in helping the system catch up to the private sector's ambitions. Regenerative farming needs support so businesses can access healthier and more sustainable ingredients at scale. Making sure everyone has access to these foods can also ensure that there is an equitable and fair playing field for all companies developing these products.[585]

Likewise, researchers and entrepreneurs noted the innovativeness of the initiatives presented, particularly the farmer-to-farmer technologies and how 'old' concepts such as permaculture, agroecology and respect for nature resurfaced in a creative way that needs to be integrated in subsequent UN FSS discussions about food systems.[586]

Technology as an important factor for the future of food production Another important discussion revolves around the use of technology in food production and the food supply chain. New technologies are acknowledged as important drivers of the future of agriculture. Some have raised important questions on how technologies may not yield the promised greater productivity - where methods such as agroecology argue that these more natural methods are better. Others raised the issue that while new technologies are better, the cost of using new technologies can be prohibitive and raises the cost. For older farmers, learning to use new technologies may be a significant barrier to adoption.[587]

Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.[588]

Agroecology is weakened if small farmers do not own the land they work. Therefore, Governments must do more to ensure that the land rights are in the hands of those who work and live on the land rather than the corporate sector. However, this contention is complicated by the fact that in countries that do not have property records, the Governments (mainly postcolonial Governments) are persuaded by TNCs to digitise land

[584] 316:10 p 6 in 553_July_15_21_Food Tank_Oatly

[585] 316:13 p 7 in 553_July_15_21_Food Tank_Oatly

[586] 317:6 p 6 in 554_July_15_21_Lopez DE

[587] 319:8 p 6 in 556_July_15_21_Von Goh_GenTan

[588] 319:10 p 7 in 556_July_15_21_Von Goh_GenTan

records. In the process they are denying indigenous practices where there isn't one individual that owns a certain plot of land but rather a communal style of ownership.[589]

Valorization of traditional knowledge by discovering local and ecological resources, thus reducing the use of harmful chemical products or pesticides, is important.[590]

Investing in sustainable resource management and regenerative production practices that deliver benefits for people and the environment. These include agroforesty and agroecology for crop and livestock production, as well as protecting key ecosystems such as watersheds or coral reefs and mangroves. Local and indigenous knowledge can be as an important source of know-how for resilient food production practices.[591]

Promotion of family agriculture within this context; family agriculture (rather than other forms of agriculture such as industrial) is considered to be more sensi6ve to the practice of less demanding agriculture (in water and inputs) and to the raising of animals adapted to local climatic conditions; as well as the application of organic agriculture which is less demanding of chemical inputs and therefore less dangerous for the ecosystem and less costly for the farmer, or of the circular economy which permits a more economical management of resources.[592]

Finance the transition to agroecological systems.[593]

Use organic food waste from urban centers and crop waste to produce organic fertilizers, reducing the health risks in cities and the fire risks associated with the burning of stubble from farms in the countryside. Develop waste collection systems that can be used in the production of organic fertilizers and returned to production quickly and efficiently.[594]

Peru prioritized tools [instruments] to boost quality food production by FFs, and to advance systems with low emissions, greater carbon sequestration, and useful for protecting valuable ecosystems: • Non-returnable financial support to co-innovations of AFCI organizations and research institutes to expand agroecological - organic production. Train extensionists in agroecological practices, in order to influence factors related to climate change.[595]

Non-returnable financial support for the development of co-innovations by AFCI organizations and research institutes to expand biologically, environmentally and economically sustainable agroecological production systems.[596]

[589] 323:5 p 7 in 560_July 19_21_Arbuthnott_Multi

[590] 324:33 p 10 in 561_July_19_21_OCCAM

[591] 327:8 p 6 in 564_July_20_21_Bakarr_MI

[592] 338:17 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[593] 340:3 p 7 in 406a_June_10_21_COPROFAM_CLOC_Eng

[594] 340:22 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[595] 341:7 p 7 in 408a_June_11_21_COPROFAM_CLOC_Eng

[596] 341:16 p 12 in 408a_June_11_21_COPROFAM_CLOC_Eng

The OPA, an organization for agroecological rights in Parana, has been working for 25 years to build a State Rural Development Institute.[597]

Training young people and adults for development of new knowledge which allows for improvement of production based on technology and agroecological logic.[598]

We are in the midst of a pandemic causing a serious crisis to the system, so it's time to turn the crisis into an opportunity for the peasant and agroecological production sectors to be at the center of the discussion. It must be made clear that there must be healthy, resilient food and healthy production to overcome the circumstances permeated by the pandemic. It is necessary to accomplish a good local presence in local, national and international spaces. Resilience is only possible if there is food sovereignty and agroecology.[599]

Tax benefits that improve competitiveness of quality and sustainable FA products • Comparative studies "agroecological vs industrialized consumers", to support tax benefits for lower health costs.[600]

Climate smart agriculture

The systemic view on health must also take into account the nutrition and microbiota of soils, given the direct relationship between soil health and plant nutrition.[601]

v. Special focus on identified climate hotspots and plans to manage, mitigate, and adapt to climate stress and shocks in accordance with government plans. For that, detailed vulnerability mapping, heavy investment in disaster risk reduction and innovation of insurance mechanisms and targeted subsidies are required.[602]

Develop a program for adaptation of agriculture in the north to global climate change.[603]

Employing climate-smart agriculture to mitigate the effect of climate change is a ¦eld that needs further exploration.[604]

Health systems should recognise climate change and its impacts on human health in policy and practice and take responsibility for reducing their own climate footprint.[605]

They are the engines for technologies and innovations generations including; crop varieties, vaccines, diagnostic tools for managing risks from biosecurity and climate change. Universities need to be brought to the center of the food systems this enable them play this critical role and help in the delivery of nutritious and safe food, improved

[597] 342:3 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[598] 345:11 p 7 in 419a_June_08_21_CLOC_Eng

[599] 346:3 p 6 in 420a_June_19_21_CLOC_Eng

[600] 347:16 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[601] 389:152 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[602] 392:15 p 9 in 434_June_02_21_Hanan_KA

[603] 394:53 p 11 in 436_June_16_21_GIYC_Multi

[604] 397:54 p 12 in 439_June_17_21_INAI

[605] 402:8 p 6 in 443_May_09_21_GIGH

financial sustainability of farm enterprises, greater engagement with communities, engagement with policy makers and change their culture of doing business by for example making universities easily accessible and open to the smallholder farmers and communities.[606]

…need to improve/scale up projects around: • Soil carbon • Transparency for carbon (blockchain) • Science-based understanding of technologies and products which enable no-till (such as some products important for farmers, like herbicides).[607]

Many Indigenous Peoples' organizations and traditional governments in the United States and Canada have created climate change adaptation plans for their communities and territories. They have prioritized long-term water security in their planning. Indigenous and non-Indigenous leaders and communities need to work together to implement climate change adaptation strategies and regional plans.[608]

Recommendation 5: Natural resource management and local biodiversity are key - water and soil are key elements to sustain biodiversity and lower climate impact. Poverty remains a major obstacle to proper natural resource management.[609]

Moving towards more integrated approaches for smallholder farmers, a partner identified the need to set a climate change adaptation target within its organization (i.e. 75% of approved projects focusing on sustainability) as a way of pledging support to the campaign, along with a commitment to evidence building (from proof of concept to scale).[610]

Organic offers a host of benefits for the environment and for overall human wellbeing and longevity. Organic farms sequester 26% more carbon than conventional farms and increase biodiversity by some 30%. Organic agricultural practices also build and foster healthy soil, mitigate climate change, conserve water use, reduce pesticide consumption/exposure, boost pollinator populations, allow for long-term self-sustaining farming viability to meet the growing needs of our planet and are ultimately more resilient to extreme weather conditions.[611]

2. In contrast with industrial agriculture, FFPOs and Indigenous Peoples territories routinely integrate biodiverse patchworks of agricultural land with forests in agroforestry systems, woodlots, fallow lands and conservation areas that are offering inclusive climate resilient development.[612]

[606] 415:17 p 6 in 456_May_17_21_Ekwamu_A

[607] 429:164 p 11 in 470_June_17_21_Burian_Multi

[608] 449:18 p 6 in 390_May_28_21_UNPFII_FAO

[609] 458:64 p 14 in 123_May_04_21_Mauderli U

[610] 463:57 p 11 in 155_Apr_27_21_FCDO_Mult

[611] 468:46 p 7 in 219_May_10_21_OTA

[612] 473:18 p 7 in 244_June_09_21_Macqueen_Multi

Resilience to extreme events, shocks, pandemics Youth are thinking more about climate change; inclusion of smallholder farmers in the discussion; more proactive support for climate smart faming and permaculture.[613]

We need to see the climate crisis in terms of crisis management and use learnings from how we deal with man-made conflicts- and realise that we are indeed at war- and get smart fast.[614]

Producing green energy on dairy farm, could reduce the cost of doing business. In PA, been working very diligently to change the regulations that would require a fair pay rate for electricity that is generated. However many states won't pay a premium for this, makes it not profitable and disincentivizes. If we could reward that type of technology, it can become accessible to smaller farms. Would be awesome to see 50% of them providing electricity to neighboring homes and business - rewarding good practices.[615]

Ghana Cocoa Board and its subsidiaries are focused on mitigating climate change and other environmental sustainability threats through cocoa agroforestry practices, climate smart cocoa production and irrigation.[616]

Mangrove reforestation 6. Integrated pond management 7. Probiotic fish feed 8. Small scale hatcheries 9. Advocacy for sustainable artisanal fishing.[617]

A large-scale mainstream supported program on women led climate resilient ecological farming to be framed and advocated to the government.[618]

Agricultural transformation to work closer with farmer's market and the local populations in order to shorten value chains and advance the 13 principles on agroecology and other innovations of the HLPE report.[619]

The participants then discussed the benefits of knowledge intensive and regenerative agriculture. This kind of agriculture encourages carbon sequestration, which in turn increases the groundwater table (for every gram of carbon sequestered, the soil can hold 8 grams more water). Regenerative agriculture also improves the soil microbiome. These can lead to greater resilience of farming to climate change and also decrease the chance of zoonosis like Covid-19. The practicalities of promoting and implementing regenerative agriculture were then discussed.[620]

Use crops that are climate resilient and require less amount of water.[621]

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[613] 476:8 p 7 in 264_May_06_21_Arrell Food_Multi

[614] 486:85 p 14 in 291_May_21_21_Polman_Prabha

[615] 497:35 p 7 in 314_June_16_21_ICC_US Farmers_Multi

[616] 499:15 p 6 in 394_June_01_21_Egyir I

[617] 503:50 p 9 in 399_June_9_21_AFA_Multi

[618] 7:11 p 7 in 167_Apr_13_21_Welthungerhilfe_Multi

[619] 23:39 p 7 in 205_Apr_27_21_CIHEAM_Multi

[620] 27:43 p 10 in 044_Feb_18_21_Bharat K S

[621] 31:8 p 6 in 077_Mar_09_21_ESCWA_FAO

Promote research, use of technology and renewable energy, use climate resilient crops that require less amount of water and save local seeds and improve agro-diversity.[622]

Engaging in circular economy activities such as the recycling of biomass (composting) and livestock waste (biofuels) can add great value to our environment, once done right. Simply adding compost or humus can have a positive impact on soil health, fertility, water retention and can even combat some effects of climate change.[623]

Establish pilot projects that improve water and energy use and reduce pollution to support countries in crisis and with funds from World Bank, Green Climate Fund and FAO.[624]

Transparency of best practices for farming in the era of climate change can lead to less energy required to produce food, which could reduce the cost to the consumers (increasing fresh food access for consumers at an affordable price).[625]

A significant emphasis should be placed on regenerative agriculture techniques, agro forestry and generating the data on the carbon sequestered from trees in agroforestry projects that promote the reforestation of indigenous trees and the conservation of indigenous species and biodiversity. Nature based climate solutions will be critical to protection of water ways, reduction of carbon and conservation of water and energy.[626]

Improving water conservation through watershed management, better use of irrigation equipment and educational programs.[627]

Adaptive approaches and youth inclusion The factors affecting food sustainability are ever-available so, adaptive measures to respond to their incidence must be adopted. Climate Smart Agriculture, incorporation of Geographic Information System and other technologies into the Food System etc have been said to be adaptive.[628]

It was concluded that adoption of Climate-Smart Agriculture, Geographic Information System, Technology, Crop selection etc will enhance an adaptive and sustainable Food System in Nigeria.[629]

Forestry and growing fruit and vegetables offer the cheapest & long-term option for earning carbon credits for fossil fuel and heavy energy-intensive industrial production. This is critical when globally CO2 emission will need to be reduced by 23 Gigatons by 2030 if the Paris Climate change aspirations are to be realized by 2050.[630]

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[622] 31:16 p 7 in 077_Mar_09_21_ESCWA_FAO

[623] 35:25 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[624] 36:35 p 9 in 096_Mar_29_21_ESCWA

[625] 49:13 p 6 in 086_Mar_20_21_Rosatan B

[626] 50:7 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[627] 50:23 p 10 in 087_Mar_20_21_Chinapoo C_Multi

[628] 61:4 p 5 in 030_Feb_4_21_CAFS_CSAYN

[629] 61:15 p 7 in 030_Feb_4_21_CAFS_CSAYN

[630] 63:46 p 10 in 037_Feb_12_21_Food Systems for the Future_Multi

Therefore, there is an urgent benefit to launching large-scale climate-smart agriculture (CSA) activities in the DRC, to support food and nutritional security and strengthen community resilience.[631]

Not only does the integration of healthier food options improve outcomes in NCDs, like diabetes and heart disease, but the practice of shifting to more plant-based foods has a direct effect on decreasing greenhouse gas emissions that impact climate change.[632]

Need to value the benefits of livestock production and minimise climate change effects so that food production is not adversely impacted by climate change.[633]

Compile a database on climate-resilient mountain crops and try to influence the use and adoption of these crops.[634]

Promote climate services and early warning systems as key tools to mitigate degradation of natural resources in mountains and better respond to climate change impacts.[635]

However, aspects of food insecurity among vulnerable populations and adaptation to climate change need to be priorities.[636]

Climate Smart Agriculture o Extensive clean-up of rivers in Nairobi so water can be used for urban agriculture o Country should limit clean/drinking water use to agriculture and domestic uses and avoid 'wastage' for example don't allow car washing companies to use drinking water o Encourage urban small business to diversity their income by running small farms or holdings rearing chickens/goats/sheep (helps with shocks like COVID).[637]

…the food system must be sustainable, and it must be able to help reduce greenhouse gas emissions.[638]

How much investment should be channelled to agriculture, & climate smart practices.[639]

Promote the importance of soil health to food production, environmental conservation and addressing climate change.[640]

Climate smart practices need to be identified and upscaled along with promoting innovative techniques for water saving among farmers.[641]

[631] 70:2 ¶ 18 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

[632] 92:22 p 6 in 225_May_13_21_Schwartz A

[633] 93:55 p 13 in 227_May_18_21_Tarawali S

[634] 98:18 p 6 in 282_May_18_21_Romeo R

[635] 98:21 p 8 in 282_May_18_21_Romeo R

[636] 101:8 p 7 in 325_May_19_21_ICLEI Africa_Multi

[637] 101:25 p 9 in 325_May_19_21_ICLEI Africa_Multi

[638] 105:31 ¶ 29 in 176a_Mar_25_21 AGFEP

[639] 117:32 p 10 in 109_Apr_13_21_Jacobs-Mata I

[640] 122:13 p 6 in 135_June_08_21_Calub_Gregorio

[641] 127:18 p 10 in 159_Apr_21_21_Hafeez M

Using low-cost technologies in climate smart irrigation and on-farm water management practices.[642]

Use of climate smart crops (heat, water and salinity tolerant crop varieties) and scaling up using an efficient seed system.[643]

Study around climate smart agriculture and seed policy to ensure ease of movement of seed across the two continents.[644]

Provision of curriculum on climate smart agricultural practices and training youth as key actors as prerequisite for building resilience to shock and stress.[645]

Stakeholders in the sector are called to develop curriculum on climate smart agricultural practices and train youth as key actors as part of the sustainability plan for building resilience to shock and stress.[646]

Institute regulations on agro-corporations to mandate climate mitigating practices and resilience building in their value chain to account for the environmental, social, and economic implications of our food systems.[647]

Enhance support for climate-profiting agriculture in Africa to boost the ability of farmers to adapt to climate change, especially through drought-tolerant crops and livestock, digital weather information and climate advisories, irrigation, better water management, and crop and livestock insurance products…[648]

Prepare for, don't just react to, climate change. Implement forward-looking management that develops and incorporates an understanding of the climate-driven changes expected (and being experienced) in a given community.[649]

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.[650]

Developing feed supplements that can massively reduce methane emissions from cattle, with farmers potentially paid carbon credits for methane abatement.[651]

Providing financial incentives to farmers for sustainable outcomes, including ecosystem service payments, carbon payments, payments for improving practices.[652]

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[642] 132:54 p 12 in 193_Apr_19_21_Ringler_Kassim

[643] 132:56 p 12 in 193_Apr_19_21_Ringler_Kassim

[644] 133:17 p 7 in 196_Apr_20_21_Attah-Krah K

[645] 139:7 p 6 in 216_May_06_21_Ben_Aniabi

[646] 139:22 p 11 in 216_May_06_21_Ben_Aniabi

[647] 149:14 p 6 in 243_June_03_21_Schwartz A

[648] 150:12 p 6 in 253_Apr_29_21_AFDB_Multi

[649] 155:17 p 6 in 272_May_12_21_Battista W

[650] 155:34 p 8 in 272_May_12_21_Battista W

[651] 156:26 p 8 in 275_May_13_21_Dornom H

[652] 156:33 p 8 in 275_May_13_21_Dornom H

Transitioning to nature positive production can generate more food for people who need it most, while aligning production with capacity of the environment and building resilience to climate change.[653]

Apply a climate lens to planning on land and sea. Climate is changing this landscape.[654]

Much climate adaptation happens at the local scale - we need to support these small-scale producers and invest in them, then scale up.[655]

We must re-imagine "protected areas" through a climate lens, and must ensure small-scale producers are engaged in design. E.G., Can we create "blue carbon zones" that can fit many things like reforestation, producing food, eco-tourism, wind farms, etc.[656]

We need to increase farms' energy efficiency: invest in technology and pilot projects for sustainable agriculture, convert the power grid to renewable sources, convert septic tanks to sewer systems to avoid nutrient leakage into waterways.[657]

Hydroponic growing and urban growing to preserve farm land and not give that land up.[658]

Work on increasing farms' energy efficiency and on converting the power grid to renewable sources so that energy used on farms does not contribute to climate change.[659]

Reducing greenhouse gas emissions and increasing the economy's reliance on local farmers are harder to quantify.[660]

Make food systems flexible and adaptable as climate threats change.[661]

Work on aquaponics system with youth 7) Use waste from tilapia growing system to grow lettuce.[662]

Artificial intelligence is guiding new systems for farming, observing many factors simultaneously like climate controls, water etc. all remotely.[663]

Feasible solutions for mitigating climate change are streamlined in the country's food systems.[664]

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[653] 161:10 p 6 in 296_May_25_21_Battista W

[654] 161:37 p 8 in 296_May_25_21_Battista W

[655] 161:38 p 8 in 296_May_25_21_Battista W

[656] 161:39 p 8 in 296_May_25_21_Battista W

[657] 163:41 p 6 in 300_May_27_21_Alesso_Pommeret

[658] 163:55 p 8 in 300_May_27_21_Alesso_Pommeret

[659] 163:79 p 11 in 300_May_27_21_Alesso_Pommeret

[660] 163:84 p 11 in 300_May_27_21_Alesso_Pommeret

[661] 163:88 p 12 in 300_May_27_21_Alesso_Pommeret

[662] 163:146 p 18 in 300_May_27_21_Alesso_Pommeret

[663] 169:38 p 11 in 327_May_18_21_CropLife

[664] 174:16 p 6 in 332_May_24_21_FAO_UNDP

Managed correctly livestock can have a positive impact on global warming by transferring atmospheric carbon to soils through plant photosynthesis. Africa, natural disasters/water shortages/stresses/low rainfall/environmental problems affect food systems.[665]

Responding to the climate crisis provides an opportunity for young people to share what they are learning about environmental conservation.[666]

It also reported the need to modify crops and animals to adapt to the changes happening in the environment, especially given the impacts of climate change and biosecurity threats.[667]

Government tractor hire services must have readily available tractor drawn implements that are Climate Smart and promote conservation agriculture.[668]

Plant drought-tolerant crops. It was agreed that there were benefits of planting drought-tolerant crops including producing larger crop yields. Planting climate-resilient maize varieties in most environments leads to increased crop yield because these crops are still able to grow in periods when the rainfall is not enough continuing to maintain soil cover and benefitting the environment.[669]

Efficient water use is also an important component in new scenarios of climate change, where dry seasons are more frequent. Need to have schemes on rain water harvesting systems, so that they become more popular among farmers in Mauritius as well as subsidies on irrigation systems like drip irrigation implements.[670]

Improved water management. Trees can contribute to the contribution of a microclimate which can be favourable for the growth of plants and provide shade to livestock. Trees can be used to create shelterbelts to protect crops against wind damage.[671]

Promote climate adaptive technologies and techniques for sustainable food production.[672]

Inclusion of pro-poor nature-based solutions and climate change and environment policies to improve the capacity of the poor to manage risks.[673]

Mainstreaming Climate change, adaptation, resilience in national, sectoral and spatial development & humanitarian development program.[674]

Supporting increased biodiversity and implementing biocentric restoration centers. Resilience is strongly linked to biodiversity, so supporting indigenous communities to keep

[665] 175:13 p 6 in 333_May_25_21_GMA_Multi

[666] 180:9 p 6 in 338_May_27_21_UNHCR

[667] 181:15 p 6 in 339_May_27_21_Sayoc_Multi

[668] 182:60 p 11 in 340_May_27_21_Mamba_L

[669] 182:80 p 13 in 340_May_27_21_Mamba_L

[670] 183:71 p 12 in 341_May_28_21_Sewraj_KS

[671] 183:93 p 16 in 341_May_28_21_Sewraj_KS

[672] 186:13 p 6 in 344_May_30_21_COAST

[673] 186:30 p 7 in 344_May_30_21_COAST

[674] 186:32 p 7 in 344_May_30_21_COAST

and restore their biodiversity is crucial not only for food security and nutrition but for life in general. One example of such initiatives is the Potato Park in Peru.[675]

Climate models do a good job of projecting plausible future climates.[676]

Further, implementation of sustainable practices in Agriculture and manufacturing which can decrease carbon emissions is a global priority in mitigating future resource-based conflicts and mass migrations of populations.[677]

Farmers must play their role in mitigating the effects of climate change through e.g., carbon storage, green energy production, increase organic farming practices, research and innovation.[678]

Over subsidized farming in the Global North has caused the loss of crop-based resources in the Global South. Modern agriculture has had a drastic impact on local economies and threatened age-old agricultural practices and family farming which, for the most part, is characterized by a symbiotic relationship between people and planet.[679]

Nature Positive Production: Offer the government review about Agri-Product Negative environmental impacts such as chemicals, slash shifting cultivation.[680]

With regard to sustainability, the need to better manage natural resources and by-products was discussed, mentioning examples in the sugarcane and poultry sectors. Opportunities to ensure sustainability in production were shown.[681]

The incorporation of new technologies is facilitating the inclusion of women in livestock farms. In addition, farmers and professionals in the agri-food sector in Spain are increasingly more specialized in their work and are committed and involved in the fight against Climate Change.[682]

Make carbon methodologies more user-friendly, affordable and applicable to the agriculture and forestry sectors. Hence, these methodologies should fit-for-purpose (e.g., inventory, donor report and carbon markets).[683]

Farmers awareness and perceptions on climate ("carbon") issues should be increased.[684]

[675] 188:26 p 7 in 346_May_31_21_CANEUS_Multi

[676] 194:51 p 14 in 352_June_04_21_Troughton J

[677] 195:4 p 7 in 353_June_07_21_Blum N

[678] 202:12 p 6 in 361_May_19_21_Cadogan_Hincks

[679] 204:34 p 11 in 363_May_26_21_Mehta_Bautista

[680] 209:10 p 7 in 368_May_31_21_Lao Farmer

[681] 235:13 p 9 in 276a_May_13_21_CCIE_English

[682] 237:6 p 8 in 284a_May_19_21_INTERPORC_English

[683] 261:12 p 6 in 497_June_24_21_Fontes_Multi

[684] 261:13 p 6 in 497_June_24_21_Fontes_Multi

The adoption of bio-fertilizers and biochemical is growing.[685]

Renewable energy and circular economy practices are part of an increasing reality and should continue growing.[686]

It is crucial for methodologies to reflect the specificities of forest sector given that this sector starts from a low carbon emission base and already has a great amount of carbon capture. Importance of doing partnership with the supply chain to achieve reduction targets.[687]

Usage of traceability tools to track the grains used for animal feed products, choosing good suppliers in order to produce more with less grains and less environmental impact, and to improve quality of the products to optimize the energy conversion and reduce the cattle methane emission.[688]

Leading role towards climate change must be played by agribusiness companies - soil preservation, crop-livestock integration, use of biological fertilizers and defensives, and water reservation and use optimization.[689]

Cogeneration energy from sugarcane bagasse used for own consumption and also for supplying the market and, more recently, the beginning of biogas projects that will use vinasse and other sugarcane by-products as the raw material for biogas/biomethane production. The biogas will be then used for clean energy generation while the biomethane as a substitute of diesel in the company's logistics.[690]

Farmers are commanding the market and will increasingly require more actions in the environmental field. No soy has been purchased from deforested areas and the grain producer must change its mind. The ones that do not adapt to the new reality will be out of the market soon.[691]

Important role from agriculture sector in providing environmental services, the need to create recognition mechanisms in the external market for all the efforts from the Brazilian Agriculture sector.[692]

Renewable energy/biofuels and their positive impact. Carbon credits and locally CBios as a way to monetize/back environmentally friendly investments. Farmers should realize that producing a lot volume thru expanding lands is not interesting for them price wise, meaning that if farmers are able to realize that in record volume moments price trends should be bearish perhaps they would better control their expansion moves…[693]

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[685] 261:22 p 6 in 497_June_24_21_Fontes_Multi

[686] 261:23 p 6 in 497_June_24_21_Fontes_Multi

[687] 261:44 p 8 in 497_June_24_21_Fontes_Multi

[688] 261:50 p 9 in 497_June_24_21_Fontes_Multi

[689] 261:51 p 9 in 497_June_24_21_Fontes_Multi

[690] 261:52 p 9 in 497_June_24_21_Fontes_Multi

[691] 261:54 p 9 in 497_June_24_21_Fontes_Multi

[692] 261:58 p 10 in 497_June_24_21_Fontes_Multi

[693] 261:62 p 10 in 497_June_24_21_Fontes_Multi

Focus on climate smart agriculture.[694]

Ensure that finance programmes focus on resilience and climate adaptation and mitigations.[695]

Cooking with Seaweed, it was noted that seaweed has a lot of potential as a food source. Seaweed forests are very biodiverse and important for our coastline. Therefore, we need to first look at how we can have a precautionary and sensitive approach to cooking with seaweed before we exploit it for the market.[696]

Seaweed mapping can be carried out through Spatial Analysis carried out in macro scale where the whole coastline is documented bit by bit and they can be stitched together to create high resolution images.[697]

On the Nature and Resilience Tracks, the National Dialogue also agreed to employ new climate smart farming technologies with the active leadership of the Agriculture and the technical and financial support of the Global Green Growth Institute and with the active involvement of NGOs.[698]

The harsh atoll conditions of the islands in Kiribati - compounded with the impacts of climate change would benefit much from this climate smart techniques after a number of successful trials.[699]

ADB, EIB, and the Green Climate Fund (GCF) have initiated a collaborative, multisectoral, and transdisciplinary approach in Mongolia to promote green growth, including the livestock sector.[700]

Climate Adaptation and Mitigation in Atoll countries.[701]

Organise independent payable grass roots advise and develop new tools to help farmers to understand the impact of their practices on climate, environment, health.[702]

Promote digital agriculture and economy, organic production, climate-smart production, and agroforestry models.[703]

Further, there is need for more capacity building for young farmers, need to begin conserving the indigenous seeds for better productivity, we should adopt proper disposal/

[694] 262:31 p 6 in 498_June_24_21_Danquah E

[695] 263:37 p 8 in 499_June_25_21_GANSF

[696] 264:16 p 7 in 500_June_26_21_Edible Issues

[697] 264:40 p 10 in 500_June_26_21_Edible Issues

[698] 265:22 p 6 in 501_June_28_21_Kairo K

[699] 265:23 p 6 in 501_June_28_21_Kairo K

[700] 266:5 p 6 in 502_June_28_21_Zhang_Basher

[701] 268:34 p 10 in 504_June_30_21_Susumu_Leiva

[702] 273:67 p 11 in 509_June_30_21_FFA_Nestlé

[703] 277:56 p 9 in 513_July_01_21_Weise S

reuse/ recycling of plastic waste and push for reforestation and tree planting for improved ecosystems.[704]

Decrease the number of vessels and hours at sea and polluting emissions.[705]

There is a huge opportunity to use climate change adaptation and ecosystem restoration as a source of jobs creation. It is far more economical to create a job in ecosystem restoration, than to create one in construction, which is the typical recovery program. This approach to green growth could help to create and support essential livelihoods in the wake of the pandemic.[706]

Environmental sustainability involves the system as a whole—to ensure that no harm is being done to the environment. This can be achieved by ensuring the food system is low waste and that individual daily habits demonstrate sustainable practices. Regenerative practices need to be incorporated in agriculture and should be encouraged through government grants and bursaries. Individuals should be encouraged to follow sustainable diets which generate low and decreased food waste. Sustainable diets should be locally sourced, financially accessible and culturally appropriate for all Canadians.[707]

Improve farmers' resilience by investing in adaptive and mitigation needs to climate change.[708]

For the countries included in this dialogue, rural and agricultural investment priorities include the development and dissemination of climate-smart crop varieties and technologies, pivoting to more resilient farming systems, nutrition-sensitive cropping systems, crop insurance, digitalisation of agriculture and real-time access to weather data, among others.[709]

Likewise, researchers and entrepreneurs noted the innovativeness of the initiatives presented, particularly the farmer-to-farmer technologies and how 'old' concepts such as permaculture, agroecology and respect for nature resurfaced in a creative way that needs to be integrated in subsequent UN FSS discussions about food systems.[710]

State Governments, large and small agricultural organisations, businesses and civil society organisations need to do more to mitigate and adapt to the negative impacts of climate change which have been brought about, in part, by the increase in large scale farming. Particularly, when it comes to the automation of what once used to be human inputs and an ever increasing reliance upon the mass use of fertilisers and pesticides. However, it was also noted that this shift can only be affected by policy makers recognising the urgent need for swift and irreversible action towards more environmentally friendly

[704] 279:17 p 9 in 515_July_01_21_EastAfricanFarmers

[705] 301:61 p 9 in 537_July_08_21_ANP_WWF

[706] 302:11 p 7 in 538_July_09_21_IDS_Multi

[707] 307:18 p 6 in 543_July_13_21_YRYFC

[708] 310:16 p 7 in 546_July_13_21_INDEP

[709] 313:6 p 6 in 549_July_14_21_Meah N

[710] 317:6 p 6 in 554_July_15_21_Lopez DE

policies and legislation that are targeted to incentive small farmers towards more sustainable methods and practices.[711]

The nation needs to widely adopt modern methods of agriculture such as climate smart agriculture as a means of increasing productivity, enhancing yields and reducing carbon emissions.[712]

We heard in a message from Paul Polman, co-chair of the Food and Land Use Coalition, that what happens in Australia matters to the world: as an agriculture powerhouse, we must address our emissions profile as well as harnessing our farmers' pioneering approaches to more sustainable agricultural practices.[713]

Climate volatility and high on-farm costs mean Australian farmers need to have either high levels of equity or off-farm income in order to survive, or to support their transition to more sustainable practices. This need for diversification and financial backing should be supported by both the public and private sectors. For instance, natural capital is becoming a highly valuable and sought-after asset class in its own right, and new opportunities for farmers to create revenue streams through both nature protection and restoration is critical in supporting a future sustainable system.[714]

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Without a market for things like manure by products or carbon credits farmers and ranchers operating on thin margins will not be able to implement mitigation strategies which inevitably will raise their costs. It is incumbent on the developed world to bring climate-smart solutions to the developing world, which is seeing the largest increases in meat and dairy production, if we are to meaningfully reduce greenhouse gas emissions from this sector.[716]

There are many powerful tools available to reduce methane emissions from livestock such as feed additives, manure management, and animal efficiency. While reducing enteric methane emissions is promising it is not the only strategy. In fact, reaching 50% methane reduction will be an uphill battle with feed additives as our only weapon. There is no silver bullet for farmers. We must look at the system as a whole and make reductions along the supply chain at every chance we have. If we zoom out and look at the whole system we can

[711] 323:27 p 10 in 560_July 19_21_Arbuthnott_Multi

[712] 325:19 p 7 in 562_July_19_21_Zombe K

[713] 326:7 p 6 in 563_July_20_21_ClimateWorksAustralia

[714] 326:8 p 6 in 563_July_20_21_ClimateWorksAustralia

[715] 326:16 p 11 in 563_July_20_21_ClimateWorksAustralia

[716] 328:2 p 6 in 565_July_20_21_Mitloehner_Kebreab

begin to identify inefficiencies. We then must communicate these efficiencies to the whole supply chain. [717]

Producers (farmers, ranchers, growers) must be "at the table" in creation of financial incentives and standards that reward and measure producers for sustainability practices including those related to climate-smart agriculture.[718]

Every farmer or rancher is capable of employing a climate smart practice, such as no-till, conservation tillage, cover crops, diversified annual crop rotations, variable rate fertilizer application, maximizing feed efficiency, range management, etc.[719]

Finally, the group considered the fact that family agriculture was the best point of entry for the op6mal management of natural resources and protec6on of the environment while promo6ng the adop6on of good agricultural prac6ces, of crops that are not demanding (in water and inputs), and crops that are adapted to climate change; among the models to be promoted, organic agriculture which is less demanding of chemical products and thus less dangerous for the ecosystem, and permaculture.[720]

Take dras6c measures to save natural resources, in par6cular water resources: there is no more 6me for diagnos6cs, and the par6cipants insisted on the urgency of promo6ng this type of measures and technologies which respect the environment and which can adapt to climate change, which are in fact already known and used in certain regions of Tunisia, but are not sufficiently promoted…[721]

Peru prioritized actions to reduce waste: • Introduce rewards and penalties for points of sale (in particular large supermarkets) for food wastage due to expiration or improper storage conditions.[722]

Continue to work on promoting conservation, efficient water use and water shortage management as well as the access to and sustainable management of this resource. This under the context of increasing frequency and intensity of droughts, floods, saline intrusion and other threats exacerbated by climate change.[723]

Create a balance of intensive crops that degrade soil and require intensive maintenance and resources, these also produce loss of biodiversity.[724]

Improved agricultural practice

A consultation carried out with the farmers' community highlights the farmers' utilisation of new improved plant varieties (71 % of the respondents) • Farmers look at new improved

[717] 328:7 p 9 in 565_July_20_21_Mitloehner_Kebreab

[718] 335:2 p 2 in 484a_June_24_21_WBCSD_USFRA

[719] 336:13 p 4 in 494a_June_23_21_US Farmers

[720] 338:7 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

[721] 338:16 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[722] 341:6 p 7 in 408a_June_11_21_COPROFAM_CLOC_Eng

[723] 346:9 p 7 in 420a_June_19_21_CLOC_Eng

[724] 348:2 p 6 in 422a_June_28_21_PROLIDER_Eng

plant varieties with an innovation lens to ensure better yields, the economic stability of the farms, also ensuring resilience over shocks, but also to make farming easier and less labour/input-intensive; • New improved plant varieties can be key to tackle the challenges of climate change and for the sustainability of food systems: ensuring resistance to droughts, better pests and diseases management; enabling sustainable use of inputs, getting closer also to consumers demand; • New Improved varieties can be key to build trust around the farming activity with financial partners (insurance companies), ensuring reliable yields…[725]

It is linked to the need to further diversify crops utilized in crop-livestock forestry integrated systems.[726]

v. Adaptation of crops and cropping systems to salination along costal belt in southern Bangladesh; strengthen and utilize existing natural biodiversity to identify most suited crops.[727]

Sustainable farming, aquaculture, and wild foods conservation - Support community seed banking, rotational farming, observance of fallow periods, and guided fallows have the potential to improve forest quality; establish community-managed fish hatcheries and forest gardens; pursue multiple-use strategies and community-based management plans that are environmentally-sound and food-focused.[728]

Include biodiversity strategies in farming…[729]

Stop using chemicals.[730]

Recommendation 5: Natural resource management and local biodiversity are key - water and soil are key elements to sustain biodiversity and lower climate impact. Poverty remains a major obstacle to proper natural resource management.[731]

The need to focus on current livestock practices was noted as a critical area for future knowledge development, including building on lessons in the policy arena that support a shift from livestock production, looking at how to effectively support transitions (for example through improving fertilizer efficiency), and supporting both marginal / transitional and transformational improvements.[732]

4. For their own survival, FFPOs and Indigenous Peoples territories are by necessity becoming resilient in sophisticated ways to climate change, economic shocks, pandemics, political inequalities and conflicts that embrace multiple socio-cultural, ecological,

[725] 369:15 p 6 in 413_June_15_21_WFO_ISF

[726] 389:95 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[727] 392:14 p 9 in 434_June_02_21_Hanan_KA

[728] 408:20 p 7 in 449_March_08_21_Wild Foods_Multi

[729] 412:6 p 6 in 453_May_10_21_Kerr_Divine

[730] 413:6 p 7 in 454_May_12_21_Dunor-Varney_Multi

[731] 459:66 p 14 in 125_May_11_21_Mauderli_COSUDE

[732] 463:46 p 8 in 155_Apr_27_21_FCDO_Multi

economic and physical / technological diversification strategies and both adapt to and mitigate climate change over collectively vast areas.[733]

Adopting circular economy approaches in aquaculture which recycle by-products from other industries/systems, including terrestrial, ones ensures that aquaculture can be scaled without putting pressure on the limited resources of the planet. It also lowers the production costs thus increasing the earning potential of poor farmers and decreasing the social volatility of a region in addition to providing nutritious foods to rural families.[734]

Place people and health at the center and create a sense of devolved ownership.[735]

5. Mangrove reforestation 6. Integrated pond management 7. Probiotic fish feed 8. Small scale hatcheries 9. Advocacy for sustainable artisanal fishing.[736]

Finally, governments/stakeholders should push for conservation farming techniques to reduce agricultural emissions across the board. The process of transitioning to low-carbon agriculture, especially where infrastructure improvements are needed, will be expensive. Therefore, a huge investment push is needed.[737]

Improving the sustainability of fisheries and aquaculture practices in the Mediterranean basin In spite of positive changes, the sustainability of fisheries in the region remains a critical issue. On the other hand, the continuous growth of aquaculture provides sustainability issues related to the farm models and their practices.[738]

Use of drought resistant crops in pilots and scaling up its use in arid areas.[739]

It is necessary to promote the transition from monoculture to integrated low carbon agriculture and to move away from the plantocracy styled economic model We must develop enhanced systems that support agricultural development, e.g. seed banks, organic fertilizers There is need to build capabilities and more widely educate farmers and processors in good agricultural practices, good manufacturing practices, safety standards, seed production, organic fertilizers.[740]

Engaging in circular economy activities such as the recycling of biomass (composting) and livestock waste (biofuels) can add great value to our environment, once done right. Simply adding compost or humus can have a positive impact on soil health, fertility, water retention and can even combat some effects of climate change.[741]

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[733] 473:20 p 7 in 244_June_09_21_Macqueen_Multi

[734] 485:19 p 6 in 288_May_20_21_GAN_Multi

[735] 501:63 p 12 in 397_June_04_21_WHO_Multi

[736] 503:30 p 7 in 399_June_9_21_AFA_Multi

[737] 17:8 p 7 in 164_Apr_15_21_Anarbekov_Akramov

[738] 23:41 p 8 in 205_Apr_27_21_CIHEAM_Multi

[739] 30:34 p 6 in 071_Mar_11_21_ESCWA_FAO

[740] 35:31 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[741] 35:46 p 7 in 095_Mar_27_21_Chinapoo C_Multi

Reclaim and rehabilitate agricultural lands, encourage good management of resources and increase efficiency of resources used, especially ground and surface water and agricultural lands through the use of modern technology • Enhance provisions related to technology transfer and capacity building included in the UN Climate Change Agreement.[742]

Establish pilot projects that improve water and energy use and reduce pollution to support countries in crisis and with funds from World Bank, Green Climate Fund and FAO.[743]

Transparency of best practices for farming in the era of climate change can lead to less energy required to produce food, which could reduce the cost to the consumers (increasing fresh food access for consumers at an affordable price).[744]

We not using what we have (natural resources). Make use of our natural resources. Use solar energy and reserve energy for other things. There is a need to invest in and support greater deployment of energy and water efficiency technology. Global funds and grants should target and support investments that address the nexus The circular economy models and principles and opportunities will be critical in navigating and addressing issues across the nexus…[745]

There is need for an increase focus in agroforestry, as the practice reduces water utilization and improves yields whilst using less energy from utilities Wider use of urban farming techniques that build on the circular economy concepts and models in water, energy and waste utilization.[746]

Wider use of permaculture Design for sustainability and resilience.[747]

Explore SMART farming/ Organic farming.[748]

Improve soil management and crop protection.[749]

A move to Nature based solutions will require the following: efforts to achieve Zero emissions; regenerative agriculture; and emphasis on a circular bioeconomy while maintaining economic viability. Therefore, its necessary ¦nd ways to valorize nature-based solutions – such as attributing value to biodiversity, carbon sequestration (carbon trading systems exist but the methods to reliably measure are not yet available). Other options include green bond issues, carbon credits and sequestration which could all create income for farmers to cover costs of transition – for ex. planting cover trees and using their carbon

[742] 36:32 p 9 in 096_Mar_29_21_ESCWA

[743] 36:35 p 9 in 096_Mar_29_21_ESCWA

[744] 49:13 p 6 in 086_Mar_20_21_Rosatan B

[745] 50:4 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[746] 50:11 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[747] 52:19 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[748] 52:35 p 7 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[749] 54:20 p 6 in 002_Nov_19_20_CGIAR

sequestration capacity to generate income while other crops grow to maturity underneath.[750]

Supporting farmer transition in adopting more sustainable agricultural practices through attributing real value to the stewardship of nature will be paramount if food systems are to respond to the Action Track work streams of protect, manage, and restore. A move to nature-based solutions will require efforts to achieve zero emissions, regenerative agriculture, and emphasis on a circular bio-economy while maintaining economic viability.[751]

For Food System Sustainability: Pests and Diseases effects should be adequately controlled…[752]

Theme 6: healthy and sustainable livestock food system Proposal: creating a benchmark for the whole livestock: from agriculture to food waste. Including data collection and transparency to prevent Antimicrobial resistance and zoonotic disease development.[753]

As leaders in research in agriculture, we can lead precise and healthier use of biological and chemical uses in agriculture.[754]

Promote Sustainable intensification • Support organic farming without the use of fertilizers and pesticides.[755]

The prospects for large-scale production will come from innovative growing techniques.[756]

Farmers also need technical training in planting to improve production, as well as pipe systems to control water and produce during the off-season.[757]

This is why some participants in discussions proposed solutions such as finding growing techniques that could increase the production of local products on both the little arable land available and land used for cash crops like rubber trees. However, other participants remained sceptical about the idea of large-scale production on the little arable land available because they have not yet been introduced to these innovative, environmentally friendly techniques.[758]

These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing techniques in response to the loss of arable land, ensuring financial inclusion for industries, empowering women and youth, increasing production by mechanizing means of

[750] 59:17 p 5 in 020_Jan_26_21_IFAN

[751] 59:44 p 4 in 020_Jan_26_21_IFAN

[752] 61:7 p 6 in 030_Feb_4_21_CAFS_CSAYN

[753] 64:21 p 6 in 041_Feb_17_21_Adler D

[754] 64:49 p 9 in 041_Feb_17_21_Adler D

[755] 64:85 p 13 in 041_Feb_17_21_Adler D

[756] 71:14 ¶ 25 in 033a_Feb_6_21_Serge BDS_ENG

[757] 71:22 ¶ 31 in 033a_Feb_6_21_Serge BDS_ENG

[758] 71:25 ¶ 35 in 033a_Feb_6_21_Serge BDS_ENG

transport (which are rudimentary for activities such as fishing), reusing agricultural waste for composting, producing biogas, and feeding animals, among others.[759]

Train local producers so that they adopt sustainable production practices. Promote initiatives and projects for preventing contamination of aquifers and promote proper water management.[760]

One of the activities with the greatest potential for agrotourism is meloponiculture, an activity of great cultural value in which women play a fundamental role.[761]

This method of processing can be a movement to encourage the planting of edible trees so that the results can be used as new products while establishing partnerships with other stakeholders for the process of using them.[762]

Process automation (already used for food and beverage sanitary registries) was mentioned as a good practice in Central America. This practice could be expanded to new horizons.[763]

There is a great need to improve the management of resources such as water. The exchange of good practices among countries of the region has great potential which is still not being taken advantage of.[764]

Development of agroforestry systems and efficient irrigation systems were also discussed as transformative solutions, together with the adoption of clean technologies and improvement of recycling capabilities.[765]

In addition to technology being available, knowledge needs to be accessible to producers. Lastly, consumers acceptance of science and innovation in agriculture needs to be maintained or gained.[766]

By using sheep, the sector helps create a biodiverse environment and reduce amount of GHGs generated vs mechanical grazing of vegetation.[767]

Although it is important to focus on the commercial interests of food companies and practical methods to introduce plant-based diets, it was discussed amongst all ¦ve panelists how food as a sacred entity and gift is missing from current food practices. Without this integral emotional perspective on food, the flaws in the food system will not be solved.[768]

[759] 71:29 ¶ 15 in 033a_Feb_6_21_Serge BDS_ENG

[760] 75:13 ¶ 70 – 71 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[761] 75:44 ¶ 131 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[762] 88:9 p 8 in 174_Mar_20_21_Niode K

[763] 89:6 ¶ 62 in 186a_Apr_15_21_Caballeros_eng

[764] 89:12 ¶ 70 in 186a_Apr_15_21_Caballeros_eng

[765] 89:16 ¶ 74 in 186a_Apr_15_21_Caballeros_eng

[766] 90:18 p 10 in 206_Apr_27_21_CCANCC

[767] 90:32 p 6 in 206_Apr_27_21_CCANCC

[768] 92:23 p 6 in 225_May_13_21_Schwartz A

Sustainable intensification adapted to local conditions, scaled by robust business models and producing high quality food- Improved animal husbandry that reduces the need for antibiotics along with other social and environmental benefits-Shift the focus of production, processing and marketing of livestock commodities more towards quality.[769]

Focus on nature-positive solutions that do not require further conversion of lands.[770]

Healthier animals reduce zoonotic risks, disease spread and contribute to healthy diets.[771]

Promotion of environmentally friendly food production activities such as: Bee-keeping Through beekeeping projects, the household can earn income and lead to better food security, livelihoods and environmental regeneration.[772]

Diversification of activities in the field and on the farm is crucial for building the resilience of mountain people's livelihoods, and agroecological approaches can help at different scales.[773]

Manufacturers need to deliver according to what the regulatory environment allows, ensuring less packaging, regenerative agriculture, UN SDG goals.[774]

Development partners were urged to play more active roles in providing training and services including trainings on how nature-based solutions can be incorporated in agriculture. There is the need to establish a farmers resource center where farmers can learn and be shown how to farm crops in the right way. The center should be in a position to educate and help farmers with soil management, crop production, and crop protection challenges.[775]

Low external input – use farm waste & by-products, good seeds, and multipurpose machines.[776]

Soil regeneration is very important so that no one solution adversely affects another part of society.[777]

At present, there have been some international actions to change the food system, such as providing fortified edible oils rich in vitamin A and vitamin D, increasing the range of beneficiaries of social security, exploring the most scientific agricultural production planning, encouraging private sector financing and assistance of small and medium-sized

[769] 93:13 p 8 in 227_May_18_21_Tarawali S

[770] 93:47 p 12 in 227_May_18_21_Tarawali S

[771] 93:53 p 13 in 227_May_18_21_Tarawali S

[772] 96:12 p 7 in 255_Apr_27_21_ICLEI Africa_Multi

[773] 98:7 p 6 in 282_May_18_21_Romeo R

[774] 99:27 p 9 in 285_May_20_21_TFFF_Multi

[775] 102:5 p 6 in 326_May_5_21_ICLEI Africa_Multi

[776] 103:11 p 11 in 007a_Dec_18_20_NAAGD

[777] 103:67 p 37 in 007a_Dec_18_20_NAAGD

enterprises, paying attention to and guiding the needs of consumers, and the use of scientific research results.[778]

This should include supports to incentivise and remunerate farmers for both food and ecosystem services, encourage environmentally-friendly farming and support high-welfare systems.[779]

In summary, it was agreed that we need to utilise land in a way that avoids growing food for animal consumption.[780]

To produce nutritious and safe harvest for food consumptions, NPK fertilisers should never be used in the first place.[781]

Agroecology (a way of building environmental resilience) principles discussed were; Adapting to the local environment – its constraints and opportunities, creating favorable soil conditions for plant growth and recycling nutrients, diversifying species, crop varieties, and livestock breeds in the agroecosystem over time and space – including integrating crops, trees, and livestock from the field to landscape levels.[782]

Innovations that could reduce energy use in food production/value chains over the next decade include: - Agroecology and better farming practices - Using balanced feeds in livestock rearing - Low pack/no pack solutions : shops using no packaging and customers using own recycled materials when shopping in stores.[783]

Therefore, a short-term goal should be to explore alternative effective/more optimal uses of water and land than just agricultural intensification.[784]

Boosting nature-positive production is multidimensional. It cuts across ecological, education, policy, social and economic dimensions. Promote true cost accounting of ecological and societal benefits.[785]

Implementation of Integrated Water Resources Management approach to meet increasing demand and competition among various sectors and users • Development of water accounting system for the sectors and improvement of these databases according to water use and disposal.[786]

Irrigation patterns play a crucial role, with some crops requiring more water like rice, mangoes and avocadoes. Changing the existing crop mix could lower water-use.[787]

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[778] 105:23 ¶ 20 in 176a_Mar_25_21 AGFEP

[779] 112:7 p 6 in 074_May_18_21_O'Mara_Teagasc

[780] 112:93 p 14 in 074_May_18_21_O'Mara_Teagasc

[781] 114:7 p 6 in 076_Mar_11_21_Tan R

[782] 116:8 p 7 in 093_Mar_25_21_Adeboye_T

[783] 117:9 p 8 in 109_Apr_13_21_Jacobs-Mata I

[784] 117:64 p 15 in 109_Apr_13_21_Jacobs-Mata I

[785] 122:12 p 6 in 135_June_08_21_Calub_Gregorio

[786] 127:36 p 13 in 159_Apr_21_21_Hafeez M

[787] 132:19 p 8 in 193_Apr_19_21_Ringler_Kassim

Promoting organic practices as sustainable food production practices and a route to reduced land degradation, and climate resilience.[788]

Adopting modern irrigation techniques such as drip or sprinkler irrigation.• Measuring soil moisture levels to maintain healthy crops without excess irrigation will increase productivity.• Phasing out of water intensive crops (like sugarcane) and switch to horticultural agriculture.[789]

Young people are encouraged to start-up the practice of regenerative farming as a means of boosting nature-positive production. It can be started at a low-scale and scale -up in a manner that manages, protects and sustain the natural ecosystem. For instance, through green house and home gardening

Seed security is crucial to food security and livelihoods and is part of a community's disaster risk management, especially in the context of climate change. Together with agro-ecological practices, and farmers accessing weather information and collecting weather data themselves, farmers use plant genetic resources as part of their climate adaptation strategies.[790]

Invest on mobility as a strategy for maintaining a healthy pastoralists system and to use rangelands in a sustainable way, to preserve natural resources. Investments must be done as a way to improve the environmental friendly productions.[791]

No one size its all, and different national/regional approaches, farm sizes and production practices need to be recognized.[792]

The suggested steps were food diversification with a particular focus on drought resistance varieties, adoption of Agri technologies that increase productivity with less impact on climate, support and promotion of Agri extension workers to reach farmers with new skills and models, the role of agro-dealers in local markets, reduction of tax for Agri inputs, promotion of livestock farming in drought-affected regions and the use of farmers cooperatives if commercial farming in not exploited.[793]

The outcomes for discussion topic 2 were increased farming cooperatives to share knowledge on preservation, tree planting to protect soil and water, planting bananas along with water reservoirs…[794]

To address these issues, the group discussed increasing the uptake of regenerative agriculture practice so practice not just mitigates impact but also aims to restore nature.[795]

[788] 132:52 p 12 in 193_Apr_19_21_Ringler_Kassim

[789] 132:69 p 14 in 193_Apr_19_21_Ringler_Kassim

[790] 140:2 p 6 in 223_May_12_21_Mushita A

[791] 152:38 p 8 in 262_May_04_21_ILC_Multi

[792] 153:32 p 6 in 263_May_06_21_CCGA

[793] 154:5 p 6 in 265_May_07_21_CSONA

[794] 154:13 p 7 in 265_May_07_21_CSONA

[795] 156:19 p 6 in 275_May_13_21_Dornom H

Wide-spread adoption of regenerative agriculture practices and soil carbon farming, backed by farmers being paid income for the carbon stored in their soils.[796]

Recognizing the need for resilient food systems, future-proof agriculture…[797]

The focus of agricultural education should not be solely on agriculture but what it can do for society. The current pandemic highlighted that there are problems that farmers, or economists, or doctors, on their own, cannot solve. Multi-disciplinarity must be considered in re-thinking agricultural practices and education.[798]

There is the need to invest in life-saving crops that are resilient and in wide diversity from a wider range of crops and cropping systems.[799]

Development of sustainable seed systems, facilitating conservation, access, availability, use and exchange of high-quality seeds of forgotten foods by farmers.[800]

In developing countries, purchasing powers are increasing and we can observe a transition towards unsustainable practices, adopting the culture of the global North.[801]

Nature positive production safeguards producers' ability to continue working and living as farmers and fishers, to maintain customs, traditions, and ways of life. Also potentially makes farming/ fishing appealing to the youth again.[802]

In some cases, nature positive production can even contribute to climate change mitigation efforts (e.g., regenerative aquaculture; enriched agricultural soil; etc.)[803]

Increase the number of on-site farms at community facilities such as hospitals, schools, etc. (Grow to Heal at Baptist Health).[804]

Increase use of more resilient crops, phase out less resilient crops, for better use of agricultural land.[805]

Participants suggested that farmers be incentivized to cultivate nutritious (and staple) foods within the community, and use farming techniques that improve fruit and vegetable yields.[806]

[796] 156:25 p 8 in 275_May_13_21_Dornom H

[797] 157:29 p 6 in 278_May_18_21_Gregorio B

[798] 157:81 p 12 in 278_May_18_21_Gregorio B

[799] 159:7 p 6 in 287_May 20_21_Akinbamijo_Y

[800] 159:11 p 6 in 287_May 20_21_Akinbamijo_Y

[801] 160:19 p 8 in 292_May_21_21_ProVeg_Multi

[802] 161:12 p 6 in 296_May_25_21_Battista W

[803] 161:13 p 6 in 296_May_25_21_Battista W

[804] 163:53 p 8 in 300_May_27_21_Alesso_Pommeret

[805] 163:89 p 12 in 300_May_27_21_Alesso_Pommeret

[806] 167:54 p 10 in 311_June_14_21_NCD Child

Potential solutions also include plant-based proteins, certifications, alternatives to packaging, recycling and consumer trust building.[807]

Embed sustainable agricultural methods.[808]

Using fisheries (seaweed, seagrass, mangrove zones) can increase yield by 25% and reduce methane emissions by 90% if used as feed.[809]

Implement sustainable agricultural practices.[810]

Using seed bombing as a method to create feed for cattle during raining seasons.[811]

all commodity groups point to a food system stuck in a subsistence production node trying hard to make a transition to a semi-commercial /commercial value chain point.[812]

Farmers be organized to work as groups to encourage collective yields that can meet market demands. Out grower contracts that entails sub-contracting of smallholder farmers by developed producers also makes it possible to meet market demands, thus enabling participation in local trading and marketing.[813]

Supplementary feeding was also highlighted as imperative so that when rangelands did not produce adequately due to several factors such as climate change, animals will still have feeds

Third, sustainable agriculture approaches that have positive impacts on the environment need innovative financing solutions which make it easier and quicker for farmers and businesses to access finance.[814]

If livestock is managed correctly, we can stop having an impact or even have a positive impact on global warming by pulling methane out of the atmosphere.[815]

A healthy grazed grassland can create deep carbon sinks. Managing grasslands well also contributes to carbon storage in other ways: by enhancing soil health and water holding capacity to equip land to be more resilient to extreme events.[816]

Feeding livestock, a seaweed supplement called FutureFeed could simultaneously help to secure global food security and fight climate change by reducing powerful greenhouse gas emissions. [817]

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[807] 168:10 p 6 in 322_June_03_21_Apicella_Machado

[808] 172:4 p 6 in 330_May_19_21_RYFP_UNMGCY

[809]172:7 p 6 in 330_May_19_21_RYFP_UNMGCY

[810] 172:8 p 6 in 330_May_19_21_RYFP_UNMGCY

[811] 172:9 p 6 in 330_May_19_21_RYFP_UNMGCY

[812] 173:13 p 8 in 331_May_24_21_LNFU

[813] 173:34 p 10 in 331_May_24_21_LNFU

[814] 174:37 p 8 in 332_May_24_21_FAO_UNDP

[815] 175:25 p 10 in 333_May_25_21_GMA_Multi

[816] 175:26 p 10 in 333_May_25_21_GMA_Multi

[817] 175:33 p 11 in 333_May_25_21_GMA_Multi

It was emphasized that smallholder farmers does not need chemical fertilizers now because, toxic chemical fertilizers are destroying their soil and food healthy.[818]

Shifting to nature based fertilizers.[819]

Machinery to enhance food production and preservation (e.g. microwave vacuum - dry up food and keep for longer in refugee setting).[820]

New food cultivation techniques (e.g. aquaponic/hydroponic - doesn't need soil to cultivate) Greenhouses Drip irrigation to help food production in dry places. - keep food production in spite of arain scarcity.[821]

Precision breeding and genome editing are increasingly becoming a practice in the Philippines, where there is an expressed need to repurpose the crops to adapt to the effects of climate change or to tropicalize livestock animals being imported from temperate countries.[822]

The dialogue realized that primary producers in Eswatini are heterogeneous and that mechanization could be an answer to the problems faced by farmers; the dialogue understood that Mechanization covers all levels of farming and processing technologies, from simple and basic hand tools to more sophisticated and motorized equipment., this improves the efficient use of resources, enhances market access and contributes to mitigating climate-related hazards.[823]

The group proposed that farmers must keep the right livestock unit per area (proper Livestock Units).[824]

Employ Soil Conservation to avoid erosion. The group agreed that Soil conservation is key to environmental sustainability: It helps protect natural resources and watersheds, restores habitats for plants and wildlife, improves water quality, and makes soil healthier. Soil conservation also creates economic opportunities including productive and healthy soil that helps farmers meet increased demand for agricultural commodities from a growing population, driving economic growth.[825]

Provide new farming techniques such as vertical farming.[826]

Re-invent the farmers to be smart for example, to use inputs when needed, and to change the way they produce.[827]

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[818] 176:14 p 9 in 334_May_25_21_Buzingo_J

[819] 176:15 p 9 in 334_May_25_21_Buzingo_J

[820] 180:33 p 10 in 338_May_27_21_UNHCR

[821] 180:34 p 10 in 338_May_27_21_UNHCR

[822] 181:30 p 9 in 339_May_27_21_Sayoc_Multi

[823] 182:20 p 7 in 340_May_27_21_Mamba_L

[824] 182:25 p 7 in 340_May_27_21_Mamba_L

[825] 182:81 p 13 in 340_May_27_21_Mamba_L

[826] 183:47 p 10 in 341_May_28_21_Sewraj_KS

[827] 183:48 p 10 in 341_May_28_21_Sewraj_KS

Community based agriculture; in increasing the capacity of food producers, organizing is an absolute thing that must be trained, the existing community is no longer trapped in the interest of getting assistance from the government, more broadly with the existing community, food producers can share various kinds ranging from capital, knowledge, to looking for markets their harvest.[828]

Sustainable agricultural practices; Sustainable agricultural practice training should be given intensively to food producers through field schools.[829]

Development of non-centralized food production, such as the food estate model. However, by supporting smallholders to consolidate to produce more e¨cient, healthy, and diverse food. Non-centralized production also accommodates existing local food resources.[830]

Emphasis on Agricultural diversification and rural employment generation and enhanced agro-based economic activities.[831]

Smallholder Farmers needs natural methods to assist their depleted soil so that they can be able to improve soil health and increase income.[832]

Farming Smarter –a soils project for the next generation.[833]

Ensuring a healthy pasture Management factors include: ameliorating soil pH underlying soil fertility and the addition of inputs disease and pest management species & cultivar selection grazing management.[834]

Introduce good agricultural practices. Promote organic farming.[835]

Improving the quality of livestock breeds and developing intensive livestock.[836]

Promote organic farming.[837]

Shifts to plant-based rather than animal-based farming.[838]

Bureaucracy in farming is dependent on policy and there needs to be incentives for farmers to change farming methods to sustainable alternatives.[839]

• Regenerative farming is growing in popularity and should be further explored, to protect wildlife and land quality. Simple conscious mowing practices can have a great impact, e.g.

[828] 185:34 p 8 in 343_May_28_21_Abdullah_S

[829] 185:37 p 8 in 343_May_28_21_Abdullah_S

[830] 185:43 p 9 in 343_May_28_21_Abdullah_S

[831] 186:15 p 6 in 344_May_30_21_COAST

[832] 187:9 p 7 in 345_May_31_21_Buzingo J

[833] 194:23 p 10 in 352_June_04_21_Troughton J

[834] 194:25 p 10 in 352_June_04_21_Troughton J

[835] 196:26 p 7 in 354_June_07_21_NAMAC

[836] 196:30 p 7 in 354_June_07_21_NAMAC

[837] 196:35 p 7 in 354_June_07_21_NAMAC

[838] 198:38 p 6 in 357_Apr 14_21_Harfouche S

[839] 202:10 p 6 in 361_May_19_21_Cadogan_Hincks

nature strips - leaving a three meter margin on the outside of ¦elds untouched to protect local wildlife.• Animal management, genetic selection, multi species swords and reducing use of tractors and quads are all important elements in creating a sustainable food system.[840]

Diversity should be improved in terms of both production and intake of aquatic foods. This would address observed species diversity loss due to unsustainable practices that in turn affect fish species and production.[841]

Supporting Land Degradation Neutrality (LDN) in order to combat desertification, restore degraded land and soil, including land affected by desertification, drought and foods, UNCCD is currently supporting 127 countries that have committed to setting their voluntary targets of which 104 have successfully set their targets. The scientific conceptual framework for Land Degradation Neutrality (LDN-SCF) that underpins these guidelines comprises live modules, which describe the overall approach to LDN.[842]

...organic way of farming...[843]

Food production: Stimulate the production of safe/nutritious food through an educational process targeting conventional family farming producers. Incentivize family farming and production policies and access to food free of pesticides. Maintain the mobilization of the legislative and State Forums to combat the indiscriminate use of pesticides. Valuing and enabling extractivism, considering the importance of traditional populations in this process, in particular coconut breakers, shellfish gatherers, and indigenous women and their knowledge.[844]

In fact, working together would make it possible to avoid situations known as "maladaptation" (adoption of adaptation measures that, for example, would lead to an increase in GHG emissions).This action also focuses on coexistence and biodiversity. Biodiversity, or biological diversity, is defined as the extent of the variety of different living organisms in a given environment. A rich diversity is a sign of a healthy ecosystem. This can be improved by extending the crop rotation cycle (more crops in rotation on the same plot). Biodiversity will also be supported by providing certain spaces for the natural environment to perform its role. The beneficial effects of a balance between agricultural activities and the ecosystem in which they take place are known. Biodiversity can be useful to agriculture such as in the pollination of many plants or the control of insect pests by birds and amphibians. However, the presence of certain animal species can lead to more or less important issues of cohabitation. For example, overpopulated deer can cause severe damage to crops and orchards.[845]

International trade with Latin America and the Caribbean is relevant not only as a generator of foreign currency and employment but also as a driver of the implementation

[840] 202:14 p 6 in 361_May_19_21_Cadogan_Hincks

[841] 208:10 p 7 in 367_May_27_21_Kachulu_Thilsted

[842] 216:5 p 7 in 377_June_07_21_Arden_Caucci

[843] 218:12 p 6 in 379_June_08_21_KAMMPIL

[844] 228:61 p 18 in 222a_May_11_21_FTI_ZHI_English

[845] 229:6 p 6 in 226a_May_17_21_Oteyami O_English

of new and better practices. In this sense, it is an essential factor to develop the potential of agriculture in the region and strengthen its contribution to overall food security and the achievement of inclusive and sustainable food systems.[846]

Axten Farms shared their work managing a family farm in Saskatchewan, Canada. They have farmed in a water limited area for over a hundred years. They faced a series of weather events that made them vulnerable and saw that perennial crops had greater resiliency. So they began adopting practices to build resiliency, such as cover crops, reduced synthetic inputs, stripper headers and stubble retention, diverse cash crops with companions, compost and carbon based inputs, compost extract and biostimulants, and synergistic crops. The idea of how big of a difference soil management practices could make really stuck with the farm as they learned about the practices of others, such as Gabe Brown. They built a seed cleaning facility that cleans all grain grown on the farm to food grade and the seed market, as well as regeneratively grown flour, that they directly market and control the end to end process. An important part of this work has been around community and socioeconomics as they have seen the loss of fellow farmers so they aimed to build a process that could employ and retain more people in rural communities. They have also conducted grain nutrient testing to highlight the major difference their practices have made on nutritional quality, and that has also translated to more flavorful products.[847]

Success stories from the panel. For example, Noursih^N was able to work on a water funding mechanism in Quito, Ecuador where funds were gathered from large water consumers in the city to support upstream water friendly farming practices. They also had a project in Zambia they want to replicate elsewhere working with Camaco and farmers across the country to gather soil data and determine carbon offsets. The resulting work has been able to support elephant conservation goals (a rare instance of major biodiversity outcomes from agricultural work) and supporting rural regenerative food and farming practices.[848]

Aquaculture has a big role to play in the future of food, and it is necessary to push the frontiers of aquaculture towards more mariculture and a diversification of species, so that aquaculture also can be an ecosystem service provider.[849]

Confined Animal Feeding Operations: continue unchallenged. Ban further factory farming…land degradation increases our risks for future pandemics Reduce pandemics by reducing animal products and increasing access to plant based options.[850]

Improvement of methodology for measuring carbon emissions is critical, as well as orientation to companies and producers on how to measure correctly.[851]

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[846] 236:7 p 6 in 277a_May_14_21_IICA_English

[847] 249:13 p 8 in 485_June_22_21_Levesque_SD

[848] 249:30 p 13 in 485_June_22_21_Levesque_SD

[849] 251:2 p 6 in 487_June_29_21_Selwyn_Multi

[850] 257:11 p 10 in 493_June_23_21_Kevany_Van

[851] 261:15 p 6 in 497_June_24_21_Fontes_Multi

The Soy Moratorium already works well in his view and an important initiative. Focus on areas that are already "at our disposal" (e.g. degraded pasture land).[852]

Right now, there's a large push to farm Kappaphycus Alvarezii, and Gracilaria Xorticata, or seaweeds commercially viable for hydrocolloids. But if we're developing more food products or nutritional products, then we need to look at the farming methods that grow those types of species.[853]

Land-based seaweed production can also grow seaweed in an integrated way, for example with shrimp farms, and open ocean farming methods such as Integrated Multi-Trophic Aquaculture (IMTA), can be used wherein which seaweed can be grown along with other species like mussels, oysters, and certain local fish to mimic natural ecosystems.[854]

Multi-trophic aquaculture approach: Local seaweed livelihoods simultaneously allow for other livelihoods like sustainable fish farming, farming bivalves, mollusks, and cleaning coastal water as well.[855]

Chemical fertilizers will continue to be banned to protect Kiribati fragile atoll environment and to ensure that all local production are organic.[856]

Also emphasized was the need for improving rangeland and pastureland management and utilization as well as the adoption of the "One Health" approach that recognizes the interconnection between people, animals, plants, and their shared environment.[857]

The role of vegetable cultivation between two harvests of main cereal crops in a rice-based system was also identified as an effective way to increase the availability of plant-based protein.[858]

Farming greed red and brown seaweed in geographically suitable conditions for these taxonomic groups and supporting local people to set up these farms so they then buy the harvest off them.[859]

Agricultural innovations and practices driving positive change in the agri-food production systems (crop and livestock systems) that can be adapted or scaled in different contexts.[860]

Need to relook at our farming systems – dynamics at the household level; - Increase productivity and profitability - Improve soil health - Reduce greenhouse emission.[861]

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[852] 261:89 p 12 in 497_June_24_21_Fontes_Multi

[853] 264:12 p 7 in 500_June_26_21_Edible Issues

[854] 264:13 p 7 in 500_June_26_21_Edible Issues

[855] 264:65 p 12 in 500_June_26_21_Edible Issues

[856] 265:41 p 8 in 501_June_28_21_Kairo K

[857] 266:4 p 6 in 502_June_28_21_Zhang_Basher

[858] 266:17 p 6 in 502_June_28_21_Zhang_Basher

[859] 267:10 p 6 in 503_June_29_21_Schnyder_Boura

[860] 268:10 p 7 in 504_June_30_21_Susumu_Leiva

[861] 268:24 p 8 in 504_June_30_21_Susumu_Leiva

Investing in efficient water use mechanisms will improve soil nutrient management and enhance food productivity in atoll islands.[862]

In addition, farmers should be encouraged to use organic fertilisers and governments to regularly review land policies were proffered as some of the solutions to constraints on agricultural land.[863]

Develop and apply integrated pest and land management systems.[864]

Human centred digitalization' in agri-food systems can help ensuring existing divides are not deepened and new divides are not created.[865]

Regenerative agriculture is a holistic approach to farming which takes into account the biophysical environment of the soil, but also the broader efficiency of land use.[866]

It is looking at a multiple range of public goods production, and involves practices looking at soil protecting and regenerating systems, biodiversity-friendly operations, integration of better water management systems, restoring soil life and more.[867]

As part of the solution, the members reckoned that proper land tenure policies need to be instituted, there is need to protect land from soil erosion and governments must ensure proper management of land laws among others.[868]

Practice of monoculture and specialized production over diversification • Practice of nature and biodiversity preservation versus natural resources utilization for agricultural production.[869]

In terms of solutions, it was proposed that there is need to invest in regenerative agriculture concerning organic farming to cushion farmers in relation to unhealthy food production, there is need for proper dissemination of research data and statistics, it is important to involve young farmers in feasibility studies and the need for reliable and accurate information regarding weather patterns among others.[870]

Some participants expressed concern about promoting plant-based diets, without consideration of land clearing, water consumption, soil depletion relating to agricultural production.[871]

[862] 268:43 p 10 in 504_June_30_21_Susumu_Leiva

[863] 270:12 p 10 in 506_June_29_21_EAFF

[864] 271:13 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[865] 272:37 p 10 in 508_June_30_21_GDPRD

[866] 273:8 p 6 in 509_June_30_21_FFA_Nestlé

[867] 273:9 p 6 in 509_June_30_21_FFA_Nestlé

[868] 275:10 p 9 in 511_June_30_21_EastAfricaFF

[869] 277:73 p 11 in 513_July_01_21_Weise S

[870] 279:16 p 9 in 515_July_01_21_EastAfricanFarmers

[871] 280:50 p 9 in 516_July-01_21_Anastasiou K

Zero-Budget Natural Farming (ZBNF) was discussed as an option for Sri Lanka in its aspirations to be the first country to produce food without the use of chemicals.[872]

With the volume of food needing to be produced for food security and with the data on the increased yields due to chemical inputs, one of the speakers noted that while the amount of chemical inputs have to be reduced, it cannot be completely done away with without having ramifications to yield. He juxtaposed the statistics from 1940 (before Sri Lanka used agro chemicals) and the yields in 2020 to show the difference (4.8 tonnes of rice per hectare in 2020 as opposed to only 0.65 tonnes per hectare in 1940). He advocated for integrated plant nutrient systems and integrated pest management systems.[873]

Panelists shared views and data supporting the idea that efforts to improve livelihoods across the board are now constrained by lack of progress in building national-level research and development capacity, particularly within NARS, and extension services. Given the highly varying farming conditions in the region, farm technologies and soil fertility management practices must be locally adapted to specific conditions. Strong NARS and extension systems are needed to achieve this. Technical innovation that is adapted to specific smallholder conditions is a precondition for sustainable and inclusive transformation of food systems.[874]

Monitoring of the Common Agricultural Policy (CAP) by different actors, demanding that financial incentives be better adapted to the national context, favoring marginal areas (growing evidence of greater environmental relevance), effectively based on results, and with greater supervision to encourage farmers to adopt more positive practices for biodiversity, rewarding them accordingly.[875]

Decrease the number of vessels and hours at sea and polluting emissions.[876]

Farmers and producers should be more aware on the importance of professional consulting services and provided training programmes in order to increase their capacities on sustainable production practices.[877]

Finally, the Dialogue centered on the theme that there is no one-size-fits-all for the food system. Rather than searching for a silver bullet, it's imperative that all players focus on supporting family farmers, sustainable agricultural practices, education, and other investments to help incentivize making a radical change towards a healthier future. Moving forward, sustainable food businesses must maintain this open conversation and continue to challenge each other.[878]

Traditional communities (Quilombos) are empowered individuals and not victims. There is much knowledge and artistic talent in these communities that can contribute to disrupt

[872] 281:4 p 6 in 517_July_03_21_Perera A

[873] 281:6 p 6 in 517_July_03_21_Perera A

[874] 298:15 p 8 in 534_July_07_21_WBADB_ADI_Multi

[875] 301:18 p 7 in 537_July_08_21_ANP_WWF

[876] 301:61 p 9 in 537_July_08_21_ANP_WWF

[877] 310:22 p 7 in 546_July_13_21_INDEP

[878] 316:11 p 6 in 553_July_15_21_Food Tank_Oatly

unsustainable food practices. People from these communities commit to take concrete steps to continue and revive their traditional agricultural systems and transfer their cultural traditions, knowledge and practices to the next generation and to the society at large. This is possible via: • Continued process of revalorization of local culture and empowerment and taking pride in traditional values that prioritize a respectful relation with nature, especially with the land.[879]

Crop diversification will significantly help in eradicating malnutrition as it increases consumption of diversified foods with enriched nutrients.[880]

Start-ups need an industry partner who could help penetrate their technologies for large-scale adoption. A collaborative approach of bringing stakeholders together to implement data driven solutions and prepare a global action plan on research, technology, market and policy interventions is essential for improving dryland food systems. A Global Centre of Excellence in Biofortification could be established to develop research programs, to promote biofortified food, advocate policy amendments and contribute to nutrition security of the malnourished population.[881]

Participants started the discussion focusing on which innovative pre- and post-harvest technologies and practices should be applied over the next years to increase crop yields while offering safe and nutritious food, and divided them in sectors of application.[882]

From the side of research and academia, it is important that research questions are co-developed with local communities since the early beginning of project cycles, so that results are appropriate and useful for farmers and they can continue beyond single interventions/projects. This will also reduce farmers' resistance to implement and use technologies or new ways of working. In promoting Sustainable Agricultural Intensification practices and technologies, it is important to understand the different value systems of stakeholders and take into consideration the drivers behind agricultural choices that are not only related to cash or yield but they are also social and cultural (ex. pearl millet is also used for buildings and not only for food).[883]

Most of the participants felt that there was urgent need for the adoption of new technologies in agriculture, the new technologies will help in improving crop management, pest control and disease management and may include farm automation, livestock technology, artificial intelligence, precision agriculture, block chain, vertical farms and modern green houses. This will contribute greatly to the consumption of diversified diets by the general populace.[884]

Flexibility is critical to producers when it comes to the design and implementation of soil health practices to improve resiliency. For example, certain practices such as strip-tilling

[879] 317:16 p 9 in 554_July_15_21_Lopez DE

[880] 321:20 p 12 in 558_July_16_21_RICH_ICRISAT

[881] 321:23 p 14 in 558_July_16_21_RICH_ICRISAT

[882] 324:22 p 9 in 561_July_19_21_OCCAM

[883] 324:47 p 11 in 561_July_19_21_OCCAM

[884] 325:15 p 7 in 562_July_19_21_Zombe K

may be possible in a field one year, but not necessarily every single year depending on moisture levels and residue decay.[885]

The promotion of agricultural produc6on systems and livestock grazing which use fewer chemical products which then represent a food risk: different models were men6oned at this level such as organic agriculture, sustainable agriculture, permaculture.[886]

Establish under the adverse conditions entailed by climate change the productive capacity of our main aquifers, communicate and educate producers based on these results and promote participatory and scientifically-based measures that allow sustainable production.[887]

Consumers tend to express their interest in local and sustainable food sources, 74 and stakeholder companies (fertilizers, animal production) are increasingly active 75 in collaborating and interact with scientist and research entities on impact of 76 climate change in agriculture. In Europe, future decisions of big food companies 77 would likely be very influential in LUC.[888]

Organic

Calling for governmental and non-governmental initiatives for capacity building and training of scientists, researchers, technicians, students, and farmers on the circular economy, non-wasteful production, and recycling of agricultural waste which can produce supplementary organic-matter resources for crop production, or valuable soil amendments.[889]

Outcomes: 1. The government is active with a good number of policies and programs that ensure protection of environment/natural resources along with food production. Examples include Good Agricultural Practices, organic farming, PalayCheck or Rice Integrated Crop Management, crop rotation, and intercropping. However, the problem lies in the implementation.[890]

Support group collective action for strengthening farmer knowledge, and practices through farmer-farmer sharing on practical concepts such as growing organic food, crop rotation, and composting.[891]

Consumers continue to demand safe food. This act will be increasing as more information and awareness becomes available to the masses. Kenya exports organic food to markets in

[885] 336:19 p 6 in 494a_June_23_21_US Farmers

[886] 338:11 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

[887] 348:1 p 6 in 422a_June_28_21_PROLIDER_Eng

[888] 353:17 p 2 in 505a_June_29_21_Borchard_UNC

[889] 166:20 p 5 in 355_June_14_21_FAO

[890] 366:45 p 9 in 410_June_14_21_Gregorio_Tan

[891] 391:15 p 8 in 433_May_25_21_Welthungerhilfe_Multi

Europe. While this is viewed as a good income stream for both specialized and selected producers, it is time that consumers demanded the same quality of food that is exported.[892]

Further, participants urged policymakers to not reinvent the wheel, but instead to focus on bridging local, indigenous knowledge with scientific evidence on agroecological approaches and innovations. As part of this, a few local CSO participants underlined the need of local producers for behavioral change-based tools to build local awareness and demand for agroecological approaches and products. They pledged to further build this capacity locally and further referred to the Africa unions Heads of State's decision to support ecological organic agriculture.[893]

Food procurement programmes guaranteeing a certain percentage of purchases for smallholders in organic agriculture is another opportunity that has proved important to foster small-holder agriculture. This could also be aligned with various national programmes, such as school feeding programmes.[894]

3. Encourage collaboration between government, farmers, academia and civil society organizations to develop concrete policies, including financial incentives, so that the transition to more sustainable – from the biodiversity and climate point of view – greening agriculture and food sector becomes a reality In many countries in the region, such as the Republic of Uzbekistan incentives (or programmes) to "green" food systems are being implemented. These include water saving technologies, smart cultivation and harvesting technologies, organic production, investment in targeted sorting, grading, storage and processing technologies as well as minimizing food loss and waste (i.e. Let's do Macedonia). Matching knowledge transfer with financial incentives or subsidies was also highlighted. For example in Azerbaijan subsidies are offered to farmer cooperatives to stimulate application of modern technologies, such as irrigation systems.[895]

A point was raised that the general public does not understand where their food comes from, catalyzed by increased distances between consumers and food producers. When the general public engages with misinformation, especially in the ways that their food is produced, they have no avenues to verify information validity. And changing their ingrained perceptions with truthful information is very difficult. Food has become a way for anyone, anywhere, to express their values. This has many benefits when it comes to learning about diverse cultures but can also lead to food becoming a new form of identity politics, promoting exclusionary, versus inclusionary, perspectives. This has the potential to be very dangerous as it could lead people to disengage from anything from diverse foods to alternate points of view. The lens of food understanding has also shifted towards a more individually-focused lens - "what is best for my family" - that is based on deeply held beliefs, versus a more scientific, unbiased lens. A great example is the global fear of pesticides and their effects on children and overall health, as well as the complex (and

[892] 391:34 p 12 in 433_May_25_21_Welthungerhilfe_Multi

[893] 396:17 p 11 in 438_June_16_21_Caballero_Multi

[894] 401:18 p 13 in 442_Apr_08_21_Mizenko B

[895] 403:6 p 8 in 444_May_25_21_FAO_UNICEF_Multi

sometimes inconsistent) mechanism of public and private food labeling and certification schemes like "organic" without any global unified definition.[896]

Evidence of the role that biocontrol can play in sustainable agriculture, particularly in terms of benefits for biodiversity, was presented to the dialogue, based on a report from the Institute for European Environmental Policy (link to report below). Their literature review examines definitions around biocontrol, the literature on benefits with regard to biodiversity, soil and human health, current efficacy levels and market position, and potential wider impacts on farm economics and climate considerations. The report states that "…biocontrol has an advantage in its overall long lasting effects, which in itself has a positive knock-on effect on biodiversity and crop resilience. Biocontrol opens a virtuous circle generating more biodiversity and more resilient agroecological systems." The report notes key evidence in the following areas: • Biocontrol has recognised potential to support the protection and enhancement of biodiversity, particularly in the framework of Integrated Pest Management and in combination with organic production. Reducing the overall use of chemical pesticides has widely acknowledged benefits for biodiversity.[897]

Biocontrol can form a bridge between organic practices and the shift in conventional farming.[898]

d) In Andhra Pradesh, convergence of the Department of Rural Development with the Department of Agriculture helped farmers shift to organic farming and enabled households to understand the importance of their food choices. Women play a crucial role in such initiatives.[899]

4. Organic Agriculture as an innovative solution for small scale farmers to reach the organic market 5. Governments should encourage more public and private partnerships and enabling partnerships….and mass communication for internet accessibility for small scale farmers.[900]

Good and organic food is one that can be traced to its origin, who the farmer is, where the seeds come from, what is the pattern of planting or cultivation, or even if necessary for what and to whom the product is sold.[901]

Participants in the discussion suggested that the Data Platform should add local small-scale supplier databases for nearby township schools to choose from. Through accurate digital governance, it can open the access for small farmers and achieve the organic combination of standardization and flexibility of procurement mode. Of course, this depends on the preconditions such as information and communication technology as well as the concept of local governance.[902]

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[896] 405:14 p 8 in 446_May_27_21_Lyons_Gould

[897] 420:13 p 8 in 461_June_09_21_IBMA_FFF

[898] 420:14 p 9 in 461_June_09_21_IBMA_FFF

[899] 421:9 p 10 in 462_June_10_21_NISD_RySS_Multi

[900] 431:16 p 11 in 472_June_18_21_van Oosterhoud_Kusumadireja

[901] 435:5 p 9 in 476_June_18_21_Niode AK

[902] 444:2 p 8 in 027_Feb_02_21_CBCGDF_UNFSS

We reached out to folks across the Philippines and conducted focus group discussions (FGDs), with a maximum of 10 participants each, to learn about the challenges they face on the ground. This is also intended to deepen understanding and build trust...[903]

For food production, the discussion centred around sustainable farming practices and the support needed to transition from conventional methods. Farmers tackled the challenges in adopting organic/ natural/ regenerative farming and the problems of high waste during harvesting. MSMEs discussed concerns in using sustainably-grown raw materials for processing.[904]

Ample supply of organic/ natural produce should also be made available in the local market to ensure that healthy food can be enjoyed by rural communities. Moreover, farmers would need to be further capacitated on key business skills like records keeping, cost accounting, and forecasting so they can dictate prices vis-a-vis production cost as well as better estimate market demand before planting.[905]

For example, IT based traceability systems (e. g. QR code) are solutions that could also be more accessible to consumers to ensure high consumer protection and trust. Contrary to organic or fair-trade labels, that are based on general and easily understandable principles, GI product specifications throughout the world, and even within the same country, considerably vary as to the level of requirements, linkage to traditions, landscapes or cultural values as well as the environmental impacts of the production. Therefore, it makes it much more difficult to establish a high standard and even more to communicate on promises to consumers.[906]

support transitions (for example through improving fertilizer efficiency), and supporting both marginal / transitional and transformational improvements.

Large national business Member of Parliament 4 Multi-national corporation Local authority 3 Small-scale farmer 2 Government and national institution Medium-scale farmer Regional economic community 2 Large-scale farmer United Nations Local Non-Governmental Organization International financial institution 6 International Non-Governmental Organization 3 Private Foundation / Partnership / Alliance Indigenous People Consumer group 6 Science and academia Other Food Systems Summit Dialogues Official Feedback Form Dialogue title Organic as a solution to meet increasing demands from consumers and global markets, to address environmental pressures, and to achieve the UN sustainable development goals.[907]

Conversations need to include diverse stakeholder perspectives, but although this fact is recognized it is not achieved in reality. This conversation, the organic industry, and organic consumers need to be more diverse but identifying immediate actions and long-term solutions are both challenging. Lending practices and land access have been designed to be intentionally discriminatory, but tangible solutions towards reconciling that

[903] 460:6 p 4 in 131_May_25_21_IISLA Ventures

[904] 460:10 p 5 in 131_May_25_21_IISLA Ventures

[905] 460:37 p 13 in 131_May_25_21_IISLA Ventures

[906] 462:6 p 8 in 133_May_27_21_CIRAD_Multi

[907] 468:1 pp 1 – 2 in 219_May_10_21_OTA

are debated. Identity politics and income inequality results in deeply polarized communities. Organic needs to be an affordable and accessible option for farmers and consumers and a complex and comprehensive approach is needed to create and sustain systematic change.[908]

In places like Senegal where people used to produce their own organic food, share meals and thus assure more food security and less waste, the introduction of cash crops broke this equilibrium. Today what used to be savanna is a desert, nature is becoming poorer. People living near the river can't drink the water because of pesticides or parasites.[909]

It is necessary to migrate towards an efficient and comprehensive agriculture based on sustainability that is not defined based on the production system: conventional, organic, hydroponic, ecological, etc. and focus on producing in a sustainable way with the integration of the best possible practices.[910]

Participants felt that multiple types of production systems are and must be part of more sustainable food systems - for example, organic and conventional agriculture should not be viewed as mutually exclusive. Both are necessary to meet consumers' needs and achieve our common goals. FSS solutions must recognize this truth and be revised to incorporate the best aspects of multiple systems of production.[911]

Government appreciates organic farming, however there is not much effort as there is a misconception that organic production cannot cater to the large scale need of the state. There is also no assured markets available for farmers.[912]

Opportunities should be available for youth to derive substantive income from working in food systems. Young people are already driving initiatives on organic food, climate and the environment. Their engagement in food systems - production, cooking and sharing --- provides additional opportunities to converge solutions that are community specific and sustainable.[913]

In addition, there was also a call for policy that directly and comprehensively incentivizes organic, regenerative and agroecological farming along the land sharing model (making the whole area of the farm good for biodiversity, not just the margins). There was an appeal for the polluter pays principle to be adhered to so that agricultural chemicals become much more expensive, and farmers are encouraged into less intensive methods while also making the cost of currently cheap imported feed much more expensive. This would then remove much agricultural pollution.[914]

Education – understood in its broadest sense and including a diversity of people. Firstly, there were calls for food literacy, including cookery skills, to be developed among young

[908] 468:12 p 14 in 219_May_10_21_OTA

[909] 486:22 p 10 in 291_May_21_21_Polman_Prabha

[910] 491:14 pp 5 – 6 in 301_May_27_21_CropLife Latin America

[911] 4:54 p 11 in 104_Apr_8_21_Animal Agriculture Alliance

[912] 7:33 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

[913] 19:43 p 6 in 115_Apr_24_21_Foronda_Multi

[914] 20:55 p 7 in 116_Apr_21_21_Hein JR

people. Secondly, it was felt that knowledge about the benefits of a healthy, nutrient-rich, local diet was needed in the wider population in order to encourage a transition towards it. The links between agricultural production systems (such as, organic or grass-fed) and nutrient density in food products also need to be clearer. Thirdly, there were calls for agricultural colleges and advisers to provide more and better training and advice on sustainable and healthy production systems. Finally, the capacity of the agricultural workforce to produce healthy, nutrient-dense, food products on ecologically and economically viable holdings would be increased by greater efforts to share examples of best practice and ideas, and the ability to gain access to research activities and results.[915]

Supporting research on organic aquaculture o Supporting research and private investments on low trophic species, and new seafood products (i.e.: algae) o Supporting the adoption of fisheries management plans at local level – Technical assistants by scientific research centres o Regional Platform for the digitalization and data collection on fisheries and aquaculture o Promoting research on low-impact ¦shing and aquaculture practices (i.e.: bio-plastic nets for mussels, selectivity of ¦shing gears) o Regional Network on Best practices for a sustainable fisheries and aquaculture • Increasing the added value of seafood products Low income and losses in the seafood value chain as well as the unequal distribution of economic returns among different actors is too high and interventions are needed to balance o Research on nutritional properties of new species and improving the general awareness – Basket of new seafood products o Design and promote a label or recognition system for Mediterranean seafood (diet) products integrating all sustainability dimensions (also enhancing origin) o Design of innovative landing site for the proper management of the seafood value chain and marine litter management on land o Design of Community Lab for processing the SSF products (not highly valued fish, overfishing, commercial value fish) respecting the seafood quality and safety standards o Technical assistance program for supporting innovation in the seafood industrial development: zero waste, better exploitation of by-catch and by-products.[916]

To increase demand and consumption of nutritious food, the discussants recommended measures such as awareness campaigns, decentralizing procurement and distribution under the Public Distribution System (PDS), strengthening local markets (such as mandis) for farm produce and ensuring cooked, healthy meals to children under the Anganwadi and Mid day Meal programmes. To enhance food safety, the measures recommended were government certification of organic products, soil testing and discouraging perverse incentives and subsidies (such as electricity and fertilizer subsidies) that encourage monoculture and industrial agriculture.[917]

Thus, indigenous and scientific knowledge should be considered equally important in research and policymaking. • Empowerment of Stakeholders – Any transition has to be community-driven to be sustainable over time. Thus, communities should be empowered to take ownership of this transition. This could be facilitated through capacity building and collectivizing schemes for specific stakeholders such as farmers, women, youth and consumers (such as women Self-Help Groups (SHGs), Farmer Producer Organisations

[915] 20:66 p 6 in 116_Apr_21_21_Hein JR

[916] 23:95 p 8 in 205_Apr_27_21_CIHEAM_Multi

[917] 26:58 p 7 in 023_Jan_29_21_Bharat K S

(FPOs) and consumer co-operatives). • Improving Access and Affordability – One of the major challenges in implementing and scaling food systems initiatives is the lack of access or affordability of resources. On the consumption side, this manifests in lack of affordability/availability of safe, nutritious foods. On the production side, this could manifest in smallholder producers' lack of access to knowledge or quality organic inputs. Thus, efforts should be directed towards improving access to resources for marginalized communities, through initiatives such as fair price shops or facilitating local production and sale of organic inputs. • Role of Technology – Digital technology can be a useful tool in disseminating information, improving access to resources, and reducing the gender gap in agriculture. • Funding – Funding for non-conventional food systems initiatives, such as regenerative agriculture, is often difficult to source.[918]

Use innovative methods for food production (research - preproduction) (Most voted on) 3. Enhance marketing strategies (Identification of food groups for vulnerable groups) 4. Promote and establishing decentralized local markets, in partnership with small farmers, to ensure access to healthy food in light of crises 5. Train young men and women to be involved in sustainable land and agriculture. 6. Organize workshops on the benefits of organic farming and limiting use of chemicals.[919]

Assure farmers are fairly compensated for nature positive low emission decarbonized agriculture production should be central to any safety and security regime The implementation of national and regional land use and urban planning reforms. An inclusive approach should be adopted that involves civil society, academia, technical societies, trade unions, technical committees, citizen advisory bodies, private sector, citizen assembly, local government, government members, opposition member and independent senators.[920]

She believes that initiatives started from personal level could lead to institutional interventions involving schools, civil society organizations, parishes, private sector and local government. She cited three illustrative cases of good/best practices that could lead to sustainable food consumption and lifestyles.[921]

Final Consumers: Change perceptions about food; fruits and vegetable do not have to look "perfect". Show how to utilize foods better, such as eating the tails, leaves, peel, etc., and encourage the composting of organic waste.[922]

Moreover, in the area of smart logistics and urban planning, the importance of food governance and its coherence is highlighted, having among the propositions, a medium-term plan for fresh food availability and improving the proximity of wholesale markets to all stakeholders. This involves the need to strengthen existing linkages between stakeholders or establish new ones, for example, through blockchain technology and by improving last mile logistics. The role of capacity building among farmers is also put

[918] 27:68 p 6 in 044_Feb_18_21_Bharat K S

[919] 30:64 p 6 in 071_Mar_11_21_ESCWA_FAO

[920] 35:110 p 9 in 095_Mar_27_21_Chinapoo C_Multi

[921] 74:108 pp 20 – 21 in 189a_April_16_21_Ateneo de Manila

[922] 75:66 ¶ 101 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

forward as the region counts with a lot of small-medium size producers. Lastly, in terms of reducing food waste, the need to improve not only the services within wholesale markets but also the whole Asian food chain was highlighted relating to reinforcement of roads, supply chain system, and collaborating with farmers to improve handling, packaging, and prevent post-harvest loss. This initiative must be complemented by better tracking systems in Asia, especially concerning its transportation periods and coherent policy that facilitates perishable goods rapid transportation within a country. It is increasingly important to ensure that wholesale markets have access to collective food waste management systems to address food waste with the example of organic waste as fertilizers and biofuels through collaborations with start-ups or organizations specialized in this area. The overall aim is always to promote best practices in the Asian region.[923]

Participants also pointed to the use of anerobic digesters as a unique opportunity to share the story of how the food system can provide alternative energy sources. Digesters are closed tanks which are used to break down organic matter such as cow manure and/or food waste through anaerobic digestion, creating biogas, which can be used to power the farm and communities, as well as to produce other materials. Participants believed it should be a priority to scale up the use of digesters and introduce them across the country for farms of all sizes and to look to community digesters.[924]

Access and Subsidization: True to rural, urban, and otherwise economically disadvantaged areas, accessing healthy affordable food is a significant challenge. Many poor communities in developed countries rely on cheap fast food and ultra-processed foods as their primary food sources. These products are cheap due to large subsidies granted to animal protein producers, sugar producers, and grain producers. It makes these foods artificially cheap whereas wholesome healthy organic fruits and vegetables receive no subsidies which force the consumer to pay the whole cost which makes it too expensive for many.[925]

Increase consumers' awareness and understanding of the importance of mountain products though narrative labels, traditional production certi¦cation and organic certification, moving from the "commodity" approach to products with a face, story and heritage.[926]

Food production should be as organic as possible. In developing countries this might come at a slower pace.[927]

The Canada's First "Pay What You Can" Grocery Store was first started in Berlin circa 2013. Involvement from Jamie Oliver led to surge of interest supporting Community Fridge Network: "Waste Less, Save More" campaign; b. Bugs: Baltimore Urban Gardening encourages students from low income families to plant veggies after-school and summer programs; and c. San Roque Community Garden seeks to strengthen the people especially

[923] 77:37 p 7 in 108_Apr_13_21_Carrara E_Multi

[924] 84:78 p 11 in 153_Apr_28_21_GCNF_Multi

[925] 92:41 p 6 in 225_May_13_21_Schwartz A

[926] 98:68 p 9 in 282_May_18_21_Romeo R

[927] 99:90 p 10 in 285_May_20_21_TFFF_Multi

during this pandemic through food support, training on the production of organic fertilizers and pesticides.[928]

In addition to nutritious food from Sundanese food commodities that are spread in every Sundanese house yard, these foods and food commodities must be safe, this was confirmed by the Sundanese customary community committee, that Sundanese food ingredients are safe, because they carry out permaculture and can ensure it meets organic food standards.[929]

Some challenges/tensions can be expected however. In certain cases, farmers are seen as the problem and not part of the solution. New entrants to dairy production are also constrained by growing environmental regulation. In relation to afforestation, barriers to adoption include its permanence, loss of social welfare pension and ineligibility for Farm Assist. A lack of focus on older person in relation to farm partnerships was also highlighted. In terms of organic and artisan food production, there is a lack of focus on market development. There is a critical need for markets to generate a fair return to producers if development of sustainable livestock systems is to be successful. Finally, coherent rural / land use policy (across agriculture, forestry, energy, environment, rural development, local planning policy) is urgently required.[930]

A broad range of actors will need to be mobilised, including players in the full supply chain, retailers/wholesalers, consumers, marketers, the organic value chain and government (to support the higher cost of organic/high environmental standard food).[931]

One group diverged in opinions on whether or not there were clear bene¦ts for organic aquaculture and whether or not sustainability has to include organic. Views ranged from there being a need for certi¦ed organic and regenerative aquaculture to handling this issue via integrated multi-trophic aquaculture that doesn't necessarily need to be harvested in the ocean nor organic. By the end of the discussion the group agreed that there are clear benefits to both, but whether or not seaweed's form of sustainability should take on one or the other was left for further discussion.[932]

Need strong promotion among children and adults on nutrition, food safety and effects on health. Provide nutritional information about organic products. Reduce food wastage.[933]

Need to educate farmers and producers about underlying principles of organic agriculture beyond crop production. Need topics on entrepreneurship, marketing, organizational strengthening, as well as post-harvest technologies, packaging and processing of food and non-food organic products, organic standards and certification. Lack of competent trainers on relevant topics.[934]

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[928] 103:133 pp 20 – 21 in 007a_Dec_18_20_NAAGD

[929] 106:27 p 5 in 004_Nov_30_21_Kustipia R

[930] 112:135 p 7 in 074_May_18_21_O'Mara_Teagasc

[931] 112:148 p 10 in 074_May_18_21_O'Mara_Teagasc

[932] 119:100 p 17 in 121_Apr_28_21_Doumeizel V

[933] 122:2 p 6 in 135_June_08_21_Calub_Gregorio

[934] 122:61 p 6 in 135_June_08_21_Calub_Gregorio

Put up farmer field schools that integrate climate resilience and sustainable organic farming.[935]

Implement the National Organic Agriculture Program Roadmap (2017-2022) more effectively.[936]

Capacitate local authorities on the unique socio-economic and environmental benefits from organic agriculture to get their support for enabling policies and programs.[937]

Educate consumers about organic agriculture so they will demand for it.[938]

New policy developments are underway in the UK, largely driven by the new national strategy following the recent departure from the European Union. Focus areas are carbon reduction, driving down synthetic fertiliser use and pursuit of a circular economy. These mirror the efforts currently underway in China to ensure a zero increase in chemical fertiliser use. However, on a global scale, very little policy exists in terms of regulating the release of emerging contaminants in the environment even though sustainable agricultural practices, such as the application of organic fertilisers, provides a pathway by which these chemicals can enter the agro-environment. Environmental regulators therefore need to harness the latest scientific developments to establish research informed thresholds allowing for the safe use and application of organic fertilisers. This is going to require research outputs to be disseminated to regulators and presented in an accessible format.[939]

In China farmers are given 100-500Y per tonne to use organic water-derived fertilizer though these aren't always evenly distributed. There are also penalties in place for poultry/pork farmers who do not recycle waste and pollute water ways. The Chinese government also produces technical documents which advise farmers on how to use wastewater-derived fertilizers, i.e. how to apply and maximize benefit whilst minimizing risk.[940]

As part of the UN Food Systems Summit 2021, this dialogue explored the concept of a circular economy, with a focus on Chinese agricultural systems. China has rapidly transformed their food production systems to meet a "Zero Increase Action Plan" for fertilizers and pesticides, and therefore provides an excellent case study to explore the concept of a circular economy in sustainable food systems further. China is predicted to reduce mineral N use between now and 2050 and organic fertilisers are assumed to help this transition.[941]

The aim was to: Share knowledge on the feasibility and risks of using organic fertiliser in agricultural production through adoption of a Circular Economy approach.[942]

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[935] 122:73 p 8 in 135_June_08_21_Calub_Gregorio

[936] 122:97 p 8 in 135_June_08_21_Calub_Gregorio

[937] 122:98 p 8 in 135_June_08_21_Calub_Gregorio

[938] 122:99 p 8 in 135_June_08_21_Calub_Gregorio

[939] 124:30 p 6 in 142_May_11_21_Carter L_Dennis S

[940] 124:38 p 7 in 142_May_11_21_Carter L_Dennis S

[941] 124:41 p 5 in 142_May_11_21_Carter L_Dennis S

[942] 124:42 p 5 in 142_May_11_21_Carter L_Dennis S

A key theme emerged that we need to work with a solutions focus moving forward. We have a growing body of knowledge surrounding the risks of using sustainable agricultural systems and in particular the use of organic fertiliser but the benefits of adopting these practices are significant in terms of meeting global food demands. We therefore need to work on developing mitigation options to ensure that these practices are done in a safe and sustainable manner. Participants discussed mitigation options and put forward their own work investigating mitigation options such as additional wastewater treatment and use of biochar to adsorb some of the contaminants. This is an area where future work is needed and there is the potential to build collaborations through this Dialogue to explore this further.[943]

Issues have been identified concerning heavy metals (Pb and Cd) and the build-up of these within soils over repeated application of fertilizer. Organic fertilisers can also introduce emerging contaminants into the environment however legislation permitting safe levels of these chemicals in the environment is largely missing. It is therefore important to consider the impacts on human and ecosystem health in development of new policies to account for this.[944]

We need to consider the legacy of existing contaminants and emerging contaminants as these both present a risk to ecosystem and human health e.g. heavy metals are often high in concentration and do not degrade whereas organic contaminants such as antibiotics are low in concentration but still remain bioactive and cause selection pressure on antibiotic resistance genes.[945]

Breakout Room 4: Climate-smart interventions are a broad topic and not much divergence was observed among participants. In general, the participants supported resilient farming solutions and discussed water productivity issues exacerbated by subsidies and divergence from the real cost to farmers under climate change. Participants also agreed that technology is not always the ultimate solution, with transformation of cultivation practices and organic agriculture also being important. While different solutions exist for similar challenges, a sole focus on technologies may cause problems in other areas. Incorporating agroecological zoning in resource planning for suitable cropping specific to soil and climate in the agricultural land was also put forward as important to incorporate.[946]

Academic Institutions may introduce curriculum modules focusing on sustainable development, organic agriculture, water use efficiency and sustainability in engineering and social sciences as well as methodologies and case studies more relevant to Egypt with suitable practices and technologies.[947]

[943] 124:43 p 6 in 142_May_11_21_Carter L_Dennis S

[944] 124:44 p 7 in 142_May_11_21_Carter L_Dennis S

[945] 124:48 p 9 in 142_May_11_21_Carter L_Dennis S

[946] 132:126 p 15 in 193_Apr_19_21_Ringler_Kassim

[947] 132:127 p 8 in 193_Apr_19_21_Ringler_Kassim

Mentioned key priority actions for achieving water security and agri-food transformations in the next three years included: • Promoting organic practices as sustainable food production practices and a route to reduced land degradation, and climate resilience.[948]

Providing agroecological zoning for suitable cropping system water-land use resource plans • Working on land reclamation projects through organic farming • Use of agronomic technologies like mechanized seeds and Climate Smart-Solar technologies are key interventions, which should be considered in future.[949]

Strategies to address these issues include incorporating a use of community pantries to reduce the loss of excess produce, creating community gardens to address issues of food stability during the pandemic, and practice of community-supported agriculture where the produce and profits feed local markets, reducing the transport and infrastructure required to support food systems. The groups discussed specific examples from countries like the Philippines and Afghanistan to address the crisis. These included supporting women to start and run organic community farms in the Philippines which were not only environment-friendly, but also ensured that families dependent on remittances (that stopped due to the pandemic) had a source of income and access to nutritious food. Or using the traditional methods for drying and storing food as in Afghanistan which are inexpensive, have low environmental footprints and require low-technological investment even as they prevent spoilage.[950]

Focus communication towards mothers, access to land and organic farms, and have workshops there.[951]

Assets found in community structures already supporting community resilience can be leveraged to support local food economies, access, and inclusion -Langar - a community based food system. Organic, veg, sustainable Sikh temples all have kitchens and everyone can eat no matter who they are -Sacred forests - temples for everything. Reimagine the utility of forests and other natural areas beyond their function as commodities for the economy -Resilient and healthy food system require a resilience and rooted tradition in the earth -Community rituals are important for reorienting behavior -Carrying the wisdom of traditional communities. Every step of life is focused on how God made us in nature and the holy way of life.[952]

Initiatives to stimulate creativity and innovation. Exhibitions and awards ceremony for the best companies with an example on organic packaging.[953]

Relocation of production systems, with creation / production of organic inputs, local knowledge, new products etc.[954]

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[948] 132:128 p 12 in 193_Apr_19_21_Ringler_Kassim

[949] 132:129 p 12 in 193_Apr_19_21_Ringler_Kassim

[950] 143:79 p 12 in 231_May_19_21_MCD

[951] 146:1 p 10 in 235_May_25_21_Gonzalez B_Multi

[952] 149:42 p 9 in 243_June_03_21_Schwartz A

[953] 164:50 p 8 in 304_June_02_21_FAO_Multi

[954] 164:51 p 8 in 304_June_02_21_FAO_Multi

Make SMEs heard 2. Reduce the cost of doing business 3. Reward responsible conduct 4. Tailor support for food SMEs 5. Democratise the digital food revolution 6. Make good food matter Feedback 1 3 courses of action discussed: 2/4/6 Track 2- improved trade and fiscal policies to protect producers, promotion of local agrifood products Track 4- favor access to industrial zones especially for women / residential areas, pursue commercial policies with exemption from taxes / customs fees for equipment imported especially for processing. Reduction in profit tax weighs heavily on SMEs and discourages SMEs from formalizing. So stay informal. Investors and donors should give more importance to social business and not just for profit business because it is important. Grouping necessary between SMEs (pooling) especially in the field of transformation, to achieve better results. Support processors in new technologies, innovations, training, more organic production, production quality Track 6- develop policies that promote local products and limit imports, act on trade policies, promote strategies around healthy eating (young children focus), quality / health control service at all levels, promotion of tools for 'balanced diet.[955]

Calling for governmental and non-governmental initiatives for capacity building and training of scientists, researchers, technicians, students, and farmers on the circular economy, non-wasteful production, and recycling of agricultural waste which can produce supplementary organic-matter resources for crop production, or valuable soil amendments.[956]

Calling for governmental and non-governmental initiatives for capacity building and training of scientists, researchers, technicians, students, and farmers on the circular economy, non-wasteful production, and recycling of agricultural waste which can produce supplementary organic-matter resources for crop production, or valuable soil amendments.[957]

In addition to food livestock provide many other human benefits including a large array of pharmaceutical ingredients, wool, pelts, leather, hides, organic fertiliser and draught power in addition to acting as a mobile source of wealth, critical to LMIC smallholder farmers.[958]

Use evidence and science to advocate to consumers: industry would respond to science by making highly nutritious foods available because that is what consumers prefer. An example was shared about the demand for organic traditional foods in Egypt by "high class" individuals.[959]

Industry could lead advocacy of organic foods. Avoidance can also be a strong advocacy strategy, e.g., avoid certain foods.[960]

Precision Agriculture As can be deduced, the following outcomes are to be worked out: 1. Enabling policies on precision agriculture should be put in place. This will involve: a) a

[955] 164:52 p 10 in 304_June_02_21_FAO_Multi

[956] 165:19 p 5 in 310_June_14_21_FAO

[957] 166:20 p 5 in 355_June_14_21_FAO

[958] 175:48 p 8 in 333_May_25_21_GMA_Multi

[959] 177:91 p 11 in 335_May_26_21_Laar_Multi

[960] 177:92 p 11 in 335_May_26_21_Laar_Multi

policy framework or a program (precision agriculture program, as the way of organic agriculture program; b) mainstreaming of precision agriculture as a strategy of the commodity programs of the DA; c) crafting of a road map.[961]

Farming Inputs. The group picked GMO Seeds and organic fertilizer as inputs needing attention an introduction for use in Eswatini. The participants felt that introduction of GMO seeds can boost productivity per unit area and local food supply. The group wondered why Eswatini does not recommend their use as neighboring countries are using GMO's. The group proposed that the country can benefit immensely from the use of Organic fertilizer since organically produced crops fetch a premium price in the market. The group was aware that organic farming is also good for the environment. They also proposed intense capacity building for farmers intending to engage in organic production.[962]

Use natural manure: the Extension Service as part of their capacity building must promote the use of Organic Fertilizers and farmers made aware of their importance in sustainable agriculture. The government on the other hand must guarantee availability to primary producers.[963]

Strategic interventions to address above risks by local food producers and other chain actors: 1) Agricultural insurance scheme to provide a safety net against external shocks on the business; 2) Training on health and safety issues to ensure traceability and quality; 3) Availability of accessible funding mechanisms by public and private funders; 4) Building on Credit systems prioritising economic status of smallholder farmers; 5) Governments should be lobbied to establish special disaster relief funds to assist farmers to kick-start businesses affected by natural calamities/pandemics; 6) Land should be made bankable for farmers to access capital; 7) Computerising the exchange system of agricultural produce for traceability to discourage thefts; 8) Engaging in Agricultural Cooperatives as a potential business models for aspiring farmers; 9) Collaboration of Government and IT companies to streamline farm operations that would result in an efficient supply chain; 10) Developing local organic certi¦cations as the current ones are expensive. For e.g., the introduction of a local Participatory Guarantee System would be a life-changing for small organic farmers due to its low-cost of implementation. The PGS system would act as a local organic certifying body allowing farmers to sell their produce at retail prices.[964]

Strategic actions of Food producers; It's the consumers that dictate the producers what he wants. The mindset of consumers needs to change to encourage them to eat local food. 75% of our vegetables are imported. There is a competition between local producers and international producers. One action taken is the Made in Moris Products while other proposals would include: 1) Provide new farming techniques such as vertical farming; 2) Re-invent the farmers to be smart for example, to use inputs when needed, and to change the way they produce; 3)As proposed by a participant; create a plant academy to bridge the gap. The plant academy will consist of sharing of knowledge between new and old

[961] 181:50 pp 6 – 8 in 339_May_27_21_Sayoc_Multi

[962] 182:119 p 10 in 340_May_27_21_Mamba_L

[963] 182:128 p 13 in 340_May_27_21_Mamba_L

[964] 183:124 p 8 in 341_May_28_21_Sewraj_KS

farmers about their ways of plantation and techniques that could be implemented to boost Agriculture; 4) Discuss on ways to buy and sell products; 5) Educate people toward biofarming, sustainable agriculture and about organic vegetables; 6) SKC Surat Ltd has implemented the Maurigap 1, 2, 3 and global gap strategies. They also added a seal of trust on most of their packaging which represent that the food is safe (Food Act).[965]

Assessing the contribution of novel sustainable farming practices such as Agroecology: 1) Introducing green belts around vegetable ¦elds. This can help to act as wind breaks, but also attract pollinators; 2) Agro-forestry is also good practice as a good agricultural practice for both crop plantation as well as for rearing animals (grazing grounds). Over years, farmers have been encouraged to shift to organic farming, which is more ecological way to safer food production; 3) Engaging in sensitisation campaign not only to educate farmers but also to consumers is equally important as they are the one setting the demand aspect; 4) Organising seminars on different value addition methods; 5) Encouraging young farmers to implement new farming techniques to increase productivity and to ensure a sustainable production; 6) Developing soil regeneration programmes (F.A.L.C.O.N Association provides both theoretical & practical courses on soil biodiversity management)and that can only happen though controlled and minimal use of fertilizers and other agro-chemicals that add to greenhouse gas emission such as nitrous oxides and methane.[966]

Roles of the public and development sector in de-risking and funding the transitional period: 1) Public body are the drivers to change, by setting proper legislations and policies. Similarly, there should be schemes to encourage to take risks and endeavor in new agricultural ventures; 2) E¨cient water use is also an important component in new scenarios of climate change, where dry seasons are more frequent. Need to have schemes on rain water harvesting systems, so that they become more popular among farmers in Mauritius as well as subsidies on irrigation systems like drip irrigation implements; 3) Subsidies on bio-organic fertilisers & pesticides to promote organic and even agroecological farming; 4) Government & private companies should provide sponsors to farmers associations to engage in national awareness campaigns on organic agriculture, agroecological practices.[967]

Build resilience to vulnerabilities, shocks & stress Contribution of Agro-forestry in scaling up climate resilience and other potential ecosystem contributions: Agroforestry is the introduction of trees in agricultural systems (crops, livestock or both). Agroforestry provides various environmental and socio-economic benefits. These include: 1) Enhanced biodiversity with diverse habitats, which facilitates the integration of pest management practices through biological control; 2) Improved pollinator communities lead to an increase in crop productivity; 3) Agroforestry provides diversified income and increase the resilience of farmers; 4) Improved water management. Trees can contribute to the contribution of a microclimate which can be favourable for the growth of plants and provide shade to livestock. Trees can be used to create shelterbelts to protect crops against wind damage; 5) The integration of leguminous trees can improve soil fertility. Breakdown

[965] 183:127 p 10 in 341_May_28_21_Sewraj_KS

[966] 183:132 p 12 in 341_May_28_21_Sewraj_KS

[967] 183:133 pp 12 – 14 in 341_May_28_21_Sewraj_KS

of organic matter from trees also improves soil texture and fertility; 6) Soil retention through contour planting; 7) Carbon sequestration; 8) Agroforestry maximises land use and allows the derivation of maximum benefits from trees on agricultural land.[968]

Coherent blue transformation strategies for resilient aquaculture & aquatic food systems & strategic intervention areas for building improving risk management systems: Challenges: 1) Insufficient resources are available to exploit marine resources; 2) Some coast inhabitants, specially the fishermen, are unaware of the fact that the ¦sh they catch are not healthy and would make consumers suffer; 3) Aquaculture farming can leave a great impact but the government was not ready for this great project; 4) Presently, CSA is not sufficiently addressed in our national strategies; this should be added and enforced accordingly; 5) It is not easy to change the mindset of farmers to convince them to change their organic farming to something more resilient and technologically modern.[969]

Waste reuse to improve soil conditions (crop). Development of organic waste composting centres in different locations within the city. This should be made available to farmers at subsidised rates. Accra has carried out a waste characterisation exercise in the bid to produce energy from waste, if these projects are developed, the sludge from bio digesters can be sold to farmers at subsidised rates.[970]

Farmers must play their role in mitigating the effects of climate change through e.g., carbon storage, green energy production, increase organic farming practices, research and innovation.[971]

The contrast between two panellists in organic farming and technology heavy farming practices gave great variety and insight into different approaches but all created a positive effect on creating a sustainable food system.[972]

For policy/programme, the group proposed the following: Under AT 3, the institutional global environmental policy at each province, monitoring system, community involvement, education and campaign. It also proposed for the creation of monitoring team involving fisherfolks and farmers that will supervise and observe good agricultural practices per municipal/provincial level. Under AT 2, organic way of farming, information drive promoting local products/food safety, review trade policies on importation (rice tarrification) including food packaging. Under AT 4. strengthen micro entrepreneurs (talipapa) oversight committee. Under AT 5, the curator mentioned the active participation of multi-stakeholders in budgeting and monitoring disasters programs and environmental projects.[973]

In terms of policy proposals, there are many suggestions to look into: (a) marine ecosystem protection (AT3); (b) global environmental facilities which would lead to the preservation and protection of resources under the sea (AT2.) by consistent monitoring and

[968] 183:137 pp 14 – 16 in 341_May_28_21_Sewraj_KS

[969] 183:138 p 16 in 341_May_28_21_Sewraj_KS

[970] 201:29 p 7 in 360_May_18_21_ICLEI Africa_Multi

[971] 202:28 p 6 in 361_May_19_21_Cadogan_Hincks

[972] 202:39 p 6 in 361_May_19_21_Cadogan_Hincks

[973] 218:28 p 6 in 379_June_08_21_KAMMPIL

implementing the use of safe ¦shing methods. It will also promote total prevention of hazardous fishing equipment and chemical inputs; and (c) adopting diversified organic farming system.[974]

In terms of policy proposals, there are many suggestions to look into: (a) marine ecosystem protection (AT3); (b) global environmental facilities which would lead to the preservation of resources under the sea (AT2.); and (c) Adopt diversified organic farming system. There are also policy proposals on Asset Reforms such as the enactment of the National Land Use Act (NLUA), to push for the completion of CARP/ER and the delineation of Municipal waters. There is need to increase social awareness on food systems and some proposals for the creation of grievance and redress committees with compensation as well as, to seek equal treatment for farmers/fishers, agrarian reform (AT4). At the same time, there are policy proposals for the diversification on resilience to food systems, that is, preventive and promoting participatory approaches.[975]

Home gardens must be promoted at the household level as they serve as a reservoir of diverse ingredients for ethnic cuisines, as local seed banks and a ready source of safe and nutritious food. The diversified crops, plants, and livestock in home gardens are crucial and accessible resources for providing year-round food supply for the household, and surplus which can bring income to the family, thereby supplementing the livelihoods of poor rural households. Further, there is a need to promote sustainable food production, soil health management and organic production, so that the ingredients of these ethnic cuisines are free of harmful chemicals.[976]

Revival of ethnic cuisines has become crucial in protecting the cultural heritage of communities, thereby protecting the whole agroecosystem. Ingredients for ethnic cuisines are often locally sourced, thus making them adaptive to climatic shocks. This can be promoted as a way to adapt to climate change. Home gardens, with their diverse and rich composition of plant and animal species, are also an integral part of local food systems in the HKH. Hence, they become ideal sites for promotion and management of genetic material in a sustainable manner. Technological support with regard to various methods of house farming such as vertical farming, rooftop farming, pot farming, and hydroponics, can support families who have little or no land. These local production system are mostly default organic as they utilize kitchen waste, animal manure and other organic residues.[977]

Some participants disagreed that innovation and technology is the best way to improve irrigation practices. They felt instead that we should look back to traditional forms of farming, where farmers were able to use resources efficiently without having to rely on high-tech solutions. Others believed that even traditional techniques would need modernisation to work on a large scale. There was also some divergence on the importance of certifications like "organic" or "bio", because these agricultural practices

[974] 218:30 p 5 in 379_June_08_21_KAMMPIL

[975] 218:31 pp 7 – 8 in 379_June_08_21_KAMMPIL

[976] 219:51 p 8 in 380_June_08_21_Shakya_Chettri

[977] 219:52 p 10 in 380_June_08_21_Shakya_Chettri

can be more sustainable, but they are not affordable if farmers have to pay large amounts to get the certification.[978]

In particular, the role of organic producers, their organizations and the communities they are part of as the drivers of these changes and who frequently do not have a voice in food system policy discussions was a major focus. Farmers tend to be 'acted upon' by Governments and agencies rather than recognized as primary actors and agents of change and custodians of the land and ecosystems they work within.[979]

There was considerable discussion concerning the role of government and universities, with agreement on the importance of Policy and Education coupled with experience that there is a significant need to implant Organic practices into these institutions. Discussions in all three Talanoas touched to some degree on people's resistance to change with first-hand experiences of farmers reluctant to take up Organic practices. Consensus realizes that this will be a major challenge for scaling up.[980]

Education, training and empowerment. Education, capacity building and knowledge products are critical and will look very different in an Organic Food System than they do in the present industrial model. Education will need to start in the early grades and continue through University and Extension outreach training.[981]

Food production: Support and encourage food production within urban communities and with traditional peoples to ensure access to healthful food in various territories. This can be achieved through the installation of organic community gardens in the periphery, and stimulated by keen budgeting, thus ensuring the continuity of existing production, credit for small producers, and the flow of communication between city and country.[982]

On the other hand, the state of play reveals that the African food system is truly vulnerable to Covid -19 but nevertheless the traditional food system has been able to preserve itself. This is why it is important to build trust between the stakeholders involved in the local food system. Organic farming would be a suitable solution for producers for a sustainable food system.[983]

Production of the largest amount of inputs possible at the local level, such as: pastures, seeds, and organic fertilizers.[984]

Motivate and train producers in the use of organic inputs.[985]

Ideas included: 1. Connecting regenerative agriculture and organic agriculture with institutional health care. Some of the worst food in the world is presented at healthcare facilities, but people don't understand the true scale of the sector. This includes hospitals,

[978] 224:43 pp 10 – 11 in 385_June_09_21_Lazzaris S

[979] 226:7 p 5 in 387_June_09_21_Mone S

[980] 226:29 p 11 in 387_June_09_21_Mone S

[981] 226:33 p 7 in 387_June_09_21_Mone S

[982] 228:88 p 14 in 222a_May_11_21_FTI_ZHI_English

[983] 229:18 p 9 in 226a_May_17_21_Oteyami O_English

[984] 232:7 p 3 in 270a_May_11_21_MinAgri_English

[985] 232:8 p 3 in 270a_May_11_21_MinAgri_English

senior care facilities, long term care facilities, and community based food services (e.g. meals on wheels) that have not contributed to the human body with true nutrition towards some of the most vulnerable population. It is a $16b marketplace almost entirely serviced with conventional food, with 40% of this spend on animal protein.[986]

Farmers do understand this but with limited or no access to these alternative resources for pest control, they succumb to what is available and easily accessible to control the pests. With the increased use of chemical pesticides, the farmers are now becoming aware of the resistance to chemicals by the existing pests and how this is a never ending vicious trap. Hence, many farmers are resorting to more sustainable alternatives of employing low cost, locally sourced, farm made organic pest repellents, advocated under the Organic Production Systems.[987]

With this, the dialogue aimed to: a) Inform and educate the participants about the issues and challenges of the present food system and the role of agroecology and organic production systems in addressing these issues; and b) Make use of the Independent Dialogue to put the voices of the small farmers and the marginalized in setting the agenda and proposing pro-farmer, pro-people and pro-planet solutions to the Food Systems Summit.[988]

Through Farmer to Farmer Learning (F2F), members gain new knowledge on organic agriculture production diversification. The action research help farmers do the research by themselves.[989]

E.Strategy for Small Farmer's Autonomy and Sustainability During Pandemic through (PGS) In many country, the government only allow certification of organic by 3rd party which is expensive for small scale farmers.[990]

Setting conditions to get involve in supply chains - Farmers has to register in groups, work in a group, and must be trained organic standards and technique. The main stakeholders include farmers, retailers, consumers and all interested will join functional teams assigned to manage and support farmers.[991]

Call for stronger unity, engagement and cooperation among stakeholders. Farmers and consumers should organize themselves, government and agencies should respect farmers rights so that there could be a foundation of lasting food systems around the world. There needs to be an improvement in consumers' knowledge about organic food. This includes community engagement activities involving research with other partners to focus on ecological research & livelihoods, engaging the communities to participate in the research

[986] 249:54 p 14 in 485_June_22_21_Levesque_SD

[987] 250:30 p 5 in 486_June_23_21_AFA_Multi

[988] 250:32 p 5 in 486_June_23_21_AFA_Multi

[989] 250:35 p 7 in 486_June_23_21_AFA_Multi

[990] 250:37 p 7 in 486_June_23_21_AFA_Mult

[991] 250:41 p 7 in 486_June_23_21_AFA_Multi

themselves to better understand, better understanding so that they work towards improving what they eat, plant.[992]

The recognition of the rights of farmers to the production of food. We have to go back to the basics and further push this in the UN food systems summit. I think we have to address the basic problems to address these rights. In organic agriculture, it's difficult if farmers do not have access to land and water. This would be helpful in the recognition of their rights.[993]

Proposal to support and scale up organic farming and agroecology through financial models for organic farming and maybe consider awards for farmers pursuing this.[994]

Push governments to create policy to reduce use of pesticides and chemical fertilizers. Ban these. Promote organic fertilizers. Policies that support small scale organic farmers to create favorable environment for them to thrive and become productive. It should include policy to introduce good post-harvest facility for farmers. Subsidy not adequate. Some more support for farmers to store product to get better price for products.[995]

Organic farming protects all living creatures in the ecological food web of life - the microbes, insects including butterflies, amphibians, birds and the entire biodiversity gets adversely affected by the use of chemical fertilizers and the pesticides which then affects the pollination, soil carbon and closing of these ecological cycles ultimately leading to unsustainable, toxic food systems that affect our health and environments.[996]

On the Nature and Resilience Tracks, the National Dialogue also agreed to employ new climate smart farming technologies with the active leadership of the Agriculture and the technical and financial support of the Global Green Growth Institute and with the active involvement of NGOs. The harsh atoll conditions of the islands in Kiribati - compounded with the impacts of climate change would benefit much from this climate smart techniques after a number of successful trials. This technique therefore need to be quickly disseminated to the farmers and also to be trialed to mangrove planting in coastal eroded areas. To be included in the capacity building is the making of compost so home organic waste can be meaningfully utilized to clean home areas and to grow more healthy foods. The training on preparation of foods from traditional food crops needs to be advocated and included in the school curriculum as well.[997]

The members proposed that there is need to break cultural barriers regarding land ownership, there is need to change land policy from land ownership to land use policy and further the need to promote vertical farming. In addition, farmers should be encouraged to

[992] 250:43 p 9 in 486_June_23_21_AFA_Multi

[993] 250:45 p 9 in 486_June_23_21_AFA_Multi

[994] 250:46 p 9 in 486_June_23_21_AFA_Multi

[995] 250:47 p 9 in 486_June_23_21_AFA_Multi

[996] 250:54 p 5 in 486_June_23_21_AFA_Multi

[997] 265:46 p 6 in 501_June_28_21_Kairo K

use organic fertilisers and governments to regularly review land policies were proffered as some of the solutions to constraints on agricultural land.[998]

A full range of indicators was discussed, regarding soil organic matter, above ground biomass, land and resource efficiency measures, nutrient density, nutrient management, nutrient surplus, measures related to circularity, measure dedicated to farmer livelihoods, collective agreements in the sector, water retention, soil fertility and consumption related metrics. This only shows the complexity of this area and shows that isn't yet a framework that aligns all parties. So, in the need for accelerating transition is it obviously area to find alignments on.[999]

Shift to sustainable consumption patterns • Promote access to healthy diets, especially to marginalized rural consumers who have low-income—it could be done via policies and communication campaigns in schools and for children and making healthy food more appealing and attractive • Develop clear targets to understand the nature of consumers, thereby changing/raising their awareness by applying behavior change approaches • Promote production of fortified good quality foods • Conduct an in-depth study on drivers and perceptions on junk food consumption, to suggest policies on the issue Action Track 3: Boost nature-positive production • Combine agriculture and tourism so that the producers can ask for better prices for their products and give them motivation to produce safe foods with high quality • Apply ecosystem approach on small scale productions • Promote the formation of cooperatives • Create policies to attract young people and to strengthen farmers' capacity in the cooperatives • Promote communication, marketing, food processing, and storage/preservation technology • Promote digital agriculture and economy, organic production, climate-smart production, and agroforestry models • Promote market-oriented planning and integrating biodiversity conservation for large production areas • Implement regulation and stabilization of input supplies for production • Describe different scenarios at landscape levels to integrate products and stakeholders in the value chains • Involve policy makers and authorities in production planning • Engage the private sector to maintain farmers' production • Strengthen public-private partnership Action Track 4: Advance equitable livelihoods • Move from a crop-based approach to system approach • Research on different types of systems (wetland, upland) and management to regulate access, ensuring that vulnerable and marginalized people get access to resources • Work with collective actions for smallholder farmers.[1000]

In terms of solutions, it was proposed that there is need to invest in regenerative agriculture concerning organic farming to cushion farmers in relation to unhealthy food production, there is need for proper dissemination of research data and statistics, it is important to involve young farmers in feasibility studies and the need for reliable and accurate information regarding weather patterns among others. Further, there is need for more capacity building for young farmers, need to begin conserving the indigenous seeds

[998] 270:30 p 10 in 506_June_29_21_EAFF

[999] 273:129 p 12 in 509_June_30_21_FFA_Nestlé

[1000] 277:80 pp 7 – 9 in 513_July_01_21_Weise S

for better productivity, we should adopt proper disposal/ reuse/ recycling of plastic waste and push for reforestation and tree planting for improved ecosystems.[1001]

The dialogue captured the complexity of the current context in Sri Lanka (where currently there is an intense debate/discourse on organic and inorganic systems of production and the trade-offs between food safety and food security, with the Government of Sri Lanka's decision to ban importation of chemical fertilizer and pesticides). Dialogue was forward looking in that it looked to be solution oriented exploring insights from other country experiences (such as India and Indonesia) and discuss the applicability for way forward in Sri Lanka. The dialogue connected those in agriculture sector and those in finance sector and it allowed for innovative solutions such as blended finance facilities towards sustainable agriculture to be discussed in detail.[1002]

Divergent views were observed where those advocating for some level of chemical inputs for agriculture noted that given the food demand of the future, the approach would need to be a balanced one, where integrated approaches need to be taken forward (such as integrated plant nutrient systems and integrated pest management) with chemical inputs (more advanced slow release versions - 2nd and 3rd generation fertlizer) being supplemented with soil organic matter. The need to promote Sri Lanka Good Agricultural Practices (SLGAP) was seen as a more pragmatic solution than attempting to go completely chemical free.[1003]

The need for more research on the balance between organic and inorganic food systems was highlighted.[1004]

Initiatives such as Communities that Sustain Agriculture (CSAs), Catrapovos, consumer groups, organic and agroecological fairs, as well as urban agriculture in public spaces are already existing models that can subvert the current logic of production and consumption and bring both fairer remuneration to producers when bringing consumers (or in the case of CSAs, co-farmers) closer to natural cycles and supporting the valorization of the products and farmers who produce them.[1005]

However, the fact that existing certifications are accredited in public procurement programs, which are good sales opportunities for family farmers, organic and agro-ecological producers, would continue to be an obstacle. Anyway, other labels would support the increase of recognition and appreciation by consumers, another important aspect of this equation.[1006]

Another big challenge discussed was about the scale of food and that we should not have organic monocultures. Food cannot be a commodity. And some possible arrangements that promote market access by small producers were discussed, but the question remains – is it

[1001] 279:35 p 9 in 515_July_01_21_EastAfricanFarmers

[1002] 281:18 p 3 in 517_July_03_21_Perera A

[1003] 281:19 pp 8 – 9 in 517_July_03_21_Perera A

[1004] 281:20 p 9 in 517_July_03_21_Perera A

[1005] 290:16 p 7 in 526_July_06_21_WWF-Brazil

[1006] 290:25 p 12 in 526_July_06_21_WWF-Brazil

possible for these models to exist in way that small producers access large markets without the product being aimed at an elite?[1007]

The performance of public institutions must be carried out in the sense of guaranteeing the rights already conquered, in supporting and monitoring the implementation of public policies and programs aimed at family, traditional, organic and agro-ecological agriculture, and in fiscalization for breaches of the laws. However, and considering the aforementioned context, the strengthening of spaces for social participation, such as councils and committees, is essential for the discussion of fundamental agendas. Civil society organizations and grassroots movements need to intensify their actions, and with the support of other actors, such as NGOs, academia and the private sector, build narratives that bring consumers closer to these causes.[1008]

However, there is both the lack of assistance, especially those that allow organic and agroecological practices, and the infrequency in their offer in general, as well as the presence of biases in the most frequently available current models, which often reinforce practices based on monocultures and dependent on pesticides, for example.[1009]

With regard to sustainable practices, such as agroecology, organic and regenerative agriculture, for their intensification, the needs to value the communities on their lands and value their knowledge were identified, as they are the ones who understand exactly how to manage their land, climate conditions and native species. Systematizing and disseminating this knowledge is imperative to strengthen this production and gain scale. When there is technical assistance offered in these places, in general they tend to be based on more technocratic and "conventional" models, which is an obstacle and a risk for the maintenance of these practices.[1010]

A central issue concerns the risk of "commodification" of organic or agroecological agriculture. We cannot aim for organic monocultures. In parallel to the gain of scale and increase in the number of initiatives and networks in agroecology, organic production, etc. it is necessary to think about more systemic changes in consumption patterns and market relations.[1011]

Reformulation of benchmarks for sustainable production methods (e.g. organic farming is no guarantee of greater biodiversity), involving all relevant stakeholders in this reformulation (prevents us from continually developing proxy approaches that do not safeguard biodiversity).[1012]

[1007] 290:28 p 14 in 526_July_06_21_WWF-Brazil

[1008] 290:32 p 7 in 526_July_06_21_WWF-Brazil

[1009] 290:33 p 10 in 526_July_06_21_WWF-Brazil

[1010] 290:34 p 17 in 526_July_06_21_WWF-Brazil

[1011] 290:35 p 18 in 526_July_06_21_WWF-Brazil

[1012] 301:70 p 7 in 537_July_08_21_ANP_WWF

Hence, smaller business structures are needed to help fighting food waste; it also easier for a better management overall. A small organic supermarket was observed to offer less fresh fruits and vegetables, but also to have less food waste overall.[1013]

State Governments need to implement financial incentives to encourage small farmers to grow more sustainable and environmentally friendly produce. However, this is not enough. Large companies purchasing and using the small farmers produce to make their products also need to be held accountable. For instance, it is common knowledge that such companies will say anything to promote their brand and/or to sell their products. However, what are they actually doing to encourage small farmers to be organic, to be environmentally conscious, to use less water and so on… These are once again issues that must be redressed by policy makers as a matter of extreme urgency. However, one solution to this issue maybe to persuade State Governments to do more to dissuade their populations and businesses from putting everything into an economic context and focusing much more on the human and environmental impacts that this current model is sustainable. More science-based public discussion on such topics will be helpful.[1014]

Work to develop waste collection for the production of organic fertilizers that return to production quickly and efficiently (community organizations, in small neighborhoods or towns).[1015]

Collect waste for the production of organic fertilizers.[1016]

Juna Manuel: Some organizations propose not to participate in the event, the Summit, but that is also leaving "the field free", not joining the battle, not leaving the terrain free, because the transformations will not come from above; the proposals come from below; there must be a sum of forces from small nuclei. The National Law on organic agriculture in Argentina, organic regions with local governments.[1017]

In the practice of agriculture, cultivation is carried out using native seeds and the rotation system of use for a certain time so as not to deplete the fertility of the land. Reforestation, the use of organic fertilizers are encouraged, only what is necessary is consumed, clean energy is used and pest control is done naturally, taking care of the ecosystem. Hunting, fishing and gathering is guided by the lunar calendar and the natural reproduction cycles of the species.[1018]

Country agreements in the field of sustainability seek to comply with the UN Framework Convention on Climate Change, UN Convention on Biological Diversity, the UN Conference to Combat Desertification, the Stockholm and Rotterdam Conventions on Persistent Organic Pollutants, the Sendai Framework for Disaster Risk Reduction and, in particular, the Paris Accord. It is essential that we look for sources of external funding in

[1013] 311:40 p 10 in 547_July_14_21_Heilinger K

[1014] 323:71 p 11 in 560_July 19_21_Arbuthnott_Multi

[1015] 340:37 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1016] 340:40 p 5 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1017] 342:21 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[1018] 343:22 p 5 in 417a_June_18_21_Fernandez L_Eng

order to advance the environmental and climate agenda of regional agricultural and food systems.[1019]

Use urban food waste and crops for organic fertilizers, lowering health and fire risks. - Boost nature-positive production.[1020]

Develop waste collection systems for the production of organic fertilizers. • Use farm stubble and urban waste for organic fertilizers.[1021]

A problem that can cause this is that since organic products do not contain pesticides that prevent organisms, (harmful or not) these products if they contain these organisms are not allowed for export.[1022]

The INOFO North America Dialogue was created as a participatory learning capacity building session. Small farmer participants represented socially disadvantaged farmers, Black Indigenous farmers and farmers of color (BIPOC) and their farmer organizations who farm using agroecology farming practices and organic agriculture systems that support wellbeing of soils and environments, and promote nutritious food systems and healthy communities. Using a participatory capacity building approach, BIPOC small farmer- speakers gave their insights in pathways for supporting food systems change that is inclusive of BIPOC small farms, small farmers and their communities. The Principles of Engagement were integrated into the INOFO North America participatory approach. Our methods supported continuous engagements, enabling relationships and inclusion of local stakeholders and local change agents voices - the voices of underserved small farm populations, agroecology and organic Black Indigenous farmers and farmers of color and their farmer organizations. The outcomes of the INOFO North America Independent Dialogue will inform the Summit process and help to guide individual and collective action towards a future of healthy nutritious food that is responsibly grown by small farmers and their organizations to promote agroecology farm practices and organic agriculture, and their benefits – supporting food that is safe, nutritious, accessible, sustainable, equitable and resilient for all.[1023]

Liberty is key: It is important to experience our liberty and freedom in a manner to operate a regenerative agroecology-organic small farms and demonstrate the benefits to our communities and nation.[1024]

Deliberate actions towards these challenges and hindrances would enable resilient small farms and BIPOC small farm livelihoods, increase food security to all communities, ensure and strengthen local healthy food systems, grow wellbeing among BIPOC communities. . . Extending the benefits of agroecology and organic agriculture, resilient organic-

[1019] 346:16 p 5 in 420a_June_19_21_CLOC_Eng

[1020] 347:35 p 5 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[1021] 347:36 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[1022] 348:20 p 7 in 422a_June_28_21_PROLIDER_Eng

[1023] 356:5 p 3 in 409_June_13_21_Mone S

[1024] 356:17 p 6 in 409_June_13_21_Mone S

regenerative agriculture and these nutritious food systems to all environments and all communities - for all human beings.[1025]

To deliberate on how organic farming can safeguard food sovereignty in Africa The current food chain is skewed towards commercialization and input driven production systems. It continues the dependence on multi-national companies in supply of seeds, which are overpriced, and harmful chemicals. This is detrimental to the livelihood of small-scale farmers who are living below the poverty line, as a majority earn $2 or less per day.[1026]

Outcomes Organic farmers in Africa shared challenges and suggestions of their desired and ideal food system that serve their needs as follows: Challenge: High Production and marketing of harmful chemicals Suggestion: Developing an institutional framework to monitor and assess chemical toxicity. This means respective countries will have mandated institutions and laws that will restrict the use of chemicals that endanger the survival of mankind and biodiversity.[1027]

Challenge: Policy and laws that discriminate against organic farmers Suggestion: Protection of farmers rights on seeds and in using local soil fertility amendments.[1028]

The government is active with a good number of policies and programs that ensure protection of environment/natural resources along with food production. Examples include Good Agricultural Practices, organic farming, PalayCheck or Rice Integrated Crop Management, crop rotation, and intercropping. However, the problem lies in the implementation.[1029]

There is also exploring the potential and documenting local food and food ingredients, especially non- timber forest products, and maintain the continuity of native local varieties in organic agriculture.[1030]

Support group collective action for strengthening farmer knowledge, and practices through farmer-farmer sharing on practical concepts such as growing organic food, crop rotation, and composting.[1031]

Agriculture has to maintain a capacity to conserve, regenerate and reward. Improved market surveillance to reduce food waste will be needed. This process should be embedded in enhanced value addition and support to farmers through market cooperatives that increase access to global markets. We see large-scale farmers embracing organic farming and organic ways of producing large-scale agricultural products for human consumption. Finally, a short and localized food value chain is needed - from production to processing/value addition and marketing. Smallholders need to access information on

[1025] 356:18 p 6 in 409_June_13_21_Mone S

[1026] 360:10 p 6 in 404_June_10_21_Mone S

[1027] 360:13 p 6 in 404_June_10_21_Mone S

[1028] 360:17 p 6 in 404_June_10_21_Mone S

[1029] 366:45 p 9 in 410_June_14_21_Gregorio_Tan

[1030] 367:30 p 6 in 411_June_15_21_Mone S

[1031] 391:15 p 8 in 433_May_25_21_Welthungerhilfe_Multi

market dynamics, pricing of products, and general empowerment by value-chain. These will help guide a consistent transformation that seeks household food and nutrition security, imparts farmer decision-making abilities, and leads them to food sovereignty. Urban farming continues to inspire hope. It is key to the production of and access to safe, nutritious, and healthy food. It has been on the increase in cities through the pot, backyard, and multi-story gardens. It also offers additional income to the smallholders who sell their surplus production.[1032]

Food procurement programmes guaranteeing a certain percentage of purchases for smallholders in organic agriculture is another opportunity that has proved important to foster small-holder agriculture. This could also be aligned with various national programmes, such as school feeding programmes.[1033]

Encourage collaboration between government, farmers, academia and civil society organizations to develop concrete policies, including financial incentives, so that the transition to more sustainable – from the biodiversity and climate point of view – greening agriculture and food sector becomes a reality In many countries in the region, such as the Republic of Uzbekistan incentives (or programmes) to "green" food systems are being implemented. These include water saving technologies, smart cultivation and harvesting technologies, organic production, investment in targeted sorting, grading, storage and processing technologies as well as minimizing food loss and waste (i.e. Let's do Macedonia). Matching knowledge transfer with financial incentives or subsidies was also highlighted. For example in Azerbaijan subsidies are offered to farmer cooperatives to stimulate application of modern technologies, such as irrigation systems.[1034]

Biocontrol can form a bridge between organic practices and the shift in conventional farming.[1035]

Alignment opportunities: By increasing the uptake of biocontrol use, as part of Integrated Pest Management, the Common Agricultural Policy can be better aligned with the Sustainable Development Goals and the Farm-to-Fork strategy in creating a pathway for achieving the 2030 targets on organic farming and chemical pesticide reduction.[1036]

In Andhra Pradesh, convergence of the Department of Rural Development with the Department of Agriculture helped farmers shift to organic farming and enabled households to understand the importance of their food choices. Women play a crucial role in such initiatives.[1037]

Ensure smallholder farmers have access to quality inputs and resources to grow for their own consumption and sell at prices that allow them to live adequately - Empower women

[1032] 391:21 p 9 in 433_May_25_21_Welthungerhilfe_Multi

[1033] 401:18 p 13 in 442_Apr_08_21_Mizenko B

[1034] 403:6 p 8 in 444_May_25_21_FAO_UNICEF_Multi

[1035] 420:14 p 9 in 461_June_09_21_IBMA_FFF

[1036] 420:15 p 11 in 461_June_09_21_IBMA_FFF

[1037] 421:9 p 10 in 462_June_10_21_NISD_RySS_Multi

and youth to be directly engaged with agriculture value chains and improve market access for both income generation and nutrition outcomes.[1038]

Organic Agriculture as an innovative solution for small scale farmers to reach the organic market 5. Governments should encourage more public and private partnerships and enabling partnerships….and mass communication for internet accessibility for small scale farmers.[1039]

Good and organic food is one that can be traced to its origin, who the farmer is, where the seeds come from, what is the pattern of planting or cultivation, or even if necessary for what and to whom the product is sold.[1040]

For food production, the discussion centred around sustainable farming practices and the support needed to transition from conventional methods. Farmers tackled the challenges in adopting organic/ natural/ regenerative farming and the problems of high waste during harvesting. MSMEs discussed concerns in using sustainably-grown raw materials for processing.[1041]

Concerns for food processing and consumption included: 1) the entrenched monocropping culture that contributed to low appreciation of diversification; and 2) lack of ecosystem innovation vis-a-vis coordination and self-organisation among smallholder farmers and MSMEs. Continued preference for monocropping had limited access for food processors and consumers to variety of crops needed to produce healthier food. This supply and demand mismatch is partially attributed to poor coordination among smallholder farmers and MSMEs. Unregulated competition in many areas had nurtured individualistic tendencies instead of complementation for collective prosperity. Furthermore, chemical fertiliser agents continued to instil 'economies of scale', discouraging farmers to grow smaller quantities of multiple crops. Viajeros (traders) also required them to produce large volumes of the same crop to guarantee purchase. Addressing these issues would require 1) enhanced business management and sustainability training among farmers; 2) improved access to local and online markets coupled with community-shared production; and 3) local governments to organize dedicated days to showcase their natural/organic produce in public markets.[1042]

This was aggravated by lack of government support in branding and marketing of local products. Smallholder farmers inherently lack business orientation, often prioritising farm-related activities. Improving food distribution therefore, would require: 1) heightened consumer awareness on the nutritional and environmental benefits of organic/natural products; 2) improved market demand estimates; 3) more community-shared post-harvest facilities; and 4) more organic trading posts and product consolidators to reduce delivery cost for aggregated products.[1043]

[1038] 424:2 pp 6 – 7 in 465_June_16_21_Congressional Hunger

[1039] 431:16 p 11 in 472_June_18_21_van Oosterhoud_Kusumadireja

[1040] 435:5 p 9 in 476_June_18_21_Niode AK

[1041] 460:10 p 5 in 131_May_25_21_IISLA Ventures

[1042] 460:16 p 7 in 131_May_25_21_IISLA Ventures

[1043] 460:18 p 7 in 131_May_25_21_IISLA Ventures

With regards to providing interim funding and/or alternative livelihood to farmers in transition, an agriculture expert suggested that targeted interventions on food provision be considered, given that 30-40% of farmer's income is spent on food. This would involve providing 'insurance crops' or open pollinated seeds that require low input and are easy to grow to serve as a safety net for their own household food requirement. Once personal consumption needs are secured, farmers would have greater incentive to experiment with small-scale organic practices, putting them in a better position to transform their conventional farms.[1044]

The labour-intensive requirement for organic/natural farming highlighted in the FGD results was linked by other stakeholders to the low availability of certified organic inputs. It was agreed that to accelerate adoption, inputs should be readily available to the farmers at non-prohibitive prices or via schemes like buy-now-pay-later. This would spare them from having to make their own inputs. However, this could be detrimental in respecting the "culture" in "agriculture". Whilst the availability of inputs could assist in the early stages of organic agriculture adoption, farmers could become dependent on these external and expensive means of production manufactured and controlled by the few, rather than harnessing the traditional 'peasant way' of natural production. If not controlled, this could replicate the conventional system, but with organic replacing chemical inputs. Another suggestion was to organise farmers and adopt a form of 'labour division', where some can focus on cultivation whilst others can be trained to produce and sell inputs.[1045]

For example, IT based traceability systems (e. g. QR code) are solutions that could also be more accessible to consumers to ensure high consumer protection and trust. Contrary to organic or fair-trade labels, that are based on general and easily understandable principles, GI product specifications throughout the world, and even within the same country, considerably vary as to the level of requirements, linkage to traditions, landscapes or cultural values as well as the environmental impacts of the production. Therefore, it makes it much more difficult to establish a high standard and even more to communicate on promises to consumers.[1046]

The group then discussed their struggles to consume sustainably during the pandemic, characterized by an increase in online services and use of plastic. If one is trying to consume in an ecologically friendly way, their choices are often limited. One might have to choose between going plastic-free, local, or organic, but rarely get the option to have all three. Time banking was once again proposed as one way of shifting the frameworks of who/what we value in our economic system. Other forms of alternative markets, such as buy-nothing groups, were also mentioned, and the concept of mutual aid came up time after time.[1047]

Inclusion and empowerment: Organic agriculture has been shown to improve rural and local economies by offering a profitable farming option and by creating more farming community jobs. The hotspots study by the Organic Trade Association shows that organic

[1044] 460:22 p 9 in 131_May_25_21_IISLA Ventures

[1045] 460:23 p 9 in 131_May_25_21_IISLA Ventures

[1046] 462:6 p 8 in 133_May_27_21_CIRAD_Multi

[1047] 463:21 pp 7 – 8 in 155_Apr_27_21_FCDO_Multi

agriculture boosts household incomes and reduces poverty levels. Being an organic hotspot increases median household income by over $2,000, and lowers a county's poverty rate by as much as 1.35%. It offers a way for farmers to work in safe conditions and be paid a living wage. But the opportunity of organic farming is still out of reach for many farmers, especially marginalized farmers, and too often people of color and marginalized communities are left out of the conversation entirely. It is important to include support of organizations that represent people of color, and support the growth and development of underrepresented communities. Farmers, farmworkers, indigenous cultures, and non-white people are missing from these conversations, and need to be included to identify viable solutions. Financial and technical assistance is especially critical in communities of color and indigenous communities. Technology advancements can help with affordability and accessibility. Investment in the development of local food hubs, enabling schools to have better access to organic options, and empowering communities with the tools they need to feed and nourish themselves is critical.[1048]

Organic farmers in general have not been leading voices on climate change so they need to play catch-up to bring attention to organic's important role. There is a need for more data collection, as well as technical support to help continuously improve standards.[1049]

Conversations need to include diverse stakeholder perspectives, but although this fact is recognized it is not achieved in reality. This conversation, the organic industry, and organic consumers need to be more diverse but identifying immediate actions and long-term solutions are both challenging. Lending practices and land access have been designed to be intentionally discriminatory, but tangible solutions towards reconciling that are debated. Identity politics and income inequality results in deeply polarized communities. Organic needs to be an affordable and accessible option for farmers and consumers and a complex and comprehensive approach is needed to create and sustain systematic change.[1050]

The Organic Trade Association's Sustainable Food Trade Action Council aims to strengthen the organic sectors voice in climate policy and sustainability issues and boost the sector's efforts to create an environmentally friendly, sustainable food system. Council members actively measure and refine their sustainability programs and chart their climate strategy.[1051]

How does organic achieve Sustainable Development Goal #2 of zero hunger and Goal #3 of ensuring good health and wellbeing? Twenty-six percent of the world is food insecure, and a staggering 21% of children under 5 have stunted growth due to malnutrition. In the US, 35 million are food insecure. Organic agriculture practices can help to turn that around. Studies of 60 different crops across 6 continents have shown that organic and conventional yields are almost equal (organic yields are just 8-9% lower than conventional) when organic is done well and certain organic practices like crop diversification and crop rotations are applied. Using organic practices can be a significant

[1048] 468:4 p 7 in 219_May_10_21_OTA

[1049] 468:10 pp 11 – 12 in 219_May_10_21_OTA

[1050] 468:12 p 14 in 219_May_10_21_OTA

[1051] 468:16 p 3 in 219_May_10_21_OTA

part of the solution in achieving zero hunger, and because it doesn't use synthetic chemicals and other inputs that conventional does, it also achieves the goal of ensuring good health and wellbeing. In addition to yield returns, organic also provides financial and ecological returns.[1052]

How does organic make meaningful steps towards Goal #13 of climate action? Science has shown that organic farms sequester 26% more carbon than conventional farms; emit 18% less global warming potential, and use around 50% less new reactive nitrogen.[1053]

Food Systems Summit Dialogues Official Feedback Form Dialogue title Organic as a solution to meet increasing demands from consumers and global markets, to address environmental pressures, and to achieve the UN sustainable development goals.[1054]

The organic community is a passionate group and highly accountable to ourselves in aiming to be the best, most transparent and trustworthy we can be. Points of divergence within the organic community really just point to the fact that we are all trying to remain highly accountable to our goals and we are critical of ourselves while striving for continuous improvement.[1055]

New citizenship and the Life Economy - valuing Nature, health, care John Perkins says that we need to enable A 'Life Economy', one in which we prioritise living, organic ecosystems; what we have now is the opposite, a 'Death' economy. A life economy is one that pays people to clean up pollution and regenerate destroyed environments. A life economy also develops new technologies that do not ravage the Earth.[1056]

In places like Senegal where people used to produce their own organic food, share meals and thus assure more food security and less waste, the introduction of cash crops broke this equilibrium. Today what used to be savanna is a desert, nature is becoming poorer. People living near the river can't drink the water because of pesticides or parasites.[1057]

As part of the concrete actions necessary to achieve this scenario, the urgency arises to implement decarbonization actions associated with food systems, using the "zero net balance" proposal, which helps to finance the transition of these systems towards more ways of sustainable production. It is also required to diversify the food matrix; work on education and training on the importance of young people's work in food systems and promote examples of scalable regeneration, such as crop rotation, minimum tillage and organic fertilizers. This last point is linked to the development of technological restoration packages that are effective in preserving ecosystem services.[1058]

[1052] 468:21 p 5 in 219_May_10_21_OTA

[1053] 468:23 p 5 in 219_May_10_21_OTA

[1054] 468:25 p 5 in 219_May_10_21_OTA

[1055] 468:38 p 14 in 219_May_10_21_OTA

[1056] 486:20 p 5 in 291_May_21_21_Polman_Prabha

[1057] 486:22 p 10 in 291_May_21_21_Polman_Prabha

[1058] 498:11 p 8 in 375a_June_04_21_IICA_Multi_English

Regenerative agriculture

To invest in restoration of degraded lands including boreal forests and other endangered ecosystems and lands, which are the basis of indigenous traditional knowledge, practices, medicine and nutrition systems.[1059]

Continual learning and mentorships/and youth mentorships and trainings in agroecology, organic regenerative farming, and organic farming…[1060]

Purchase guarantee options, such as offtake agreements and long-term contracts, are necessary as an economic basis for the transition to regenerative agriculture, in addition to connection with markets that give value to products generated from sustainable practices…[1061]

2.Make good food matter a.There are many SMEs in China making effort to build a better food system, whether it's regenerative agriculture, eco-agriculture, animal welfare, or plant-based protein, we can see a significant increase in the number of SMEs in these fields, however, consumers are still speculating and not willing to change their behaviors right away, and contrary to popular belief, the Chinese market can be quite complicated and challenging.[1062]

9. Biocentric ecological restoration must be urgently prioritized by Member States and relevant stakeholders, as it is the insurance for our collective future on the planet and the surest way to mitigate the impacts of climate change.[1063]

Agroecology and regenerative agricultural practices are key. These ecological systems that are in harmony with the environment also have social benefits and need to be scaled-up. To facilitate this, more research is needed that highlights the benefits of these systems.[1064]

Ensure that regenerative agriculture (RA) is defined in a way that encourages access to tools and technology. RA is about modern agriculture and about technology and innovation (this may include fertilizer and inputs). Modern agriculture can help the soil, biodiversity, etc.[1065]

Soil health solutions and partnerships (including regenerative agriculture and carbon storage).[1066]

[1059] 354:40 p 9 in 407_June_10_21_CSIPN_Aborigen Forum

[1060] 356:57 p 7 in 409_June_13_21_Mone S

[1061] 389:120 p 9 in 431_June_22_21_CEBOS_EMBRAPA

[1062] 393:27 p 9 in 435_June_08_21_FAO_ICC_UNFSS

[1063] 394:16 p 6 in 436_June_16_21_GIYC_Multi

[1064] 409:16 p 6 in 450_Mar_11_21_IFAD_Multi

[1065] 429:187 p 13 in 470_June_17_21_Burian_Multi

[1066] 429:263 p 18 in 470_June_17_21_Burian_Multi

Moving away from mono cropping and industrial agriculture into more of that. Revival level and regenerative when we see the power of co OPS, or people working together to eliminate food waste or coming into a piece of the supply chain. And filling a niche so that others can really play their part, well, instead of having all of this hyper competition in ways that's not really spreading best practices.[1067]

To implement the proposed systemic interventions, participants saw the need for the UN to take the lead in the global advocacy on natural farming, and in providing guidance to member states in adopting agroecology and regenerative agriculture. The UN should also exert their influence over large agro-industrial companies to ensure that food security is achieved via the triple the bottom line approach (i.e. people, planet, prosperity for all).[1068]

But the conversations focused mostly on the solutions to reestablish connection and compassion to foster food systems that are regenerative, equitable and nourishing in all senses of the word.[1069]

Channel more resources towards regenerative farming systems.[1070]

Leading farmers have been on the regenerative bandwagon for decades, using no-till methods and cover crops; finding ways to reuse "waste" with biodigesters and gas lines for energy from manure; using hulls from one crop to mulch another; and more-effective irrigation, among other practices.[1071]

As in grains and livestock, specialty-crop farmers have for years been adopting nature-positive practices – though the change often has been as much for economic and environmental reasons (which underscores the argument that regenerative farming is not an economic burden).[1072]

Banks should aim to commit a significant portion of their loan books to regenerative agriculture.[1073]

In addition, there was also a call for policy that directly and comprehensively incentivizes organic, regenerative and agroecological farming along the land sharing model (making the whole area of the farm good for biodiversity, not just the margins).[1074]

Similarly, regenerative agricultural initiatives should also include consideration of local communities.[1075]

[1067] 432:16 p 7 in 473_June_18_21_Sheridan S

[1068] 460:84 p 9 in 131_May_25_21_IISLA Ventures

[1069] 486:27 p 7 in 291_May_21_21_Polman_Prabha

[1070] 501:73 p 12 in 397_June_04_21_WHO_Multi

[1071] 8:41 p 5 in 169_Apr_6_21_Shea E

[1072] 8:42 p 12 in 169_Apr_6_21_Shea E

[1073] 16:31 p 8 in 251_Jan_25_21_World Vegetable Center

[1074] 20:42 p 7 in 116_Apr_21_21_Hein JR

[1075] 20:43 p 10 in 116_Apr_21_21_Hein JR

Scientific evidence and documentation of regenerative production practices are essential to facilitating this shift in policymaking and governance.[1076]

All participants were in agreement on the main findings of the Dialogue, especially on the urgent need to shift to regenerative agriculture, to empower small producers and women through collectivization, to conserve and promote traditional knowledge and to improve access to resources for marginalized communities.[1077]

Funding – Funding for non-conventional food systems initiatives, such as regenerative agriculture, is often difficult to source.[1078]

In meeting the aim of Boosting Nature-Positive Food Production, respective Government agencies have responsibilities of providing farmers with biofortified crop seeds and adequate training to boost production of farm outputs as well as incentivizing regenerative food production.[1079]

Additionally, training these actors to adopt regenerative and circular practices as economic, social and environmental preparedness to future shocks and vulnerabilities.[1080]

There is need to develop a national and regional organic certification program that supports fully organic and regenerative agriculture practices.[1081]

Partnerships can catalyze a shift from transactional steps and interactions that surround the activity of growing food on a farm to deeper, more regenerative relationships among businesses, consumers, farmers, farm workers, and the farm ecosystem.[1082]

Design market and policy systems to enable farmers to adopt soil health through ecological and regenerative practices on farms.[1083]

Global funds and grants should target and support investments that address the nexus The circular economy models and principles and opportunities will be critical in navigating and addressing issues across the nexus, It would be critical to address need to reduce emissions, the need to address soil health, food and to assure that waste is managed in a more regenerative, sustainable and appropriate way.[1084]

Building gardens for community members, Supplying traditional foods through emergency food pantries.[1085]

[1076] 26:41 p 6 in 023_Jan_29_21_Bharat K S

[1077] 27:16 p 11 in 044_Feb_18_21_Bharat K S

[1078] 27:50 p 6 in 044_Feb_18_21_Bharat K S

[1079] 33:2 p 9 in 084_Mar_17_21_UnyimeAbasi B

[1080] 33:41 p 11 in 084_Mar_17_21_UnyimeAbasi B

[1081] 35:35 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[1082] 43:8 p 6 in 003_Nov_23_21_Posner S

[1083] 43:9 p 6 in 003_Nov_23_21_Posner S

[1084] 50:40 p 11 in 087_Mar_20_21_Chinapoo C_Multi

[1085] 394:46 p 10 in 436_June_16_21_GIYC_Multi

6. Promote urban agriculture in communal lands as a means of livelihood and food security for urban poor; establishment of a farmer markets in the city with adequate support infrastructure, where local farmers can sell their produce.[1086]

Growth of healthy corner farmers on 1/10 of an acre plots to create food oases in food deserts in the US; step beyond the idea of healthy corner stores selling more fruits and vegetables to grounding production in the community (healthy corner farmers rather than healthy corner stores); use of hydroponic farms for production.[1087]

…the school canteen must be a vector in society for the message of healthy eating. This will require accompanying school canteens with didactic/educational tools such as school gardens and field trips on sustainable food production.[1088]

How: the school canteen must be a vector in society for the message of healthy eating. This will require accompanying school canteens with didactic/educational tools such as school gardens and field trips on sustainable food production. It is necessary to remain within a sustainable production system by strengthening the capacities of support institutions, farmers, and partner operators. All this must be included in national programmes and appropriate school modules developed in school curricula. Dedicated programmes should reach canteen operators and parents. Raising awareness on healthy nutrition should not only focus on school and maternal-infant care, it should target the entire value chain and consider the specific context.[1089]

School gardens must be accompanied by a budget to hire staff to be responsible on vacation.[1090]

Food waste provides many opportunities for circularity and should also be a focus of investment A significant emphasis should be placed on regenerative agriculture techniques, agro forestry and generating the data on the carbon sequestered from trees in agroforestry projects that promote the reforestation of indigenous trees and the conservation of indigenous species and biodiversity.[1091]

A move to nature-based solutions will require efforts to achieve zero emissions, regenerative agriculture, and emphasis on a circular bio-economy while maintaining economic viability.[1092]

I think the emphasis should be on action because it is critical to ensure access to safe and nutritious food, to promote sustainable consumption, to boost nature's positive production agriculture, regenerative agriculture to promote equity and equitable livelihoods and ensure resilience.[1093]

[1086] 418:18 p 6 in 459_June_01_21_Rashid Md J

[1087] 424:23 p 8 in 465_June_16_21_Congressional Hunger

[1088] 457:97 p 18 in 120_Apr_27_21_Mauderli_U

[1089] 459:73 p 18 in 125_May_11_21_Mauderli_COSUDE

[1090] 474:19 p 6 in 246_June_09_21_Boza_Kanter

[1091] 50:41 p 11 in 087_Mar_20_21_Chinapoo C_Multi

[1092] 59:46 p 4 in 020_Jan_26_21_IFAN

[1093] 74:51 p 37 in 189a_April_16_21_Ateneo de Manila

One participant shared that sustainability might be an outdated term, and that regeneration is a better term to be using since regenerative systems deliver economic value for the farmer and for society.[1094]

Overall, across all breakout groups, there was consistent agreement that food system transformation needs to deliver healthy and sustainable foods, embrace responsible (and regenerative) production methods, and encompass equity and social justice to address the most vulnerable among us.[1095]

Promoting soil health and carbons sequestration through regenerative practices can address these boundaries.[1096]

Promotion of soil health and stability through regenerative practices.[1097]

There is a need to produce food that supports regenerative growth and holistic biodiversity support.[1098]

Among the 2030 outcomes for the sector were: healthier, more productive, and well cared for animals; reducing carbon emissions from livestock; quality over quantity; improve productivity, efficiency, sustainability, and resilience of the livestock sector; moving to regenerative farming; change the negative image of the sector; and to acknowledge and secure the Food Systems Summit Dialogues official Feedback Form Dialogue title Embracing change and harnessing diversity: the roles of livestock in future food systems Date published 21/05/2021.[1099]

In some cases, regenerative livestock systems means fewer productive animals.[1100]

Involve more farmers and work with farmers that are trailblazing regenerative food systems.[1101]

Greater application of regenerative mixed farm systems.[1102]

Young people are encouraged to start-up the practice of regenerative farming as a means of boosting nature-positive production. It can be started at a low-scale and scale -up in a manner that manages, protects and sustain the natural ecosystem. For instance, through green house and home gardening.[1103]

[1094] 85:24 p 13 in 160_20_Apr_21_GSI

[1095] 85:26 p 13 in 160_20_Apr_21_GSI

[1096] 86:40 p 6 in 162_Apr_16_21_Fountain G

[1097] 86:41 p 6 in 162_Apr_16_21_Fountain G

[1098] 91:32 p 6 in 217_May_6_21_Schwartz A

[1099] 93:87 pp 6 – 7 in 227_May_18_21_Tarawali S

[1100] 93:88 p 13 in 227_May_18_21_Tarawali S

[1101] 93:89 p 13 in 227_May_18_21_Tarawali S

[1102] 93:90 p 13 in 227_May_18_21_Tarawali S

[1103] 139:15 p 9 in 216_May_06_21_Ben_Aniabi

Create community education projects for homes and community spaces on the importance of small gardens, water storage and management and regenerative techniques that strengthen food resilience + nutrition.[1104]

Improve community and industry education to train towards regenerative practices and bicultural foods systems.[1105]

Farmer participants noted concern with singular, prescriptive approaches, such as agroecology and regenerative agriculture, and their applicability to a Canadian context. For value-added, innovation can drive increased productivity in Canada's food supply (robotics) and address labour shortages. For consumers, clarity in labelling and improvements in packaging to support sustainable consumption (recycling, extends shelf life, portion sizes).[1106]

To address these issues, the group discussed increasing the uptake of regenerative agriculture practice so practice not just mitigates impact but also aims to restore nature.[1107]

Regenerative management practices result in improved soil health, greater water holding capacity and increased plant growth, increasing human food availability in harmony with increased biodiversity and system resilience.[1108]

Delivers soil improvement, fertility and health through regenerative management practices which imitate previous wild livestock systems where large herds moved across a landscape.[1109]

Agroecology has been recommended as the best way to assist smallholder farmers especially regenerative agriculture and permaculture.[1110]

Explore ways and opportunities available in climate smart agriculture particularly in Regenerative Agriculture and Agroforestry.[1111]

iii. Smallholder farmers need regenerative agriculture trainings and education to know modern ways of agriculture.[1112]

It was recognized that soil is the foundation of healthy ecosystems and food production systems. Improving soil health, which affects biodiversity, leads to healthy food and healthy people. Therefore, soil degradation must be approached as the foundation for

[1104] 149:7 p 6 in 243_June_03_21_Schwartz A

[1105] 149:13 p 6 in 243_June_03_21_Schwartz A

[1106] 153:37 p 7 in 263_May_06_21_CCGA

[1107] 156:71 p 6 in 275_May_13_21_Dornom H

[1108] 175:40 p 6 in 333_May_25_21_GMA_Multi

[1109] 175:41 p 11 in 333_May_25_21_GMA_Multi

[1110] 176:17 p 9 in 334_May_25_21_Buzingo_J

[1111] 187:21 p 5 in 345_May_31_21_Buzingo J

[1112] 187:22 p 7 in 345_May_31_21_Buzingo J

building healthy food systems. The view must be systemic: Without healthy ecosystems, we don't have healthy people.[1113]

The directionality of food system towards quantity instead of quality has been deleterious to human and environmental health. The way it is possible to breed for a cardboard tomato shows the potential to breed for more nutritional and regenerative food products.[1114]

The importance of technical and financial assistance to transition land towards regenerative practices. The panel, including a farm owner, shared their experiences with consultancy and digital education efforts funded by state…[1115]

Then the audience took a 10 minutes break and then has been divided in 6 breakout sessions: Sustainable Agriculture, Carbon, Climate Change Mitigation, Regenerative Agriculture, Sustainable Livestock and Payment for environmental service.[1116]

Regenerative agriculture - Education, Communication and Sustainable Development Framework.[1117]

Companies must commit with Regenerative practices and Governments must provide access to transition finance and support the scalability of projects. Blended-finance instruments can facilitate the transition and scale up.[1118]

In addition, there was a view that the benefit actually lays in the creation of increased value for regenerative agriculture production techniques which could be shared across the food chain although, not surprisingly, there was a question about how much would filter back to the primary producer – the farmer.[1119]

Although none of these areas of divergence are insurmountable, they do seem to touch on the fundamentals of how to mainstream and scale regenerative agriculture.[1120]

Connections are paramount, between and within sectors. Conversations need to build the bridge between nutrition science and regenerative agriculture.[1121]

Develop waste collection to be used in the production of organic fertilizers that return to production quickly and efficiently.[1122]

Agricultural Development: Food systems improvement pathways should be built on the basis that agriculture is a key component of global food and environmental sustainability as well as an essential part of the solution. Without agriculture, there is no food, so the

[1113] 236:4 p 6 in 277a_May_14_21_IICA_English

[1114] 249:1 p 6 in 485_June_22_21_Levesque_SD

[1115] 249:28 p 11 in 485_June_22_21_Levesque_SD

[1116] 261:104 p 4 in 497_June_24_21_Fontes_Multi

[1117] 261:105 p 5 in 497_June_24_21_Fontes_Multi

[1118] 261:106 p 11 in 497_June_24_21_Fontes_Multi

[1119] 273:103 p 14 in 509_June_30_21_FFA_Nestlé

[1120] 273:104 p 14 in 509_June_30_21_FFA_Nestlé

[1121] 280:91 p 13 in 516_July-01_21_Anastasiou K

[1122] 341:13 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

assurance that all people have access to enough food starts with healthy and productive agriculture which is able to provide for both the well-being of producers and rural communities, as well as enough surplus for feeding the rest of society.[1123]

To cope with the growing pressure of crop diseases and water access difficulties, several actions must be taken: - Establish and / or consolidate effective agricultural advice systems at the service of producers; - Disseminate technical itineraries adapted to different production systems and strengthen the technical skills of producers and technical support mechanisms; - Promote agro-ecological practices (organic fertilizers, biopesticides, limited and reasoned use of chemical inputs, etc.) promoting sustainable production systems adapted to climate change. Good practices and educational tools (technical manuals, videos, etc.) can be shared and disseminated; - Disease control; - Awareness and effective control of sanitary procedures to limit the spread of diseases (crop rotation, access to good quality and healthy seeds, water management, etc.).[1124]

III. Encourage environmentally friendly production: 13. Attract international donors for the development of intensive horticulture in the Kyrgyz Republic; 14. Attract investors for the development of fishery and aquaculture in the Kyrgyz Republic; 15. Enhance laboratory control over highly dangerous animal diseases.[1125]

Waste

Hotel and restaurant industry o Need to rethink food waste policies in the service sector o It is not sustainable for hotels and restaurants on the coast in Malaga to buy fish in Madrid that arrives by courier o The level of food waste in hotels that offer "all-inclusive" packages is reckless o Only small family restaurants take care of the traditional gastronomy offering a meal based on the Mediterranean diet o The separation of organic and containers, other than glass, does not occur due to time and space.[1126]

Presently, 54% of fruits and vegetables are lost or wasted while there are sectors that suffer from lack of access to these products.[1127]

As a next point, emphasis was placed on the need to research and focus on development in order to adapt new techniques to the reality of each country. In turn, great emphasis was placed on the importance of intersectoral support. It is important to have sectoral approaches where knowledge can be shared and to also be able to evaluate the economic benefits of reuse.[1128]

[1123] 512:9 p 7 in 088_May_28_21_Divine NTF

[1124] 510:17 p 9 in 079a_May_27_21_NGA_Soung_Eng

[1125] 519:8 p 5 in 106a_June_18_21_Nurgaziev R_Eng

[1126] 513:19 ¶ 363 – 368 in 090a_May_29_21_Theunissen D_Eng

[1127] 515:4 ¶ 271 in 094a_June_09_21_Luchetti T_Eng

[1128] 516:6 ¶ 328 in 098a_June_10_21_Caballeros C_Eng

Strengthening logistics to prevent food waste.[1129]

To have a robust food system, it is necessary to also understand how to optimise the resources available when producing fruits and vegetables, with an additional focus on minimising waste.[1130]

The question of food waste was also discussed. The participants agreed that shorter value chains and the farm-to-fork approach would help in tackling food waste.[1131]

Better understanding of the food chain so that people can come closer to the source of their food and appreciate its value and reduce its waste. This could entail subsidizing initiatives to reuse wasted food to make compost, energy and animal feed and raising awareness of young people in urban cities on importance of reducing waste.[1132]

Zero emissions and waste through a functioning circular economy • A food system that enhances biodiversity and improves soil and water quality.[1133]

Address the issue of food waste.[1134]

Provide financing to private institutions on projects that adopt sustainable production systems and establish new consumption behaviors that take into account the requirements of sustainability and waste reduction • Increase investment in innovation and logistics systems such as climate-smart agriculture and improve post-harvest operations, infrastructure, packaging and cooling centers to reduce food waste and loss.[1135]

It would be critical to address need to reduce emissions, the need to address soil health, food and to assure that waste is managed in a more regenerative, sustainable and appropriate way. Food waste provides many opportunities for circularity and should also be a focus of investment.[1136]

Eliminate food loss and waste in the supply chain.[1137]

An environmentally friendly diet is one that does not have a large carbon footprint. This diet can be achieved by: a. Paying attention to locality, naturalness, and type of product (reduce consumption of animal products, prioritize more carbon-friendly vegetable products). b. Reducing food waste and plastic packaging that is not environmentally friendly c. Guarantee the totality of the full use of food ingredients so that food loss does not occur. d. Processing of kitchen waste in the form of compost and replanting. e. To maintain food sustainability, it is necessary to pay attention to locality. We need to explore food ingredients that are widely developed in our area and diversify food sources. 3. In

[1129] 5:4 p 6 in 105_Apr_8_21_Vieira J

[1130] 18:26 p 12 in 114_Apr_19_21_Maurer H_Roskruge N

[1131] 26:26 p 8 in 023_Jan_29_21_Bharat K S

[1132] 31:12 p 7 in 077_Mar_09_21_ESCWA_FAO

[1133] 34:5 p 7 in 089_Mar_22_21_Gee S

[1134] 34:26 p 9 in 089_Mar_22_21_Gee S

[1135] 36:31 p 8 in 096_Mar_29_21_ESCWA

[1136] 50:5 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[1137] 54:11 p 5 in 002_Nov_19_20_CGIAR

order for all levels of society to be involved for a diet that takes into account health and is environmentally friendly, education is needed starting from the pre-production, processing, to marketing stages. Education is carried out to producers, distributors, and consumers.[1138]

Lastly, concrete initiatives to reduce food waste and losses (such as the app "Too Good To Go") are useful if they bring the system closer to the true costs of food, thus as a transition instrument.[1139]

Proposal: create incentives and penalties throughout the food system: To reduce food waste, a different waste stream system, such as households paying per weight waste, incentives for farmers to reduce agriculture waste and for consumers to buy "ugly" fruits and vegetables. Solutions such as taxes on ultra-processed food and differential VAT on healthy food create incentives to consume healthy diets on the production and consumption. Proposal: reducing food waste – promoting better consumption and purchasing through policies.[1140]

Waste: The cost of food waste to the cities is enormous. 40% of the local authority's waste is organic waste. There is a huge saving for municipalities and individuals. Changing waste policy to the European model - those who reduce waste will be compensated, and payment will be according to the amount thrown away. The solution to food waste needs to be implemented at the municipal level first.[1141]

Reducing food losses and food waste by rescue food. Focus on vegetables and fruits (cooked food is more problematic for transfer and donation).[1142]

…waste separation and organic waste should be sent to a designated site to be composted in each region…[1143]

Recommendations for action: • Reduce food waste: o Obtain sufficient data on where food is wasted along the supply chain, to develop tailored system solutions for reducing it at the source; o Develop approaches to collect and redistribute excess food in a fair way to vulnerable groups ("revalue" the waste); o Educate people on how to use and cook with fresh foods and reduce waste at home.[1144]

By and large, participants want to clean up their environment, build a composting center for agriculture, and of course, produce biogas from waste.[1145]

These solutions include establishing a local brigade to guard the lagoon against pollution by individuals, adopting sustainable and environmentally friendly innovative growing

[1138] 57:3 p 6 in 008_Dec_19_20_Niode AK

[1139] 60:19 p 7 in 021_Jan_27_21_Donati L

[1140] 64:18 p 6 in 041_Feb_17_21_Adler D

[1141] 64:35 p 8 in 041_Feb_17_21_Adler D

[1142] 64:43 p 8 in 041_Feb_17_21_Adler D

[1143] 64:86 p 13 in 041_Feb_17_21_Adler D

[1144] 66:30 p 9 in 052_Feb_25_21_EUFIC

[1145] 71:12 ¶ 23 in 033a_Feb_6_21_Serge BDS_ENG

techniques in response to the loss of arable land, ensuring financial inclusion for industries, empowering women and youth, increasing production by mechanizing means of transport (which are rudimentary for activities such as fishing), reusing agricultural waste for composting, producing biogas, and feeding animals, among others.[1146]

Food waste is a major concern for many nations in the world. Even in developed countries, they must contend with huge wastages due to inefficient production, distribution, storage and consumption of foods. As far back as 1967, food banks have been working towards helping to feed the less privileged by collecting overproduction excesses and close-to-expiry foods for redistribution to poor communities. It is a similar strategy that is being adopted by the Lagos Food Bank Initiative that now operates in two Nigerian states (Lagos and Ogun).[1147]

Low external input – use farm waste & by-products, good seeds, and multipurpose machines…[1148]

Promote "creative gastronomy" among the populace, for preparing and processing local foods into healthy, new, and practical dishes, and reducing food loss and waste.[1149]

It is increasingly important to ensure that wholesale markets have access to collective food waste management systems to address food waste with the example of organic waste as fertilizers and biofuels through collaborations with start-ups or organizations specialized in this area.[1150]

A collective food waste management system located within the wholesale market can help address food waste. Asian markets need also better tools to measure food waste. Several markets are lacking methodology and a procedure to collect information on food waste. There is also a need to give value to waste. For example, organic waste can be used as fertilizers and biofuels - explore collaborations with startups or organizations that are specialized in this area. Moreover, the best practices must also be promoted in the region. For example, a wholesale market in Hongkong was able to decrease food waste with financial support from the government by setting up a system to distribute food waste to communities in need. Beyond this, it is also important to have a better tracking system in Asia concerning backward and forward linkages to decrease transport periods.[1151]

Lastly, in the third area of reducing food waste, solutions to address food waste should be developed at every level of the supply chain. This requires an integrated approach that tackles at each level the main problems which involves processes and support at both local and national levels.[1152]

[1146] 71:29 ¶ 15 in 033a_Feb_6_21_Serge BDS_ENG

[1147] 73:11 p 9 in 204_Apr_27_21_YASIF_UYSG

[1148] 74:15 p 11 in 189a_April_16_21_Ateneo de Manila

[1149] 75:45 ¶ 132 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1150] 77:11 p 7 in 108_Apr_13_21_Carrara E_Multi

[1151] 77:25 p 10 in 108_Apr_13_21_Carrara E_Multi

[1152] 78:8 p 7 in 110_Apr_14_21_Carrara E_Multi

To promote more sustainable consumption patterns, food waste reduction is key. In fact, "Zero food waste" should be a vision, and the goal should be to reduce as much as possible food waste. Solutions to address food waste should be developed at every level of the supply chain. This requires an integrated approach that tackles at each level the main problems. In Europe one of the key issues is to reduce food waste at the level of consumption, both in home and out of home. We need to implement tools in each level. [1153]

Sustainable production and consumption of aquatic foods are an important key to ending poverty and hunger, and to ensure food security and health for all. We must keep our oceans and waters renewable and clean, ensure a variety of aquatic foods and fully use what we harvest, without loss and waste.[1154]

The U.S. is a multicultural country and school nutrition staff need training to prepare culturally relevant food for diverse student populations. A lack of funding, skilled staff and infrastructure often means these advancements are deprioritized. School meals present an opportunity to identify and prevent food waste along the whole value chain. The burden of preventing food waste sits with all actors, including producers, processors, transporters, and consumers.[1155]

Sago waste can be made into fertilizer and animal food.[1156]

One of the focuses for Action Track 2 is the reduction of food waste and in achieving this objective, grazing livestock are a natural fit. Ruminants turn products that are inedible by humans into a nutrient-dense protein option.[1157]

Reductions in animal waste. Reduced emissions from livestock farms.[1158]

Focusing on how to actually prevent food waste rather than how to reduce it.[1159]

Food waste management. Linkages with different farmers to make use of biodegradable waste.[1160]

Strengthen value addition and agro-processing dealers so as to minimize food loss and waste. This is through capacity building by national and local government, private consumers as well as • Women and children who are major handlers of food. Capacity building is crucial especially on issues of nutrition and food safety.[1161]

[1153] 78:24 p 10 in 110_Apr_14_21_Carrara E_Multi

[1154] 82:3 p 6 in 150_Apr_30_21_GANSFOIWFSN

[1155] 84:15 p 9 in 153_Apr_28_21_GCNF_Multi

[1156] 88:8 p 8 in 174_Mar_20_21_Niode K

[1157] 90:11 p 6 in 206_Apr_27_21_CCANCC

[1158] 93:61 p 13 in 227_May_18_21_Tarawali S

[1159] 100:8 p 8 in 324_May_14_21_Guzanic J

[1160] 101:19 p 8 in 325_May_19_21_ICLEI Africa_Multi

[1161] 101:34 p 10 in 325_May_19_21_ICLEI Africa_Multi

the best way to reduce food waste is to not produce it at all and the best way to end hunger is to have a fair market based system that is priced for access.[1162]

The participants also proposed several possible solutions for current problems, such as increasing the production and processing of whole grain foods to reduce the waste of food nutrients and reduce the waste of water resources, and help soil improvement…[1163]

A reduction in overconsumption/waste would occur due partly to advertising/influencing producers and consumers.[1164]

Reducing wastage in the system is the low hanging fruit that needs to be focused on.[1165]

Need strong promotion among children and adults on nutrition, food safety and effects on health. Provide nutritional information about organic products. Reduce food wastage.[1166]

By creating an economy in which waste is reused and pollution is mitigated, natural systems can recover. This approach supports the drive to produce food commodities in an environmentally sustainable manner, ensuring the needs of a growing population are met today without any long term negative impacts on food production in the future.[1167]

However more attention is needed in order to reduce greenhouse gas emissions and to better control nutrient and contaminant concentrations. Ultimately, organic wastes need to be used in a safe and sustainable manner.[1168]

…food education, reducing food waste, and improving animal welfare.[1169]

Bio-Waste Management for Renewable Energy Production: There is a need to convert that waste into energy. All the waste either going into the landfill, while the waste from the agriculture ¦elds is being burnt causing smog. Proper and well-planned policies are required to harness the potential energy from bio-waste.[1170]

Each individual is also responsible to change their own behavior to avoid food waste, because consumption patterns at the individual level affect the aggregate level.[1171]

Urgent action required to reduce food-waste and value natural resources ● Educating home cooks and other chefs about food processing as a way to preserve and keep the nutrition of ingredients, and also to tackle food waste.[1172]

[1162] 104:12 p 4 in 051a_Feb_24_21_Google

[1163] 105:26 ¶ 27 in 176a_Mar_25_21 AGFEP

[1164] 112:55 p 10 in 074_May_18_21_O'Mara_Teagasc

[1165] 117:7 p 8 in 109_Apr_13_21_Jacobs-Mata I

[1166] 122:2 p 6 in 135_June_08_21_Calub_Gregorio

[1167] 124:1 p 5 in 142_May_11_21_Carter L_Dennis S

[1168] 124:12 p 7 in 142_May_11_21_Carter L_Dennis S

[1169] 126:10 p 10 in 157_Apr_25_21_UNFSS-AT2

[1170] 127:11 p 9 in 159_Apr_21_21_Hafeez M

[1171] 132:25 p 8 in 193_Apr_19_21_Ringler_Kassim

[1172] 142:15 p 7 in 230_May_19_21_Allen K

Cultivate a nature positive approach by ensuring zero food waste, reducing pesticides and fertilizers, restoring degraded land for agricultural use, preventing additional conversion, and enabling small scale traditional farmers by implementing technology to help them grow traditional crops and connect them to markets using seasons as a guide.[1173]

Urgent action required to reduce food-waste and value natural resources Educating home cooks and other chefs about food processing as a way to preserve and keep the nutrition of ingredients, and also to tackle food waste. Ways progress could be assessed: - Legislation on food waste, recycling and sustainable living.[1174]

Reducing consumer food waste.[1175]

Restaurants, the amount of available food per person in restaurants has increased. In addition to providing restaurants with free food waste audits, NGO's can continue to help them divert their food from the landfill while municipalities set up the composting system.[1176]

…production and consumption 3) promoting initiatives for agri-waste recycling.[1177]

Provide knowledge on food waste and establish waste processing plants in every region…[1178]

Reduce food waste- incentives.[1179]

Instil the value of proper waste management as consumers and participants in the food systems. Include proper waste management such as but not limited to composting (i.e. establishing community composting facilities in support of community gardens); stop the use of plastics in packaging and give rewards to communities/institutions/organizations that reach zero-plastic use; and develop and support waste to energy initiatives.[1180]

The groups discussed the importance of policies and financial support that promote more sustainable practices, such as nature-based solutions, regenerative agriculture, and vertical farming, as well as incentives for better managing waste. On the other hand, participants agreed that we would also need "restrictive" policies, to penalise bad management of water and to prevent criminal acts in water scarce area.[1181]

Reducing food waste, in order to not waste the resources that were used to produce their food.[1182]

[1173] 144:19 p 9 in 232_May_20_21_Schwartz A

[1174] 147:16 p 7 in 239_May_27_21_Allen K

[1175] 156:57 p 11 in 275_May_13_21_Dornom H

[1176] 163:110 p 13 in 300_May_27_21_Alesso_Pommeret

[1177] 166:16 p 7 in 355_June_14_21_FAO

[1178] 196:27 p 7 in 354_June_07_21_NAMAC

[1179] 198:36 p 6 in 357_Apr 14_21_Harfouche S

[1180] 221:24 p 11 in 382_June_08_21_AIPP_Multi

[1181] 224:5 p 6 in 385_June_09_21_Lazzaris S

[1182] 224:13 p 8 in 385_June_09_21_Lazzaris S

Ms. Luo, a Zhanjiang Daily journalist, shared the case of using eco enzyme in order to create more zero-waste communities and villages in Hangzhou city of China. A detailed action plan regarding the use of eco enzyme is available now for more communities and villages throughout China.[1183]

The divergence is mainly in the priorities at the national level since many countries in Asia are not getting enough support, specially vaccine, to be able to continue producing more food. In Asia, many countries faced the challenge of transportation of the food to the urban centers that caused overproduction and wastage in the rural area. With this, the priority now is to bring the harvest to the urban centers but not in supporting farmers have better marketing skills and improve the production and processing capacities so that food do not go into waste.[1184]

Many food systems create waste and infrastructure are needed to prevent waste.[1185]

The focus of this new facility will include: (i) leveraging private sector participation for enhanced ecosystem services; (ii) linking investments to agricultural insurance products to help farmers manage risks; and (iii) using the platform to help minimize food losses and food waste.[1186]

Reduce food waste.[1187]

Introduce specific programs on food waste and food systems for children and the elderly.[1188]

Define an objective of ZERO FOOD WASTE for food manufacturers and retail chains by the year 2030.[1189]

Take advantage of seafood discards (recover the old practice of using discarded seafood for flour, e.g.; diversify baskets by including less consumed seafood species).[1190]

Demand from distribution: reduce portion sizes, channel consumption to sustainable species, and reduce waste.[1191]

Environmental sustainability involves the system as a whole—to ensure that no harm is being done to the environment. This can be achieved by ensuring the food system is low waste and that individual daily habits demonstrate sustainable practices. Regenerative practices need to be incorporated in agriculture and should be encouraged through government grants and bursaries. Individuals should be encouraged to follow sustainable

[1183] 243:2 p 6 in 479_June_20_21_Yang_Shanna

[1184] 250:20 p 10 in 486_June_23_21_AFA_Multi

[1185] 257:15 p 11 in 493_June_23_21_Kevany_Van

[1186] 266:21 p 6 in 502_June_28_21_Zhang_Basher

[1187] 267:17 p 7 in 503_June_29_21_Schnyder_Boura

[1188] 277:44 p 9 in 513_July_01_21_Weise S

[1189] 297:14 p 6 in 533_July_07_21_Gazit GS

[1190] 301:56 p 9 in 537_July_08_21_ANP_WWF

[1191] 301:57 p 9 in 537_July_08_21_ANP_WWF

diets which generate low and decreased food waste. Sustainable diets should be locally sourced, financially accessible and culturally appropriate for all Canadians.[1192]

Integrating issues on Food Loss and Waste as a core element of Kosovo's education system and curricula for all (e.g. local municipalities, public servants, businesses etc), including main concepts and principles to analyze where we have losses, at what levels and why but also how to reduce them.[1193]

Farmer´s markets and refill stores enhance the reduction of food waste because you can buy the right amount of food. Usually, larger supermarkets do not offer this personalized packaging option. Hence, smaller business structures are needed to help fighting food waste; it also easier for a better management overall. A small organic supermarket was observed to offer less fresh fruits and vegetables, but also to have less food waste overall.[1194]

Reducing food loss and waste in food systems requires systematic thinking and approaches, with additional policy attention to developing effective market systems, especially for perishables. The market access could be improved by supporting the formation through farmer groups, cooperatives, associations and link them to markets, encourage contractual farming and long-term contractual agreements between growers and processors.[1195]

E-commerce platform focusing on agricultural production with cold-chain logistics network could improve procurement efficiency from smallholder farmers to consumers, well connecting transportation and retailing, contributing to food loss and waste reduction.[1196]

Financial policy should be designed to support an efficient management mechanism between demand and supply side and establish direct links between the two sides. Furthermore, the supply chain system should be built on proximity to support locally produced commodities and avoid unnecessarily long transport, thus minimizing gaps in timing and distance.[1197]

Implement measures that minimize post-harvest and storage losses.[1198]

Devise innovative ways of ensuring that left over food is not thrown away.[1199]

[1192] 307:18 p 6 in 543_July_13_21_YRYFC

[1193] 310:31 p 9 in 546_July_13_21_INDEP

[1194] 311:24 p 10 in 547_July_14_21_Heilinger K

[1195] 315:5 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[1196]315:25 p 9 in 551_July_15_21_FAO_ESCAP_Multi

[1197] 315:29 p 10 in 551_July_15_21_FAO_ESCAP_Multi

[1198] 325:5 p 6 in 562_July_19_21_Zombe K

[1199] 325:11 p 6 in 562_July_19_21_Zombe K

Availability and transparency of data and the sharing of pre-competitive information across value chains could better redirect food for human consumption and eliminate a significant amount of food waste.[1200]

Investment in local logistics and distribution infrastructure, and reduction of food loss and waste, so that even while schools are closed the supply of local produce and delivery of food parcels to families can be guaranteed.[1201]

Public investment and financing are vital for achieving waste reduction.[1202]

Implement systems that make it possible to take advantage of food in an adequate state of preservation and with an expiration date that operators decide not to offer to consumers (for commercial reasons), through donations from private agents (wholesalers and/or retailers and/or industrialists) before they must be thrown away (not placed on the market), and count them as part of the payment of taxes at a lower value than the replacement value of the merchandise in order to promote it. The purpose of this measure is to direct these donations in favor of vulnerable populations with difficulties in accessing to food.[1203]

Support for cooperatives/organizations to achieve better marketing in shorter distribution channels, taking advantage of the proximity to the consumer and reducing waste.[1204]

For women, crops grown on less land are more resilient than those grown on a large scale. The emphasis is on the variety of crops, since it ensures that the failure of one item has a reduced impact on the food security of the communities. The recognition of ancestral knowledge is advocated to ensure the incorporation of knowledge which over time has been successful in food production. The women also argue that there should be a reduction in waste and the use of chemicals. The dissemination of family crops (Conucos) is recommended for their efficiency in food security.[1205]

Promote demand for healthy foods: iii. Support systems for the certification of origin/quality of FA products, which induce consumer preference. Recognize/Institutionalize participatory certification.[1206]

capacity building could infiltrate the technical aspects of product handling and safety (for both receivers and end users, since products are sometimes rescued at the time of production but are then wasted in the last phases of this alternative supply chain); better planning, conservation and distribution of food, as well as increased knowledge for consumers and productive participants regarding the entities that could distribute the products, the requirements, and the concerns and mechanics of donation.[1207]

[1200] 331:5 p 2 in 139a_May_27_21_WBCSD

[1201] 339:6 p 6 in 393a_June_01_21_Food of Tomorrow_Eng

[1202] 340:17 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1203] 340:21 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1204] 340:24 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1205] 343:2 p 6 in 417a_June_18_21_Fernandez L_Eng

[1206] 347:11 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[1207] 352:7 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

Including the environmental and waste management topic could also help promote the process or even make use of the elements found in the waste that is ultimately created, and facilitating local or community infrastructure could make the collection and distribution process more efficient.[1208]

Guiding Theme 13. Contextualize And Localize

Local solutions

Abuse of the color green in advertising and labeling. Changes in advertising and labeling of food products, to include the sustainability of the product and whether it is healthy.o It is necessary to find ways of action to have a marketing of sustainable products, without 'Green Washing' and that respect permaculture.o Need to explore the power of consumers in greater depth. o Take into account diversity and different cultures, claim local diversity.[1209]

Cities must integrate food access and resilience into adaptation and emergency planning, develop relationships with stakeholders across the food system to build resilience, and ensure at least some local food production for emergencies.[1210]

The view that regional and international policies are important to push for versus concentrating efforts on strengthening local initiatives which often require customized or tailor-fitted intervention designs and strategies. What is the added value of regional/global policies, considering that local contexts have varying requirements? There is a need to recognize that not all communities are in a similar position as far as wild foods are concerned and thus require separate strategies. Consider further reflections on possible local-to-global-to-local and global-to-local-to-global actions that impact food systems.[1211]

[1208] 352:8 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

[1209] 513:13 ¶ 264 – 267 in 090a_May_29_21_Theunissen D_Eng

[1210] 404:48 p 11 in 445_May_26_21_ICLEI USA

[1211] 408:36 p 17 in 449_March_08_21_Wild Foods_Multi

…ensure and strengthen local healthy food systems…[1212]

Small farms, Black Indigenous small farmers and farmers of color are important for local diverse food production, enabling local nutritious food security and the capacity for local nutritious food systems that reach everyone.[1213]

Agroecology and organic BIPOC small farmers are important for local healthy food production.[1214]

Strengthening urban agriculture and local food production can improve nutrition and access to food among the urban poor; Restoring the health of agroecological systems will be needed to boost resilience;[1215]

Direct trade between producers and consumers. There should be more local producers selling directly to consumers (CSA). Now, it's probably a relatively small group of people that care enough about knowing where their food is coming from and that it's sustainably grown, but that's where it starts as a snowball effect. Demand and importance of local produce have already increased a lot during the global COVID pandemic.[1216]

Certification, good management practices, local agro-industrialization, and payment mechanisms for environmental services are possible alternatives of income from the standing forest;[1217]

It was mentioned that school meals, for example, should prioritize regional foods, also with the support of the PNAE.[1218]

The most effective programs adopt a multi-strategy, multi-sector approach that includes both securing and sustaining the supply of local healthy foods and access to safe drinking water.[1219]

Increase attention on local food economy through local staple foods, local resources and crops and value addition in the agri-food systems.[1220]

Eco system recovery is a direct result of methods used that restore Papatūānuku (Earth Mother). To feed the population, our population has to eat local as much as possible to financially support local food growers – as a Province what do we eat, what do we grow, what do we actually need to bring in?[1221]

[1212] 356:48 p 6 in 409_June_13_21_Mone S

[1213] 356:73 p 9 in 409_June_13_21_Mone S

[1214] 356:80 p 10 in 409_June_13_21_Mone S

[1215] 359:26 p 8 in 403_June_10_21_ESCAP_Multi

[1216] 364:26 p 9 in 415_June_16_21_van Schoonhoven M

[1217] 389:122 p 9 in 431_June_22_21_CEBOS_EMBRAPA

[1218] 389:153 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[1219] 402:32 p 9 in 443_May_09_21_GIGH

[1220] 414:8 p 6 in 455_May_14_21_Ekwamu_A

[1221] 427:22 p 11 in 468_June_18_21_Mayne A

The main subject focused on was ensuring the most nutrient dense food is produced locally and purchased locally and that is it is easily accessible at affordable prices for all.[1222]

Adapt innovations to work within local contexts.[1223]

Mama programme - supports women to distribute their product through building an inclusive supply chain and access to market and training and finances.[1224]

Dairy Value Chain - advancing local dairy in Nigeria - empowering SMEs to source locally - while men own cows, women own the milk.[1225]

Localization of food system is nature positive and shall build back better and sustainable.[1226]

We could create a planet with localized hubs to optimized production and scale without compromising inequality.[1227]

Participants in the discussion repeatedly stressed the importance of building a local food system that not only helps local economic development but also enhances resilience to the uncertainty of environmental change. In the local food system, the value of local ingredients can be maximized. For example, it was mentioned in the discussion that in the arid northern part of Shanxi province, every family has soybeans in their yard. Soybeans grow very easily and can be made into a variety of soy products, enriching recipes. It can also be made into soy milk as a substitute for milk. Even soybean yogurt can be fermented to become a sweet product for children. In addition, planting soybeans has the effect of fixing nitrogen and improving soil fertility. By making full use of local ingredients for innovation, we can better maintain the quality of nutrition and avoid problems such as excessive processing and packaging contamination of foreign foods.[1228]

We commit to, and ask others to join us in increasing localized, sustainable production and food generation for local consumption, as well as local economies to promote increased agrobiodiversity, including Indigenous chefs and businesses.[1229]

Policies that Promote traditional food through a. Emphasizing on local procurement and distribution through PDS b. Enabling market access and support for small women farmers c. Promoting FPO's that connect Producers directly to Consumers.[1230]

Recommendation 4: the need for shorter supply chains requires global market regulations, as the current free trade systems favour big corporations. It also requires a shift towards

[1222] 427:34 p 5 in 468_June_18_21_Mayne A

[1223] 429:155 p 10 in 470_June_17_21_Burian_Multi

[1224] 430:36 p 10 in 471_June_08_21_van Liere M

[1225] 430:37 p 10 in 471_June_08_21_van Liere M

[1226] 436:4 p 7 in 477_June_19_21_Christy_S

[1227] 436:5 p 7 in 477_June_19_21_Christy_S

[1228] 444:22 p 9 in 027_Feb_02_21_CBCGDF_UNFSS

[1229] 449:30 p 10 in 390_May_28_21_UNPFII_FAO

[1230] 455:32 p 8 in 063_Mar_04_21_Nanavaty_Multi

higher demand for local products and investment in local market infrastructure to meet the demand. Who: national governments, municipal governments, private sector, large corporations and civil society. How: national governments need to develop public policies focused on small enterprises, with public funds and provide access to smart credit. Municipal governments could also form alliances with neighbourhood councils and territorial or indigenous farmers' organisations. The private sector should provide efficient digitally supported logistics systems, large corporations need to adopt a higher degree of global responsibility (this can be influenced by shareholders, investors, and customers).[1231]

Environment and Climate to promote more seasonal and local food systems: To achieve a sustainable food system, it is necessary to promote the implementation of actions that promote seasonal and local consumption (and therefore local production).[1232]

The public sector should become more involved in the local food supply, in terms of incentivizing greater local production and consumption.[1233]

Consumers chose sustainably produced food Reduce animal consumption to increase land availability for other crops; move beyond a monopolized grain industry to support for other crops; diet diversity can be improved by promoting local community food systems; support local farmers to partner with schools and teach children to grow and cook diverse nutritional foods; build stronger links between healthy eating and health costs; need a standard methodology and labelling for selecting healthy food choices.[1234]

Have tax credits to procure local purchases; buy local; support polyculture; governments need to commit to food security and to understand the desire of Canadians to grow local and eat local; strengthen the link between climate change and food insecurity.[1235]

Utilise locally available feed ingredients.[1236]

An interesting aspect that he brought up was the perception people have of the background of the food they consume: "we take food from this food system that entails labor violation, soil exploitations etc. This is destructive on so many levels, but it is sold to us like happy farms." What he would wish were done for the next generation is thinking more about local food and labelling and focusing attention on understanding where our food comes from, eliciting more interest in indigenous food systems.[1237]

While making these shifts, it's important to promote education within the community on native plants and the benefits of growing or purchasing local produce.[1238]

[1231] 459:65 p 14 in 125_May_11_21_Mauderli_COSUDE

[1232] 474:16 p 6 in 246_June_09_21_Boza_Kanter

[1233] 474:37 p 11 in 246_June_09_21_Boza_Kanter

[1234] 476:13 p 8 in 264_May_06_21_Arrell Food_Multi

[1235] 476:19 p 8 in 264_May_06_21_Arrell Food_Multi

[1236] 485:43 p 9 in 288_May_20_21_GAN_Multi

[1237] 486:61 p 11 in 291_May_21_21_Polman_Prabha

[1238] 487:32 p 8 in 293_May_22_21_City of San Antonio

For input marketing, improvement in the supply of new varieties of cocoa seed, mechanized equipment, security of cocoa land and availability of trained extension officers and availability of credit facilities were called for.[1239]

… democratising local and indigenous food.[1240]

The Covid19 crisis indeed could be an opportunity to think of more locally rooted food systems (what foods I can get from my environment?).[1241]

Highlight the grassroots responses to climate change effects on land and water resources.[1242]

Scale up technologies and local knowledge to enhance SFS implementation and transformation.[1243]

For decentralized implementation to be effective, local institutions and human resources need to be mobilized.[1244]

The participants then addressed the issue of transitioning to sustainable and nutritious consumption patterns. Diversifying and localizing diets was seen as the way forward.[1245]

The participants also recognised the importance of creating solutions that are sensitive to local contexts and ecologies.[1246]

Different regions experience different realities, both in terms of the agroecological and also the socioeconomic conditions where they operate.[1247]

Reaching a liveable wage is also critical, and we need policy change and urban agriculture land use regulations that can support economic opportunities for fresh food production within city limits.[1248]

Solutions: Encouraging traditional home self-production, encouraging children to produce healthy nutrition in the household backyards and other lands.[1249]

Social campaign from bottom up. For example - the olive harvest season as a family experience, more community gardens. Integration of local councils.[1250]

[1239] 499:22 p 6 in 394_June_01_21_Egyir I

[1240] 504:80 p 12 in 400_June_09_21_Viera_Pollmeier

[1241] 1:45 p 8 in 072_Mar_09_21_Sibanda L

[1242] 23:12 p 10 in 205_Apr_27_21_CIHEAM_Multi

[1243] 23:13 p 10 in 205_Apr_27_21_CIHEAM_Multi

[1244] 26:10 p 6 in 023_Jan_29_21_Bharat K S

[1245] 27:8 p 7 in 044_Feb_18_21_Bharat K

[1246] 27:13 p 9 in 044_Feb_18_21_Bharat K S

[1247] 28:1 p 7 in 064_Mar_4_21_Farming First

[1248] 49:7 p 9 in 086_Mar_20_21_Rosatan B

[1249] 64:7 p 11 in 041_Feb_17_21_Adler D

[1250] 64:8 p 11 in 041_Feb_17_21_Adler D

There should be efforts driven towards scaling up local production to regional, national, and international terrains. On the long term, this will ease the importation burden that seats on our head as a nation.[1251]

Establish more points of sale for local products and make existing ones more flexible.[1252]

Teach inhabitants how to produce their own food by retrieving ancestral knowledge related to backyard gardens.[1253]

Communities on the ground have been doing pilots for some time – they know what works in their ecosystem. They can scale and are ready to go! But there is no pathway to the next point, no support or funding to get there.[1254]

Megono, a typical food from Pekalongan, Central Java, is made from jackfruit, shredded coconut, torch ginger, bay leaves and other herbs and spices. The price is cheap and suitable for breakfast, lunch, and dinner menus. Usually it is cooked using firewood so the production is still traditional. The process from upstream to downstream is very sustainable because traditional food packaging uses banana leaves. So it does not pollute the environment. Future food should return to the past, for example by using baskets for containers. Instead of using plastic, the use of baskets is more natural and environmental friendly.[1255]

Sago palm (Metroxylon sago) is a type of carbohydrates with environmental and health benefits. It can be part of the solution of various crises, such as the climate crisis and the food crisis. Unfortunately this non-rice food is currently not being fully utilized.[1256]

Traditional foods that will be prospective to become Indonesia Future Food are those that use forgotten food commodities but has a good taste if processed properly and has good nutritional value, namely local food based on sago, cassava, sweet potato, soybeans that can be processed into various elegant preparations such as pastry, ice cream, to steak.[1257]

No one-size-fits-all solution: Participants balked at the notion that there is any one silver-bullet to 'improving the food system'. The food system is too complex to have broad global policy recommendations. Regional differences must be taken into account when recommending environmental best-practices. There is the recognition that best-practices may even differ from farm to farm, let alone from country to country.[1258]

The largest and most important point of divergence was between making the existing food system structure - which relies on agro-corporations, major farms, heavy reliance on animal proteins, and processed foods that require huge amounts of plastics, shipping, refrigeration, and preservatives - more just, accessible, and equitable versus relying more

[1251] 73:21 p 10 in 204_Apr_27_21_YASIF_UYSG

[1252] 75:54 ¶ 120 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1253] 75:59 ¶ 82 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1254] 87:1 p 10 in 173_Mar_25_21_Mayne A

[1255] 88:22 p 10 in 174_Mar_20_21_Niode K

[1256] 88:24 p 7 in 174_Mar_20_21_Niode K

[1257] 88:25 p 7 in 174_Mar_20_21_Niode K

[1258] 90:26 p 6 in 206_Apr_27_21_CCANCC

on localized modes of food production that put finance and development towards smaller farmers, Indigenous practices, and reclamation and rewilding of lands.[1259]

Avoiding top down approaches that don't allow for local solution.[1260]

Promotion of environmentally friendly food production activities such as: Bee-keeping Through beekeeping projects, the household can earn income and lead to better food security, livelihoods and environmental regeneration. Mushroom farming: this will not destroy the forestry as both activities can take place mutually through agro-forestry. The problem is to dry them - preservation . Investment in Fish ponds to improve nutrition status but also supplement fishing and reduce incidents of over fishing.[1261]

Mountain products are often high quality and low impact and have a potential to lift mountain people out of poverty.[1262]

Promote mountain products and raise awareness of their value.[1263]

Promote the leadership of local people as a strategy to restore degraded ecosystems by integrating them in policy-making processes and promoting cooperative work to achieve better results and negotiation prices and increased resilience.[1264]

A need for more community-oriented projects with a strong emphasis on food education.[1265]

Promote urban planning and zoning to support local production.[1266]

This dialogue conveys alternative policies for national nutrition programs, preferably based on ethnic diets, because they are more diverse and logistical. This means not making up according to the rules made and socialized by the government, where the problem faced is the unavailability of these foodstuffs in shopping centers or traditional markets.[1267]

There is no ethnic-specific nutrition education.[1268]

Different communities need different things.[1269]

One size does not fit all. There is a need to respect local needs, capacity, particularly in developing geographies.[1270]

[1259] 91:31 p 9 in 217_May_6_21_Schwartz A

[1260] 93:75 p 13 in 227_May_18_21_Tarawali S

[1261] 96:15 p 7 in 255_Apr_27_21_ICLEI Africa_Multi

[1262] 98:45 p 6 in 282_May_18_21_Romeo R

[1263] 98:48 p 7 in 282_May_18_21_Romeo R

[1264] 98:50 p 8 in 282_May_18_21_Romeo R

[1265] 100:13 p 6 in 324_May_14_21_Guzanic J

[1266] 101:40 p 9 in 325_May_19_21_ICLEI Africa_Multi

[1267] 106:20 p 6 in 004_Nov_30_21_Kustipia R

[1268] 106:21 p 7 in 004_Nov_30_21_Kustipia R

[1269] 108:15 p 7 in 059_Feb_26_21_O'Doherty M

[1270] 113:60 p 13 in 075_Mar_10_21_IFAN

The right of people to define their own food and agricultural policies.[1271]

As a conclusion on how agroecology can contribute to addressing major climate and food challenges in Nigeria, what emerged was building the knowledge of farmers, indigenous peoples, and pastoralists, this could be done by government through extension workers or other food organization. Increasing research and innovations and delivering it in the indigenous languages. There's also an urgent need to rethink and transform production models.[1272]

What contributions will our organizations make? Applied research that supports the development of models and tools which can respond to local needs and broader national policies.[1273]

Secondly, the package of solutions to farmers may be too difficult to adopt. Solutions do not come as silver bullets, but as a package. There is a need to assess if these solutions are not too difficult for the famer to adapt to local environments, by using applied research and testing together with agricultural innovation and putting knowledge in hands of farmers.[1274]

Tapping into communities, participants talked about the importance of considering the needs of the communities with which the work is done. For example, in Africa, one of the participants stated that there is still no success story that can be replicated, and yet there are still many barriers to project implementation such as lack of technical knowledge from farmers. For this reason, it was suggested to develop joint efforts to create a success story in Africa that becomes a role model and continues to advance and scale regional and globally.[1275]

Local engagement is required to understand local perceptions.[1276]

At the highest level of governance of islands, campaigns should be mounted to "eat local", "grow and gather local" and "eat healthy" within the context of indigenous wisdom and cultural heritage.[1277]

Changing the narrative around the notion of health and the relationship of food systems to population health is of critical importance. We define "health" as not just what is physical, but it includes the mental, social and spiritual dimensions of being. "Eating for health" therefore, is about food that meets the nutritional needs of the body, but also reinforces the "connectedness" of our sustenance to the land, the sea and the seasons. "We are what we eat" - articulates a holistic view of culture and identity in relation to a holistic view of food. Access to "natural" or "ancestral food" is inextricably linked to healing and recovery, especially when one is "unwell". Eating what is locally produced entails "being

[1271] 116:20 p 6 in 093_Mar_25_21_Adeboye_T

[1272] 116:21 p 7 in 093_Mar_25_21_Adeboye_T

[1273] 117:91 p 14 in 109_Apr_13_21_Jacobs-Mata I

[1274] 118:78 p 11 in 117_Apr_22_21_Dinesh D_Multi

[1275] 118:79 p 12 in 117_Apr_22_21_Dinesh D_Multi

[1276] 120:62 p 7 in 127_May_13_21_IAFN_CWFS

[1277] 121:47 p 9 in 130_May_22_21_Foronda R_Gloria C

comfortable in our own skin" and intuitively leads to balance. In some Pacific islands, people are insulted when taught what to eat. Eating is a natural process and should not be taught.[1278]

Develop sound policies for agriculture, water and environment keeping in view of the local needs in addressing food security in relation to changing climate.[1279]

…learning from local farming systems, as well as indigenous crops, species and practices. This will assist with issues of declining biodiversity on both continents, understanding how to build back better, and how to change existing food systems towards more desirable outcomes.[1280]

Successful initiatives need to be catered to the local context. Regionalization is key in both in winning in the alternative protein segment and in providing the right equipment to the farmers. We need to correct the language around produce and agriculture in the Philippines. There are a lot of metaphors using farming-related concepts which refer to unfavorable situations…[1281]

Localise solutions: Focus on local businesses, ensure availability of healthy and plant-based food. Meet communities where they are and adapt nutritional recommendations. Tailor-made strategies for specific areas. Open communication on the politics of how the implications would be for different countries.[1282]

It is essential to move the needle further down towards the ground, to empower local leaders better. Resources and decision power should be transferred from the UN and nation-states more to a city-level through different mechanisms and processes. With strong fora and facilitators, we need to start asking questions and empower conversation at a lower level where the issue begins and then build up from there.[1283]

Through the collaboration between farmers, breeders, and policy makers, breeders will gain a better understanding of farmers' needs in crop varieties, while farmers can further adapt to local climatic conditions and markets.[1284]

Community-led food systems are systems in which communities have the power to address their own nutrition and food security needs. Projects within community-led food systems are often local, collaborative and engage the entire local food system.[1285]

They recognised the need for concerted action at the community level and advocacy to ensure an enabling policy environment with the government.[1286]

[1278] 121:49 p 5 in 130_May_22_21_Foronda R_Gloria C

[1279] 127:87 p 10 in 159_Apr_21_21_Hafeez M

[1280] 133:30 p 7 in 196_Apr_20_21_Attah-Krah K

[1281] 135:10 p 6 in 202_Apr_24_21_Hao_H

[1282] 138:33 p 7 in 214_May _05_21_50by40

[1283] 138:43 p 10 in 214_May _05_21_50by40

[1284] 140:37 p 6 in 223_May_12_21_Mushita A

[1285] 143:55 p 5 in 231_May_19_21_MCD

[1286] 143:58 p 9 in 231_May_19_21_MCD

Honor indigenous food systems and knowledge by returning land to be managed by indigenous communities and fostering an integrated approach to cultivating food that allows biodiversity to flourish.[1287]

Go back to ancestral plant tradition and everyone should have a home garden / orchard: learning by doing.[1288]

Advocate for local sourcing.[1289]

Plant indigenous and bioregionally appropriate foods to encourage ecosystem health, resilience, and the regeneration of flora and fauna key to local ecosystem vitality.[1290]

Include Local Communities In Policymaking - Communities being impacted by policy decisions must be at the table where policy is being written and decided. Policymakers must ensure that every plan created prioritizes access to nutritious, culturally appropriate food.[1291]

Participants agreed that the promotion of short food chains with fresh local products is key, as well as to foster the linkages and future opportunities between rural producers and urban markets.[1292]

These Independent Dialogues provided a forum for more people, who are otherwise unheard in the communities, to identify sustainable solutions that are locally based, locally-led and fully adaptable to the different context within Malawi to strengthen local and global food systems.[1293]

Empower local groups to develop and implement policies locally through community-based management.[1294]

Sustainability, food sovereignty, climate-resilience, and equity interventions should be developed in an inclusive, participatory way at the local level, and then scaled up through national support, funding, and enforcement.[1295]

Improving particular practices including feeding cows better, composting, using home-grown fodder, silage wrap recycling, pain relief for dehorning, planting trees…[1296]

Ensuring the transportation/delivery of locally produced items to above mentioned stores.[1297]

[1287] 144:28 p 8 in 232_May_20_21_Schwartz A

[1288] 146:48 p 7 in 235_May_25_21_Gonzalez B_Multi

[1289] 147:25 p 6 in 239_May_27_21_Allen K

[1290] 148:32 p 10 in 240_May_27_21_Schwartz A

[1291] 149:30 p 6 in 243_June_03_21_Schwartz A

[1292] 151:2 p 8 in 261_May_03_21_Carrara_Le More

[1293] 154:2 p 5 in 265_May_07_21_CSONA

[1294] 155:1 p 6 in 272_May_12_21_Battista W

[1295] 155:4 p 8 in 272_May_12_21_Battista W

[1296] 156:3 p 8 in 275_May_13_21_Dornom H

[1297] 163:13 p 13 in 300_May_27_21_Alesso_Pommeret

Consumers can buy local. On an individual level, you can educate people about it.[1298]

Further, food waste and lack of adequate storage facilities for food products were also seen as challenges by participants. Some other challenges included: (1) belief systems surrounding food (i.e., that it is for satisfaction rather than nutrition), (2) the influence of aggressive modes of fast-food advertising on consumer purchasing behavior, and (3) the threats that forest degradation and rapid population expansion pose to food security. All of these were said to be exacerbated by poor involvement of locals in implementation and decision-making on interventions, and inadequate collaboration between sectors involved in food systems and malnutrition.[1299]

Participants reasoned that supporting local farmers could reduce the carbon footprint of the food supply chain, and also minimize barriers from farm-to-table. However, participants also stated that the costs of local produce from small-scale farms might be higher, and that small farms may not be able to sufficiently support entire communities.[1300]

The panelists all agree that decision-makers should have regional lenses on food systems and that global discussions and actions might not fit the needed challenges within their sub-regions.[1301]

Market policies that are not transparent and do not favor the use of local food sources as healthy and quality food have created some derivative problems, such as competition for local food as a source of healthy and quality food, low technology, and opportunities for access to local food. Food as a source of healthy and quality food is available in large quantities and is affordable both in terms of area and access.[1302]

Food development adapted to the characteristics of local resources; To maintain abundant food diversity and optimize the use of existing resources, food development must consider various aspects and be based on multi-disciplinary scientific studies.[1303]

Research is needed in local level connecting the local people and farmers and those who are involved in the food system.[1304]

50 years of Earth observation data coupled with local knowledge is a key to understand the impact of global climate change on food systems and indigenous people are the best stewards of climate balance.[1305]

Recommendation 1 (5.1) Promotion of Food Banking on community level.[1306]

[1298] 163:23 p 17 in 300_May_27_21_Alesso_Pommeret

[1299] 167:8 p 12 in 311_June_14_21_NCD Child

[1300] 167:9 p 14 in 311_June_14_21_NCD Child

[1301] 172:1 p 7 in 330_May_19_21_RYFP_UNMGCY

[1302] 185:7 p 6 in 343_May_28_21_Abdullah_S

[1303] 185:10 p 8 in 343_May_28_21_Abdullah_S

[1304] 186:3 p 7 in 344_May_30_21_COAST

[1305] 188:3 p 7 in 346_May_31_21_CANEUS_Multi

[1306] 190:1 p 5 in 348_June_02_21_ASF Pakistan

Local communities and local decision-makers are capacitated to apply sustainable management and restoration of productive landscapes.[1307]

Shifts to more localized food production.[1308]

Community gardens. Access to fresh local food.[1309]

Develop community by-laws to protect rights of pastoralists.[1310]

Regional Education - value what is local.[1311]

Faith communities can play a special role in providing thought leadership and convening decision-makers to employ available technologies and listen to local knowledge to accelerate concrete action towards resilient, inclusive and sustainable food systems. Dr. Ismahane Elouafi, Chief Scientist at the Food and Agriculture Organization (FAO), thereafter stated that technology and innovation can enable the elimination of world hunger, while staying within planetary boundaries. She called for institutional innovation along the lines of a lifecycle approach, integrated policy and local empowerment.[1312]

Need to enhance local food systems to ensure greater availability and affordability of food.[1313]

The future transformation of food systems in Africa requires innovative research, education, and training approaches that are rooted in local contexts.[1314]

There is a schism between the level of understanding knowledge and standard of food safety in the 'developed' and the 'developing' world. In the developed world, food safety standards are often taken for granted but here too, standards need to be raised and there needs to be a level of localisation.[1315]

Encouraging, where possible, 'eat local' food campaigns and consider the agricultural and food production infrastructure needed to do this.[1316]

The indigenous aquaculture production and bio-diversity (species, genetic, beels, haors, baors and estuarine ecosystem) is under threat. Preservation of indigenous genes, species and ecosystems is urgently required and should be promoted. There is need to sensitise communities on existing innovative approaches, ideas and adaptation measures especially

[1307] 196:42 p 7 in 354_June_07_21_NAMAC

[1308] 198:20 p 6 in 357_Apr 14_21_Harfouche S

[1309] 198:48 p 6 in 357_Apr 14_21_Harfouche S

[1310] 199:59 p 8 in 358_May_11_21_ILC_Multi

[1311] 204:18 p 9 in 363_May_26_21_Mehta_Bautista

[1312] 205:7 p 6 in 364_May_26_21_DPIHD

[1313] 205:25 p 8 in 364_May_26_21_DPIHD

[1314] 206:21 p 5 in 365_May_27_21_Ekwamu A

[1315] 207:12 p 8 in 366_May_27_21_Cumbers S

[1316] 207:31 p 10 in 366_May_27_21_Cumbers S

indigenous adaptation processes. Deliberate efforts should be made to assess and tap voices and knowledge of farmers and fishers.[1317]

He highlighted the need to bring the voices of vulnerable communities to the center of international political debates, promote circular models of food production and consumption, enhance local and traditional knowledge to ensure better protection of natural resources and reform present-day technological and financial structures to support the transformation of food systems.[1318]

Enhance local and traditional knowledge.[1319]

Family Farming gained visibility during this pandemic, as the importance of local and sustainable food consumption has been highlighted during the crisis.[1320]

The current food production system is upheld by 1.5 billion smallholders, concentrating power locally; therefore, science-policy interfaces must translate into planning that is simultaneously top-down and bottom-up (e.g. living labs), to effectively mobilize the nexus approach on INRM. Further, top-down food policy may not align consistently in national development plans, as governmental ministries and institutions lack communication with each other, despite working with equal information, yet feeding into different databases.[1321]

They also called for greater support for the maintenance of local food systems, especially home gardens, for improving household food security.[1322]

The role of home gardens in local cuisine, the role of communities in maintaining home gardens as repositories of diversity, and the role of women in managing home gardens for better dietary diversity and nutrition security of their families.[1323]

The need to understand the local context and role of local actors in negotiating the prioritization of trade-offs, for example in development planning processes.[1324]

IP food systems developed from collective indigenous knowledge and practice based on principles of reciprocity and equitability vs Knowledge can be isolated and patented for individual profit.[1325]

Localisation. Supporting a local market economy is very important with food sovereignty and environmental sustainability as a goal. A comprehensive and wholistic approach to value chain development is required from production to markets. This includes using locally developed approaches for extension and training, for example the family focus

[1317] 208:18 p 8 in 367_May_27_21_Kachulu_Thilsted

[1318] 210:2 p 6 in 369_May_31_21_Holy See

[1319] 210:17 p 7 in 369_May_31_21_Holy See

[1320] 214:15 p 9 in 374_June_03_21_DG INTPA

[1321] 216:1 p 7 in 377_June_07_21_Arden_Caucci

[1322] 219:28 p 7 in 380_June_08_21_Shakya_Chettri

[1323] 219:34 p 6 in 380_June_08_21_Shakya_Chettri

[1324] 220:17 p 12 in 381_June_08_21_UNEP_Multi

[1325] 221:29 p 12 in 382_June_08_21_AIPP_Multi

works well in many places in the region, and research for local solutions. Also diversifying products to reach out to a wider market segment developing transformed products made from local raw materials.[1326]

Leveraging community knowledge and governance. Pacific Islanders and aboriginals are proud of their heritage. Cultural preservation is a high priority. Most cultures are oral however, making the first priority to capture and archive them in order to preserve and pass them to future generations. Culture and tradition must then be incorporated throughout our Organic systems, all the way up to policy and including indigenous governance training. The Pacific Organic Standards already capture culture and tradition as a key guiding principle. The principle needs to be applied to Organic in an integrated and holistic approach to ensure the sustainability of our interventions. This includes applying a GESI perspective to untap potential of individuals (regardless their gender, age, socio-economic status…) and overall sector.[1327]

Generally, family farming has shown its tremendous capacity to adapt over the centuries despite wars, economic crises, famines and natural disasters. This resilience finds its source in the characteristics of the family structure: solidarity, selflessness, dedication, willingness to pass on one's inheritance and knowledge, and acceptance of temporary limitations in case of need. Producers who practice family farming, due to their local roots and their in-depth knowledge of their territories, represent hotbeds of empirical innovations adapted to their respective local contexts.[1328]

Implement community resilience initiatives.[1329]

Therefore, respecting the integration of local cultures in food production and consumption policies and practices becomes a necessity, to protect and improve health, individual well - being, livelihoods, community resilience, and to promote good resource management.[1330]

A local solution might not work for a global system.[1331]

Start working at the local level. There could be a global agenda, but initiatives should start at the local level.[1332]

Establish network of community allotments/ growing spaces to enable access for every resident, along with growing workshops/skills development (including composting) - a 'master gardener' network in each ward Pilot a Social Supermarket, ideally in town centre location.[1333]

Making town more resilient by strengthening links with local producers - eg, 'food festival' event, local produce market, link surplus to distribution hub, website and social media

[1326] 226:5 p 7 in 387_June_09_21_Mone S

[1327] 226:12 p 8 in 387_June_09_21_Mone S

[1328] 229:16 p 9 in 226a_May_17_21_Oteyami O_English

[1329] 229:17 p 8 in 226a_May_17_21_Oteyami O_English

[1330] 229:19 p 3 in 226a_May_17_21_Oteyami O_English

[1331] 245:34 p 11 in 481_June_23_21_Global Counsel

[1332] 256:51 p 12 in 492_June_23_21_Liu JA

[1333] 260:15 p 9 in 496_June_23_21_Tradewell C

promotion, online sales platform to raise awareness. Integrate regenerative local food producers/processors/distributors/retailers into a local monetary system with built-in rewards for regenerative practices.[1334]

Acknowledge local practices.[1335]

Local produce market structure needs to be properly regulated to ensure the competitiveness of the local production against the imported vegetables. Farmers and vegetable vendors who now sell produce at very high and unreasonable prices need to understand this while financial and technical support from Government keeps flowing to areas that it will maximize production and mobilization of produce.[1336]

The right incentives to be devised to encourage local productions and to reduce import level on certain foods.[1337]

Building partnerships between producers, state and non-state actors as well as consumers will ensure sustainable production systems which lead to the development of localized research to support and address key food production systems that will work well for the Pacific people.[1338]

There is need to empower and strengthen the capacities local people affected by challenges facing food systems to advocate for themselves and communicate their stories to raise awareness on the challenges they face can be an effective way to raise awareness and drive change.[1339]

On the point of "Global vs Local" - a question of what/how do we change the food system to more resiliently produce locally where possible, and what has to continue to be produced within a local system.[1340]

Local production of nutritious aquatic foods must be improved in order to meet growing demand in low-income nations.[1341]

Consensus was reached around the need for increased local and international investments in locally relevant, adaptive national level agricultural research and development, including the investments in improved institutional and absorptive capacity and ownership at National Agricultural Research Systems (NARS), improved education for innovation actors, including on-farm actors, and incorporating indigenous knowledge and technologies.[1342]

[1334] 260:16 p 10 in 496_June_23_21_Tradewell C

[1335] 263:1 p 6 in 499_June_25_21_GANSF

[1336] 265:7 p 8 in 501_June_28_21_Kairo K

[1337] 265:32 p 7 in 501_June_28_21_Kairo K

[1338] 268:2 p 6 in 504_June_30_21_Susumu_Leiva

[1339] 271:4 p 9 in 507_June_30_21_AKADEMYA2_FANPRAN

[1340] 273:6 p 13 in 509_June_30_21_FFA_Nestlé

[1341] 287:1 p 6 in 523_July_06_21_WorldFish_FAO

[1342] 298:17 p 8 in 534_July_07_21_WBADB_ADI_Multi

Rebuild local knowledge systems to have a systems approach. We need knowledge-based systems rather than science-based solutions with academia as an active partner to co-create and share knowledge within sectors and across similar territories.[1343]

Bring Indigenous communities and those using traditional practices to the table as decision makers to include knowledge that has supported sustainable food systems for millennia. Document and support different knowledges and different diets that are adapted to territorial circumstances.[1344]

Small scale farmers can no longer eat what they produce and cannot access or afford the food they need. Local food markets have been progressively eroded by an increasingly globalized food system that disconnects producers and consumers. The distortions of present food systems reflect the commodity approach and trade focus on export-driven agriculture policies that prioritize imports into growing cities. We have ignored local culture and indigenous knowledge, opting instead for push uniform approaches. This aggravates the power asymmetry between increasingly concentrated big corporations and fragmented small-scale producers, culture and nature, that results in a major urban-rural disconnect.[1345]

Integrate local communities and animals in the management of national forests.[1346]

There is a need to increase resilience at the local level and concurrently capitalize on global food production resilience (global markets with transport and logistics systems which were considered essential). Each supply chain is going to have its own unique vulnerability and solution profile. At the local level, greater attention to strengthening food sovereignty based on traditional systems is needed, and this should be accompanied by support to more sustainable production at a global level.[1347]

In some parts of the UK, there are local schemes to plant fruit trees in parks. Not only is this a fantastic idea, but it brings children and the community closer to food, especially in urban areas but it also makes way for community initiatives to get together to look after the trees and furthermore can provide food for the homeless.[1348]

Participation and Local ownership of farmers need as the centre of Food Systems Transformation In the spirit of "leave no one behind", and localization, it is key to have local ownership of food system transformation.[1349]

World Trade Organisation (WTO) Global food trade is against the principles of food sovereignty and local sustainability. There is a need to build sustainable local food

[1343] 299:4 p 9 in 535_July_08_UNESCO Chair on Food

[1344] 299:6 p 12 in 535_July_08_UNESCO Chair on Food

[1345] 299:8 p 6 in 535_July_08_UNESCO Chair on Food

[1346] 301:1 p 8 in 537_July_08_21_ANP_WWF

[1347] 302:19 p 9 in 538_July_09_21_IDS_Multi

[1348] 308:4 p 10 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1349] 309:3 p 5 in 545_July_13_21_Mbenya R

production systems first. We, therefore, call upon the UNFSS to recognize local food sufficiency as the basis of national food security.[1350]

However, a number of challenges were identified at the local level. This includes limited resources and access at the household level and connectivity issues due to poor digital infrastructure. The digital divide also manifests itself in terms of poor digital literacy among the older generation and low confidence among end-users in accessing digital platforms—with the problem of information overload being identified.[1351]

Climate change is a global phenomenon that has location-specific impacts. As such, some of the solutions that can help build climate resilience are necessarily local.[1352]

Creating and strengthening a local public market system improves health, reduces inequalities, improves livelihoods, and supports a more sustainable distribution of food throughout cities and regions.[1353]

Participants also pointed to the importance of recognizing the extractive nature of many food supply chains. A more restorative system would invest in women and the BIPOC communities that are on the front lines of many of the issues that sustainable food businesses are striving to solve. Participants agreed that we must bring in the people and communities that are closest in proximity to these issues. Moving forward, different voices including historically forgotten and underrepresented communities need to be in conversation with food business. These conversations should focus on local and culturally appropriate solutions that serve all eaters.[1354]

Finally, the Dialogue centered on the theme that there is no one-size-fits-all for the food system. Rather than searching for a silver bullet, it's imperative that all players focus on supporting family farmers, sustainable agricultural practices, education, and other investments to help incentivize making a radical change towards a healthier future. Moving forward, sustainable food businesses must maintain this open conversation and continue to challenge each other.[1355]

Emphasis on local production reduces CO2 for food transport.[1356]

Local investments in strengthening social protection delivery systems including shock responsiveness and livelihood opportunities for the poor and vulnerable groups' remains very low.[1357]

[1350] 309:22 p 7 in 545_July_13_21_Mbenya R

[1351] 313:3 p 10 in 549_July_14_21_Meah N

[1352] 313:7 p 6 in 549_July_14_21_Meah N

[1353] 314:1 p 6 in 550_July_15_21_Danie_Verel

[1354] 316:6 p 9 in 553_July_15_21_Food Tank_Oatly

[1355] 316:11 p 6 in 553_July_15_21_Food Tank_Oatly

[1356] 317:2 p 8 in 554_July_15_21_Lopez DE

[1357] 318:3 p 8 in 555_July_15_21_Zombe K

Some of the ideas in transforming the society beyond feeding the society is as follows: Developing community-based agriculture that leverage on local biodiversity.[1358]

Another important discussion is over the question of importation and production - some participants are of the view that countries should encourage greater production within the country, however there are also concerns over whether the higher cost of production for country might have other negative effects. While policymakers, private sector and civil societies are progressing to evolve into a more socially-sustainable food production, the lack of political will and leadership may pose a threat to the ongoing efforts to strengthen the social aspect of food production.[1359]

Boosting nature-positive production: The participants noted that it is extremely challenging to identify clear recommendations that are scalable globally yet adaptable to local conditions. For instance, different financial incentives are needed in different economies and/or different technology is needed in different geographical regions.[1360]

National government driven investment in locally produced foods.[1361]

Established local food standards for food fortification and safety.[1362]

Local supply

Unlock the potential of bananas and plantains, as well as root plants and tubers; - Gradually reduce rice and wheat imports, and promote the production and consumption of local products; - Significantly increase the production of cereals and livestock to establish food security in the Sahel; - Significantly increase the production of soybeans, corn, dairy products and poultry in the Guinean savannah area…[1363]

To promote local food systems, Government should take proactive steps for decentralization of the procurement rules for public service program. Local food systems could be a viable option to address hunger and malnutrition, however, there is lack on intent to promote and sustain.[1364]

Going back to local food traditions instead of globalized ones as the local foods are the ones most adapted to local climatic conditions.[1365]

Sustainable procurement practices need to also be more widely applied by the private sector. These should support preference for local and regionally produced foods Expanding education programs on climate smart and resilient agriculture practices. Practices such as beekeeping, community gardens, no till agriculture, indigenous agriculture practices, agro forestry rainwater harvesting, stormwater management and

[1358] 319:2 p 7 in 556_July_15_21_Von Goh_GenTan

[1359] 319:6 p 6 in 556_July_15_21_Von Goh_GenTan

[1360] 323:29 p 11 in 560_July 19_21_Arbuthnott_Multi

[1361] 330:8 p 11 in 568_July_21_21_Cooper-Liverpool M

[1362] 330:13 p 13 in 568_July_21_21_Cooper-Liverpool M

[1363] **510:37 p 14 in 079a_May_27_21_NGA_Soung_Eng**

[1364] 7:21 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

[1365] 31:19 p 7 in 077_Mar_09_21_ESCWA_FAO

mitigation Utilize contract farming/sustainable procurement as means of reducing food loss, reducing carbon footprints and having farmers know exactly what varieties of crops to grow. This can support improvement in relationships and also support more collective approaches. Support community led action and procurement of community produced food in local institutions such as hospitals, hotels, schools and juvenile institutions.[1366]

Support production of high-quality homemade food while ensuring their affordability and promote local food production and traditional ways and educating consumers about the importance of supporting local products.[1367]

Develop local plant varieties and animal breeds to increase production and productivity.[1368]

Encourage self-production and educating consumers about the importance of supporting local product. Improving practical education on agriculture in communities, homes and buildings so that everyone can produce food.[1369]

Ensure that domestic food production addresses the availability and quality of foods, and the socio-economic challenges.[1370]

Consideration should be given to temporarily stopping the import of fruits vegetables and foods that we could create effective supply chains for 1 group of products at a time. This would ensure we build local capacity (we understood that effort must also be put in by every actor along that supply chain to make sure it becomes effective as was done with chicken in Trinidad).[1371]

HEALTHY EATING 1. A diet that takes health into account is what ensures nutrition. It is better to take foods from nature and reduce processed food. In addition, education is also needed for food producers to maintain food hygiene and sanitation during food processing to ensure health. 2. An environmentally friendly diet is one that does not have a large carbon footprint. This diet can be achieved by: a. Paying attention to locality, naturalness, and type of product (reduce consumption of animal products, prioritize more carbon-friendly vegetable products). b. Reducing food waste and plastic packaging that is not environmentally friendly c. Guarantee the totality of the full use of food ingredients so that food loss does not occur. d. Processing of kitchen waste in the form of compost and replanting. e. To maintain food sustainability, it is necessary to pay attention to locality. We need to explore food ingredients that are widely developed in our area and diversify food sources. 3. In order for all levels of society to be involved for a diet that takes into account health and is environmentally friendly, education is needed starting from the pre-

[1366] 35:88 p 12 in 095_Mar_27_21_Chinapoo C_Multi

[1367] 36:26 p 8 in 096_Mar_29_21_ESCWA

[1368] 36:38 p 9 in 096_Mar_29_21_ESCWA

[1369] 36:43 p 10 in 096_Mar_29_21_ESCWA

[1370] 44:15 p 7 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[1371] 50:19 p 9 in 087_Mar_20_21_Chinapoo C_Multi

production, processing, to marketing stages. Education is carried out to producers, distributors, and consumers.[1372]

We have to preserve local traditional foods and drinks and encourage sustainable consumption of such foods. They are healthier, local, and more environmental friendly, have low carbon foot prints, and provide livelihood for producers and distributors. Also we have to encourage non-rice for carbohydrate consumption. It is important to identify and map the ingredients, cooking method, culture, recipes, traditions, and health benefits of certain foods. Indonesia has at least 100 types of carbohydrate sources, 100 kinds of nuts, 250 kinds of vegetables and 450 kinds of fruits. A mapping of Indonesian traditional foods and drinks showed that there are at least 35,000 types identified, and the number is still counting. We propose two solutions to facilitate consumer access to healthy and sustainable traditional foods, a macro and micro approach. In a macro approach, the state/government is important in increasing consumer access to healthy and sustainable traditional foods. The state can promote healthy and sustainable traditional foods through policies, programs, promotion, building relevant infrastructure, and to reduce the distance traveled during the distribution of traditional foods to minimize carbon footprint In a micro approach, the community as an agent of information dissemination can disseminate the positive impact of healthy and sustainable traditional food.[1373]

Food is a topic that connects communities - activities around the food systems are connecting and non-threatening. Focus shifted from food baskets to local production and local agriculture to eliminate the need for food baskets.[1374]

Municipal kitchens for educational institutions and social periphery – to support local employment and local food production.[1375]

General approach: Food security - Fresh food must continue to be produced locally.[1376]

Empower farmers and food producers: Invest in farmers and local food supply systems (e.g. in providing farming communities with the necessary infrastructure, such as good quality broadband in rural areas, or use public procurement to support farmers transitioning to more sustainable practices).[1377]

Encourage more of the same. Others have reconnected to local food supply chains - make sure to keep them connected.[1378]

Promote the processing of local products to mitigate preservation issues, especially in rural areas that do not have electricity.[1379]

[1372] 57:3 p 6 in 008_Dec_19_20_Niode AK

[1373] 57:9 p 4 in 008_Dec_19_20_Niode AK

[1374] 64:34 p 8 in 041_Feb_17_21_Adler D

[1375] 64:40 p 8 in 041_Feb_17_21_Adler D

[1376] 64:84 p 13 in 041_Feb_17_21_Adler D

[1377] 66:33 p 9 in 052_Feb_25_21_EUFIC

[1378] 66:50 p 11 in 052_Feb_25_21_EUFIC

[1379] 71:3 ¶ 18 in 033a_Feb_6_21_Serge BDS_ENG

Shorter food miles – localized supply chains with smaller carbon footprints; less food waste; and boosts the local economy.[1380]

Encourage the demand for local products with businesses, restaurants, and governmental institutions. Disseminate the social, economic, and environmental benefits of eating local, healthy, and seasonal products.[1381]

Create a directory of local producers. Promote a brand or label for products from the Yucatan. Take advantage of restaurants on social media for promoting local and seasonal products, and including them on their menus.[1382]

Panelists agreed on the importance to enhance the accessibility and affordability of healthy diets as a core issue of regional agri-food system. It implies the promotion and investments in high quality infrastructure for healthy food distribution to respond to the growing urbanization and demand for fresh food products in cities, shortening the distances between rural and urban areas. In addition, reduce the number of intermediaries, which could promote accessible prices for a larger part of the population. Participants agreed on the role of wholesale markets to achieve this goal.[1383]

Additionally, one participant noted that producing food where it will be consumed will be important to address extreme poverty and smallholder farmers in emerging economies. It can be done by "creating shared value" where feed companies teach techniques and sell feed to produce formulations to raise the livelihoods of smallholder farmers.[1384]

Success looks like local food being feed to our tamariki/children, including locally grown grains. Commercially viable businesses which have set up their own meat processing factories that are on iwi land, run by our own people and producing our food for the lunches. Success looks like the continuing proliferation of these initiatives that we are all connected to. Little farms, food forests, compost piles, everywhere.[1385]

Development entities need to focus on supporting bioregionally specific foods and local farmers to produce robust, diverse, and healthy diet that are culturally appropriate.[1386]

Food is such an integral part of our lives, that it is too easy to forget about its details. Having a local focus that connects individuals with their farming practices, food preparation skills and connecting intergenerationally (e.g., children, grandchildren), a more personal relationship develops with the food.[1387]

There is huge potential for the Zambezia Province, where Quelimane is the capital, for agricultural production, especially the production of nutritious local food such as Rice (there is an identified unique and flavourful rice local to Zambezia), Corn, Soy and animal

[1380] 74:12 p 10 in 189a_April_16_21_Ateneo de Manila

[1381] 75:35 ¶ 122 – 123 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1382] 75:36 ¶ 124 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1383] 76:8 p 8 in 103_Apr_8_21_Carrara E_Multi

[1384] 85:13 p 11 in 160_20_Apr_21_GSI

[1385] 87:18 p 10 in 173_Mar_25_21_Mayne A

[1386] 91:8 p 5 in 217_May_6_21_Schwartz A

[1387] 92:5 p 8 in 225_May_13_21_Schwartz A

husbandry such as Cattle keeping instead of the over reliance on imported foods from South Africa and other provinces. Imported foods are expensive and some have low nutritional value.[1388]

In order to promote food production of local plant species, the municipality and stakeholders need to dedicate resources towards: The Promotion/ celebration of local foods such as the toasted rice, Zambezia pineapple, among others that are local to the Zambezia: promotion nationally and even globally. This will drive the demand, eventually change perceptions as well as create employment opportunities for local farmers.[1389]

Access to local products.[1390]

We cannot always depend on food coming from out of the city region and imported food. We should encourage urban and peri-urban production within the city and the strategy should strongly express through actions on hoe this will be promoted.[1391]

Shorter food miles – localized supply chains with smaller carbon footprints; less food waste; and boosts the local economy.[1392]

The development of local industries so that heavy metal pollution control measures and rural vitalization are compatible and mutually promoted.[1393]

The participants agreed that a possible impact of these actions would be the use of locally-produced by-products as feedstuffs in livestock production systems (e.g. residues of fruit or vegetables and by-products of agro-industry), with less dependence on imported protein sources.[1394]

Restaurants and the food industry influence what people eat and many establishments are shifting to healthier menus. Chefs have a strategic role in popularization of locally grown products through satisfying dishes. Agro-tourism can be a strategy to stimulate local production of food.[1395]

At the highest level of governance of islands, campaigns should be mounted to "eat local", "grow and gather local" and "eat healthy" within the context of indigenous wisdom and cultural heritage.[1396]

Economic and financial planners should redirect tourism strategies toward promoting local food production and providing tourists opportunities to eat local food. Agritourism is

[1388] 96:1 p 6 in 255_Apr_27_21_ICLEI Africa_Multi

[1389] 96:14 p 7 in 255_Apr_27_21_ICLEI Africa_Multi

[1390] 100:11 p 8 in 324_May_14_21_Guzanic J

[1391] 101:12 p 7 in 325_May_19_21_ICLEI Africa_Multi

[1392] 103:8 p 10 in 007a_Dec_18_20_NAAGD

[1393] 105:18 ¶ 16 in 176a_Mar_25_21 AGFEP

[1394] 112:90 p 14 in 074_May_18_21_O'Mara_Teagasc

[1395] 121:18 p 7 in 130_May_22_21_Foronda R_Gloria C

[1396] 121:33 p 9 in 130_May_22_21_Foronda R_Gloria C

a viable approach. Organize local food festivals. Shine a spotlight on delicacies and special foods of a region.[1397]

Jian Yi, head of the UNFSS-AT2 working group on the "Food Environment" and CBCGDF Good Food Fund founder, introduced the national food system action platform, local food markets, food education, reducing food waste, and improving animal welfare.[1398]

…including home garden production of nutritious food, nutrition-sensitive aquaculture, developing recipes based on locally available foods, improving infrastructure and market access.[1399]

Potential solutions include a focus on community-level food demonstrations, home-garden production, nutrition-sensitive aquaculture and snail-rearing, promoting recipes incorporating nutritious local foods, and increased use of micronutrient powders.[1400]

Focus on local businesses, ensure availability of healthy and plant-based food.[1401]

Locally produced food plays an important role in meeting local people's food security and in ensuring dietary diversity. In much of Sub-Saharan Africa, small holder farmers provide up to 80% of the domestic food supply. At least half of these farmers are women. Local food systems refer to specific geographic and social networks of short value chain of food production, processing, marketing, distribution, consumption and waste management.[1402]

Chefs can take the following actions to enable they know where their ingredients come from: use their purchasing power - buy only locally produced foods in season.[1403]

Chefs struggle with a consistent supply of biodiverse plant ingredients, due to lack of demand. Chefs need to create the demand for the sourcing/ growing of these diverse earth friendly ingredients. Farmers will make sure there is consistent supply if there is demand and they are able to earn a livelihood.[1404]

Rethinking / restructuring the system of local market supply in providing nutritious foods to markets in big cities. This often contributes to lack of nutritious food in local rural markets. Supporting household farming to encourage farmers to produce foods for local consumption.[1405]

Strategies to address these issues include incorporating a use of community pantries to reduce the loss of excess produce, creating community gardens to address issues of food stability during the pandemic, and practice of community-supported agriculture where the

[1397] 121:37 p 9 in 130_May_22_21_Foronda R_Gloria C

[1398] 126:10 p 10 in 157_Apr_25_21_UNFSS-AT2

[1399] 131:5 p 6 in 190_Apr_16_21_Cullen N

[1400] 131:20 p 9 in 190_Apr_16_21_Cullen N

[1401] 138:1 p 7 in 214_May _05_21_50by40

[1402] 140:1 p 6 in 223_May_12_21_Mushita A

[1403] 142:8 p 7 in 230_May_19_21_Allen K

[1404] 142:21 p 9 in 230_May_19_21_Allen K

[1405] 143:25 p 8 in 231_May_19_21_MCD

produce and profits feed local markets, reducing the transport and infrastructure required to support food systems.[1406]

Advocate for local sourcing.[1407]

Improve community based food systems that are able to feed those in need and produce locally to supplement global food supplies.[1408]

Implement policies that enable modernization of agriculture and promote the emergence of a local private sector.[1409]

Participants agreed that the promotion of short food chains with fresh local products is key, as well as to foster the linkages and future opportunities between rural producers and urban markets.[1410]

Emphasize contributions of SSFs to local economies and formalize the sector.[1411]

Granting required respect of rights of farmers through allowing them to locally use, save, exchange and sell their Forgotten Foods.[1412]

We need to change taxation of food: there is a disconnection of Food production and consumption, strengthening local supply chain, strengthening local supply chain and connecting consumer with farmer.[1413]

We need to change the taxation of food by strengthening local supply chain, strengthening local supply chain.[1414]

Increase the number of programs that could be culturally sensitive, ex: Little Haiti could integrate local chefs in the community to create recipes and have fun events to show how they make recipes, give them out, and show how they can eliminate food waste when cooking. Ex: how to cut a pepper to avoid as much waste as possible, and use as much of the food as possible.[1415]

Recognize the lack of preparedness for major shifts and the need for restructuring the balance between international supply and local.[1416]

[1406] 143:42 p 12 in 231_May_19_21_MCD

[1407] 147:7 p 6 in 239_May_27_21_Allen K

[1408] 149:10 p 6 in 243_June_03_21_Schwartz A

[1409] 150:37 p 9 in 253_Apr_29_21_AFDB_Multi

[1410] 151:25 p 8 in 261_May_03_21_Carrara_Le More

[1411] 155:9 p 6 in 272_May_12_21_Battista W

[1412] 159:10 p 6 in 287_May 20_21_Akinbamijo_Y

[1413] 160:15 p 6 in 292_May_21_21_ProVeg_Multi

[1414] 160:38 p 11 in 292_May_21_21_ProVeg_Multi

[1415] 163:57 p 8 in 300_May_27_21_Alesso_Pommeret

[1416] 163:64 p 10 in 300_May_27_21_Alesso_Pommeret

Have big supermarket chains choose part of their supply from local farmers (having a % of their total purchases coming from local producers).[1417]

Increase support for/dependence on local farmers, especially by having grocery stores and restaurants get more produce from South Florida farmers. That would reduce emissions and lower the number of imports, which undercut local growers and drive down the wages of local agricultural employees.[1418]

Reducing greenhouse gas emissions and increasing the economy's reliance on local farmers are harder to quantify.[1419]

Have municipal governments also incentivize local farmers to create their own composting facility on site to process local food scraps.[1420]

Ensuring the transportation/delivery of locally produced items to above mentioned stores.[1421]

Providing subsidies for fresh local seasonal produce.[1422]

Give opportunity to growing food locally and distributing, rather than outsourcing foods (ex from California to Miami). Food that travels leads to food waste.[1423]

Consumers can buy local. On an individual level, you can educate people about it.[1424]

Promotion of local agrifood products.[1425]

Participants agreed that a just food system is needed and that it is essential to respect the local production, local crops, local types of animals, and to avoid homologation.[1426]

Need to restructure food safety measures and implementations along the supply chain to protect consumers' health and to avoid wasting food and resources.[1427]

Change of mindset or mindset about local food. That local food has many advantages and benefits are also healthy.[1428]

Popularize the food ingredients produced by our farmers in a contemporary way and disseminated by public figures/influencers to go viral, so that the local food market niche

[1417] 163:68 p 10 in 300_May_27_21_Alesso_Pommeret

[1418] 163:75 p 11 in 300_May_27_21_Alesso_Pommeret

[1419] 163:84 p 11 in 300_May_27_21_Alesso_Pommeret

[1420] 163:97 p 13 in 300_May_27_21_Alesso_Pommeret

[1421] 163:105 p 13 in 300_May_27_21_Alesso_Pommeret

[1422] 163:122 p 16 in 300_May_27_21_Alesso_Pommeret

[1423] 163:129 p 17 in 300_May_27_21_Alesso_Pommeret

[1424] 163:140 p 17 in 300_May_27_21_Alesso_Pommeret

[1425] 164:23 p 10 in 304_June_02_21_FAO_Multi

[1426] 171:22 p 10 in 329_May_19_21_CI_WFO

[1427] 172:6 p 6 in 330_May_19_21_RYFP_UNMGCY

[1428] 185:47 p 10 in 343_May_28_21_Abdullah_S

grows well. Gastrodiplomacy efforts by the state to other countries to introduce local food can be a solution.[1429]

Support building competitive Mongolian food brands that meet national and international quality/food safety standards.[1430]

Incentives to localize food production.[1431]

As a global society, we need more farmers' markets to close the gap between the producers and consumers. Doing so, we have to make nature-positive production something that is attractive for the younger generations.[1432]

Need to enhance local food systems to ensure greater availability and affordability of food.[1433]

Dorota Owen, GEN ambassador, mentioned that there are four sections to the education program of Global Ecovillage Network: economy, environment, social and culture. And food comes into all the four aspects. At the House of I, people love to grow, harvest, cook and eat together. It's a social experience and part of the local culture. We all understand that people need to grow food and then to sell it within an environment. But it's so much better to sell food locally. Because the minute you sell food nationally or internationally, you have to transport it , which costs energy - what we call ' food miles'.[1434]

However, the point was raised that although there are benefits to a localised food system there have been many historic famines that were highly localised. The difference between animal farming and crop farming was raised, as localised systems are more challenging for animal farming. Some foods are also more sustainable produced in specific regions, and consumers now expect food from around the world. There needs to be a way to get the benefits of small scale and local production without the risk associated, while also making the system more productive.[1435]

It became apparent that some attendees believe there needs to be a move towards a less centralized and more localized food system, which focusses on a shift towards more local produce and short distribution chains or channels.[1436]

Need for mechanization, irrigation, improved varieties that are adapted locally.[1437]

Less dependence on imported varieties.[1438]

[1429] 185:52 p 10 in 343_May_28_21_Abdullah_S

[1430] 196:38 p 7 in 354_June_07_21_NAMAC

[1431] 198:40 p 6 in 357_Apr 14_21_Harfouche S

[1432] 204:12 p 9 in 363_May_26_21_Mehta_Bautista

[1433] 205:13 p 8 in 364_May_26_21_DPIHD

[1434] 243:1 p 6 in 479_June_20_21_Yang_Shanna

[1435] 245:25 p 11 in 481_June_23_21_Global Counsel

[1436] 253:18 p 11 in 489_June_22_21_Rare China Centre_Multi

[1437] 262:18 p 6 in 498_June_24_21_Danquah E

[1438] ***264:83 p 13 in 500_June_26_21_Edible Issues***

Also the food import needs to be properly managed and controlled with incentives given to local producers to trade off those imported foods. In this way the imports will be regularly reviewed and reduced as local production increases.[1439]

The Ministry of Commerce and National Statistics office to work closer with the Ministries of Agriculture and Fisheries to check on local production capacity and to make necessary adjustments to the import level of imported foods.[1440]

Farming greed red and brown seaweed in geographically suitable conditions for these taxonomic groups and supporting local people to set up these farms so they then buy the harvest off them.[1441]

Other benefits of building partnerships include the provision of technical and expert support in developing value-added products and local food recipes that can easily be incorporated into the local people's diets.[1442]

Hence, local systems need to change holistically, if it is to be mainstreamed.[1443]

Improving the labour productivity is critical for African agriculture to play a greater role in meeting local to global food demand, in a competitive and a cost-effective and competitive manner, as Sub-Saharan Africa harnesses science solutions for growth. A proportionately balanced workforce will enhance labour productivity, especially when coupled with agri-innovations creating opportunity to increase rural incomes and participation in cash economy.[1444]

Ensuring that all FSR work is done bottom up with local actors on board. This could be achieved, e.g. through making collaboration with local actors a requirement for receiving funds in the first place. Involving and creating buy-in from local governments.[1445]

Raise our voices for further localisation and embedding.[1446]

Consensus was reached around the need for increased local and international investments in locally relevant, adaptive national level agricultural research and development, including the investments in improved institutional and absorptive capacity and ownership at National Agricultural Research Systems (NARS), improved education for innovation actors, including on-farm actors, and incorporating indigenous knowledge and technologies.[1447]

[1439] ***265:18 p 6 in 501_June_28_21_Kairo K***

[1440] 265:31 p 7 in 501_June_28_21_Kairo K

[1441] 267:10 p 6 in 503_June_29_21_Schnyder_Boura

[1442] 268:15 p 7 in 504_June_30_21_Susumu_Leiva

[1443] 273:18 p 6 in 509_June_30_21_FFA_Nestlé

[1444] 276:10 p 7 in 512_July_01_21_Malawi President_Ekwamu

[1445] 278:41 p 11 in 514_July_01_21_Bolling_Multi

[1446] 278:61 p 12 in 514_July_01_21_Bolling_Multi

[1447] 298:17 p 8 in 534_July_07_21_WBADB_ADI_Multi

Address conflict between agriculture and trade values and priorities: Farmers must have viable livelihoods and consumers must be able to access a healthy/affordable food supply from local and distant sources.[1448]

Link procurement to education to show how food is grown/harvested/ transported to help inspire future farmers and support learning about food systems. For example, in cooking class curriculum, add growing own plants to see full cycle.[1449]

Implementation of policies to value local products and control products imported from distant regions (analysis by region to meet essential needs).[1450]

Make large-scale local production of alternative foods (seaweed, insect meal, protein crops), especially protein alternatives, produced locally - allows for shortening chains.[1451]

The dialogue also highlighted importance of strengthening the resilience of local food production systems (essential for reducing vulnerability) while strengthening global systems to enable a global response to local crises. The coexistence of local systems/strengthening of local production systems while strengthening global production is an important challenge that we face in reforming and transforming food systems. In the past, changes were made to the benefit of some, and to the detriment of others.[1452]

Civil society and non-governmental organizations offer important links between government responses and the most impacted. Front line non-governmental organizations and social support organizations such as food banks are essential for government responses to be able to reach the most vulnerable and less accessible populations. Cooperatives can play an important role in crisis situations because they are already embedded in the communities and are setting up production diversification systems, to support communications on COVID, protection measures, etc. More active and dynamic cooperatives set up awareness-raising activities, sought seeds to diversify people's diets and kept the commercial channels open to sell production. Their members were less impacted by public health measures than those from less dynamic ones.[1453]

Environmental sustainability involves the system as a whole—to ensure that no harm is being done to the environment. This can be achieved by ensuring the food system is low waste and that individual daily habits demonstrate sustainable practices. Regenerative practices need to be incorporated in agriculture and should be encouraged through government grants and bursaries. Individuals should be encouraged to follow sustainable diets which generate low and decreased food waste. Sustainable diets should be locally sourced, financially accessible and culturally appropriate for all Canadians.[1454]

[1448] 299:15 p 6 in 535_July_08_UNESCO Chair on Food

[1449] 299:71 p 12 in 535_July_08_UNESCO Chair on Food

[1450] 301:30 p 8 in 537_July_08_21_ANP_WWF

[1451] 301:39 p 8 in 537_July_08_21_ANP_WWF

[1452] 302:9 p 7 in 538_July_09_21_IDS_Multi

[1453] 302:17 p 8 in 538_July_09_21_IDS_Multi

[1454] 307:18 p 6 in 543_July_13_21_YRYFC

Participants identified that it is important to move away from commercialization and focus on local and resilient change. On the other hand, it was emphasized that a barrier to facilitating sustainable food systems at the local and individual level includes housing without a garden or a green space to grow your own food (e.g. apartments without balconies and housing with unusable or inaccessible backyard space). Therefore, community-level initiatives such as community garden spaces are essential for sustainable food systems to be accessible to all youth.[1455]

Indigenous and heritage varieties of food should be prioritised for subsidies by governments when they are more nutritious than rice and wheat. Indigenous food should also be included in school feeding program meals and communities should have a say in what food is used for these meals & be able to shorten supply chains using locally grown food giving children nutrient dense food and not empty calories just to fill their bellies. Providing school meals and school feeding programs is good, but the food also has to be nutritious as this has a direct impact on learning & concentration.[1456]

World Trade Organisation (WTO) Global food trade is against the principles of food sovereignty and local sustainability. There is a need to build sustainable local food production systems first. We, therefore, call upon the UNFSS to recognize local food sufficiency as the basis of national food security.[1457]

Promote local product development – agricultural extension and other rural entrepreneurship/advisory e.g. branding, name recognition and identification with geographic region.[1458]

Establish supporting schemes for slow food systems, with a view to encouraging local producers to introduce sustainable systems of production, economize the local area, and encourage citizens to consume locally-produced food items.[1459]

Smaller structures and shorter supply chains help to avoid food waste. Smaller stores have better possibilities to manage their food supply and create less food waste overall. Moreover, shorter supply chains lead to less waste creation. In that sense, it is not only important to watch out for regional but also for seasonal food. Food grown in the season is also tastier and provides people with additional health benefits. Zero Waste stores, farmers' markets and small organic stores, but also other alternative forms of purchasing food e.g. SOLAWI and growing own food in gardens are found to have beneficial effects for food waste reduction. Every consumer can do his/her part here: Informing themselves about local fruits and vegetables and establishing alternative purchasing habits.[1460]

Farmer´s markets and refill stores enhance the reduction of food waste because you can buy the right amount of food. Usually, larger supermarkets do not offer this personalized

[1455] 307:54 p 12 in 543_July_13_21_YRYFC

[1456] 308:12 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1457] 309:22 p 7 in 545_July_13_21_Mbenya R

[1458] 310:17 p 7 in 546_July_13_21_INDEP

[1459] 310:28 p 8 in 546_July_13_21_INDEP

[1460] 311:9 p 6 in 547_July_14_21_Heilinger K

packaging option. Hence, smaller business structures are needed to help fighting food waste; it also easier for a better management overall. A small organic supermarket was observed to offer less fresh fruits and vegetables, but also to have less food waste overall.[1461]

Farmers' incomes can be safeguarded from food shocks through emergency funding, crop insurance, and the establishment of minimum support price/buy-back policies. To help local produce compete with imports, domestic production must be supported through favourable polices and strengthened customs regulation. Investment must be made in strengthening local, regional and national supply chains to ensure adequate food supply and reduce reliance on imports. Development of up-to-date data dashboards can help improve food systems governance and inform policy development.[1462]

E-commerce could build a bridge between small farmers and consumers to reduce food loss in the process, transferring the demand from the consumer side to the production side to short the supply chain of agricultural products.[1463]

Financial policy should be designed to support an efficient management mechanism between demand and supply side and establish direct links between the two sides. Furthermore, the supply chain system should be built on proximity to support locally produced commodities and avoid unnecessarily long transport, thus minimizing gaps in timing and distance.[1464]

Well-being of people living in cities improved by permaculture and regenerative approaches to produce food. Expansion of awareness and education about the origin and means of production of food. Gardening as a 'perfect melting pot for communities' to learn together and lead more healthy lives. This is possible through: Peer-to-peer marketing that helps to reconnect people with food through showcase by growers in local areas. Emphasis on local production reduces CO2 for food transport. Farming and taking time to prepare the soil derives in mental health benefits. Besides growing own food, surplus and replication of urban farming model can become profitable activities in a small scale. Get children involved in the recovery and caring of empty lots or 'dead spaces' in the cities to educate future generations with different values. Create digital content on YouTube and social media.[1465]

Some ideas on changing consumption include: 1. Bringing agriculture closer to schools through small farming plots in schools. 2. Basic knowledge of food culture to be taught at home by parents. 3. Local government and housing ministry to create awareness on food through encouraging urban farming. 4. Bringing food preparation lessons for children in schools. 5. Increasing the consumption and knowledge of underutilised crops in Southeast Asia.[1466]

[1461] 311:24 p 10 in 547_July_14_21_Heilinger K

[1462] 313:26 p 9 in 549_July_14_21_Meah N

[1463] 315:11 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[1464] 315:29 p 10 in 551_July_15_21_FAO_ESCAP_Multi

[1465] 317:14 p 8 in 554_July_15_21_Lopez DE

[1466] 319:11 p 8 in 556_July_15_21_Von Goh_GenTan

Governments must do more to incentivise the growth of crops that are currently imported and/or to increase the diversity of crops being grown within their borders. Only then will small farmers and corporations pay more attention to a nations overall food security.[1467]

Increased consumption of locally grown foods and produce - also requires tracking of annual production quantities.[1468]

National government driven investment in locally produced foods.[1469]

Promotion of food systems based on local products: even in rural zones, there is a strong tendency to consume imported processed products whose nutritional quality is ojen subject to question; in this context it is essential to survey the products and local knowhow to reinforce good traditions (all of them are not good!), through local festivals, and by a system of biological certiffcations, controlled designations of origin, etc.[1470]

Promote local channels with high enhancement potential (product and subproducts) and encouragement of investments enabling specific funding (micro credits, subsidies, etc.) for the development of these local channels which are ojen developed by small producers.[1471]

Promote territorial identity through the encouragement of labeling of local products which were artisanally processed and organic certiffcation which will enable producers and processors to build awareness and quality of the products to be placed on the market; in this context, promote the local private sector incentivizing it to invest in the territory of origin; this requires the revision of investments in order to make them more favorable to small investors.[1472]

Promotion of short-range distribution networks (from the producer to the consumer) and the corresponding logistics in order to ensure an increased part of the added value to small producers in consultation with the other stakeholders involved in the channel (retail locations, fairs, information on products, etc.).[1473]

Investment in local logistics and distribution infrastructure, and reduction of food loss and waste, so that even while schools are closed the supply of local produce and delivery of food parcels to families can be guaranteed.[1474]

Create mechanisms that can guarantee the supply of fresh and seasonal foods, especially those coming from closed circuits that prioritize produce from traditional communities in the region, such as, for example, the use of Farinha do Babaçu (Babassu Flour) in school

[1467] 323:19 p 7 in 560_July 19_21_Arbuthnott_Multi

[1468] 330:43 p 9 in 568_July_21_21_Cooper-Liverpool M

[1469] 330:56 p 11 in 568_July_21_21_Cooper-Liverpool M

[1470] 338:9 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

[1471] 338:23 p 9 in 392a_June_01_21_Sidibe_Remy_Eng

[1472] 338:24 p 9 in 392a_June_01_21_Sidibe_Remy_Eng

[1473] 338:26 p 9 in 392a_June_01_21_Sidibe_Remy_Eng

[1474] 339:6 p 6 in 393a_June_01_21_Food of Tomorrow_Eng

meals, which allowed communities to remain on their land, generating income and ensuring food security.[1475]

We identified a set of positive impacts from strengthening family farms in the program, as a practical, healthy and beneficial multifaceted route for actions related to the reopening of schools and school meals, in particular: Maintaining the supply of green parcels, as supplements to the food parcels and as the basis of the menus for cooking and meals at school.[1476]

Sufficient production is generated to supply humanity; however, this does not happen; there are losses and damage to the environment. It is therefore important to value the role that FF plays, which offers consumers the possibility of buying healthy food with less waste and care for natural resources.[1477]

Support for cooperatives/organizations to achieve better marketing in shorter distribution channels, taking advantage of the proximity to the consumer and reducing waste.[1478]

Connect AFCI with culinary professionals, so that they can get to know the attributes of their products and increase their demand. Sierra Productiva gained experience with the "Al turista lo nuestro" ["From our lands to tourists' hands"] program run by the Ministry of Foreign Trade and Tourism, through which 60 hotel and restaurant chefs completed an internship at FFs' facilities. They were impressed with the color, texture, flavor and aroma of the products and saw the artisan mills where they are processed. This generated contracts with 30 hotels and restaurants. It would be desirable to extend it to other areas throughout the country.[1479]

Julia: Modern food is monotonous; few products are used. We must recover the ancestral, nutritious products. In small farms, these are protected and used in food; we must be careful not to fall into the trap that can drive trade, as was the case with quinoa in Peru, where the market takes the product and the country cannot consume it.[1480]

Vanessa: It depends more on the seasonal production of crops, in a relationship of food with the territory; not like supermarkets that keep everything imported, not fresh.[1481]

They request the Venezuelan state to transform welfare food policies, incorporating the modes of production, distribution and consumption of indigenous peoples as intercultural public policy, and to incorporate traditional items in School Food Programs, Food Houses, and Local Supply and Production Committees (CLAP). They require technical and financial support for the production initiatives, distribution and commercialization of their own food items.[1482]

[1475] 339:38 p 11 in 393a_June_01_21_Food of Tomorrow_Eng

[1476] 339:53 p 13 in 393a_June_01_21_Food of Tomorrow_Eng

[1477] 340:16 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1478] 340:24 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1479] 341:11 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

[1480] 342:2 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[1481] 342:6 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[1482] 343:3 p 6 in 417a_June_18_21_Fernandez L_Eng

It was reflected on, in the context of border confinement and restrictions, that we must commit to more resilient food systems. This will be accomplished by diversifying production, preventing eventualities, as well as producing our own seeds in turn eroding the power of GMO seed markets that demand the use of toxic agricultural inputs.[1483]

Despite the agro-export model, it's important to be aware that production should first be for local consumption. The surplus should then be sold at a fair and reasonable price and be good quality. But, it is also important to begin adding value to products rather than consuming products packaged and treated by big industries.[1484]

Improve the functioning of FA markets (short circuits, virtual purchases, direct sales).[1485]

Operation: Local markets, points of sale, and FA e-commerce. Subsidies to FA for roles in addition to production. Special credits to FA for processing and commercializing. Businesses and industries must implement transparent supply contracts with FA. Businesses and industries must form development tables with FA and authorities, to improve the system. Banks must consider the specificities of FA, looking for new ways to access credit.[1486]

Support points of sale so that consumers have easy access to FA products. Take advantage of the opportunity of the pandemic that questions large stores. Promote FA points of sale and FA-consumer networks.[1487]

Support to farmers to develop healthy products in a healthy manner, to expand the variety and diversity of fruits and vegetables that can contribute to the nutritional value of the basic food basket. Provide adequate nutrition guidance for farmers and give them participation in decision-making on food sovereignty. Encourage collective and individual gardens. Inclusion in local commerce by zones.[1488]

It is important to invest in the communities close to the companies that produce and export, and that already have social and sustainable programs included in their plans and operations with which they are motivated to continue and work to achieve the objectives that they have as a nation, around sustainable food production and access to healthy and diverse foods, according to the national diet and the characteristics of the terri[tories].[1489]

Spaces such as school and community gardens are necessary in order to empower civil society towards healthy eating.[1490]

[1483] 345:7 p 7 in 419a_June_08_21_CLOC_Eng

[1484] 345:10 p 7 in 419a_June_08_21_CLOC_Eng

[1485] 347:6 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[1486] 347:10 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[1487] 347:12 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[1488] 349:4 p 7 in 423a_June_28_21_PROLIDER_Eng

[1489] 350:24 p 8 in 424a_June_28_21_PROLIDER_Eng

[1490] 351:5 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

It was recommended that vegetable gardens in homes be encouraged (heads of households).[1491]

Local value chain

The strong presence of intermediaries (middle-men) in the marketing channels and the limitations of very local short channels.[1492]

Boost short marketing channels, especially through: 1) establishing and strengthening of public procurement channels to local coops and associations, reducing intermediaries; and 2) establishing and scaling agroecological markets and farmers in collaboration with the municipalities. [1493]

Increase attention on local food economy through local staple foods, local resources and crops and value addition in the agri-food systems.[1494]

Science must feed the transformation of neglected value chains.[1495]

Buy farmer direct to shorten value chain where available.[1496]

Use local cultivars that can resist the impact of climate change. This will help address the loss in biodiversity, which endangers ecosystems.[1497]

Localization of food system is nature positive and shall build back better and sustainable.[1498]

We commit to, and ask others to join us in increasing localized, sustainable production and food generation for local consumption, as well as local economies to promote increased agrobiodiversity, including Indigenous chefs and businesses.[1499]

Promote local production and distribution to address the issue of food wastage as well as localization of agricultural value chain to generate better, just and equitable livelihood opportunities.[1500]

With the current food value chains being urban-bound and export-oriented, we concur that this localisation must be given priority. The tendency of rural farmers to sell their produce to large cities and abroad has only provided avenues for several middlemen to intervene between farm and table, thus increasing the cost of food. To shorten the value chain, we

[1491] 351:19 p 7 in 552a_July_15_21_Frente_Parlamentario_Eng

[1492] **525:5 p 8 in 122a_July_13_21_RIMISP_Eng**

[1493] **525:9 p 10 in 122a_July_13_21_RIMISP_Eng**

[1494] 414:8 p 6 in 455_May_14_21_Ekwamu_A

[1495] 414:25 p 6 in 455_May_14_21_Ekwamu_A

[1496] 429:197 p 13 in 470_June_17_21_Burian_Multi

[1497] 429:230 p 16 in 470_June_17_21_Burian_Multi

[1498] 436:4 p 7 in 477_June_19_21_Christy_S

[1499] 449:30 p 10 in 390_May_28_21_UNPFII_FAO

[1500] 455:21 p 6 in 063_Mar_04_21_Nanavaty_Multi

see the need to invest in enabling technologies that would localise food production and distribution.[1501]

…looking at the value chain and implement regulations on the value of food…[1502]

We need to "address transport shortfalls, especially for rural communities". We need to "look into the supply chain structures, understand where the gaps are and find opportunities". We need to improve "Supporting current channels that are feeding the need in the community".[1503]

We can ensure access to safe and nutritious food for all by involving manufacturers in the decision-making dialogues to ensure nutrition in food is maintained even while on the shelf. We can also do this by empowering more persons to participate in farming at home that way they can guarantee how it has been produced.[1504]

There is a need for processors/manufacturer to evaluate their inputs, consider replacing foreign inputs where practicable and consider shorter/regional shipping lanes.[1505]

Raise incomes across food value chains.[1506]

Theme 7: local food systems are central to the solutions. Municipalities can take part in all SDG's Proposal: since food systems are so complicated, each municipality or region must have an inclusive food and sustainability council led by the mayor and lead the region's healthy and sustainable policies. Proposal: connecting the municipals' private sector to be part of the solutions to changing the local food systems to healthier and sustainable ones.[1507]

Develop and strengthen strategies for shortening value chains and establish direct marketing channels between producers and consumers. Strengthen and expand the Circle 47 Program to include more producers and reach more citizens of Mérida, above all the most vulnerable. Enhance the work of various organization that promote fair trade and direct marketing between the producer and consumer. Promote the establishment of street markets with accessible and quality products. Promote collection networks and points of sale, as well as farmers markets, to give food producers visibility and promote fair trade. Establish one or several "secondary" supply centers in different parts of the city.[1508]

Panelists also noted the need to strengthen local value chains. For example, with the participation of wholesale markets in territorial food systems - markets that concentrate agricultural supply and allow farmers to sell their products in convenient volumes. This

[1501] 460:98 p 12 in 131_May_25_21_IISLA Ventures

[1502] 504:32 p 8 in 400_June_09_21_Viera_Pollmeier

[1503] 18:10 p 8 in 114_Apr_19_21_Maurer H_Roskruge N

[1504] 35:83 p 11 in 095_Mar_27_21_Chinapoo C_Multi

[1505] 50:17 p 9 in 087_Mar_20_21_Chinapoo C_Multi

[1506] 56:7 p 6 in 006_Dec_16_20_UNDESA

[1507] 64:22 p 6 in 041_Feb_17_21_Adler D

[1508] 75:20 ¶ 87 – 92 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

would promote greater communication and operational improvements between producers and distributors.[1509]

Actors pointed out the need to strengthen local value chains: For example with the involvement of wholesale markets in territorial food systems (markets concentrating agricultural supply and enabling farmers to sell their produce in convenient volumes) and the necessity to promote a broaden integration with the urban retail network not only in fruits & vegetables but also in meats, fish & seafood and dairy products.[1510]

Greater farmer shares of consumer peso – community level value-adding; product diversification; and direct selling.[1511]

Strategies to address these issues include incorporating a use of community pantries to reduce the loss of excess produce, creating community gardens to address issues of food stability during the pandemic, and practice of community-supported agriculture where the produce and profits feed local markets, reducing the transport and infrastructure required to support food systems.[1512]

A competitive environment is required to attract investment in value-added processing. Consumer choice and individual needs should be respected (price, locale production method.).[1513]

Local farmers need to 1) diversify their production based on local demand, and 2) create their own composting facility on site to process local food scraps.[1514]

To build back better from COVID-19, we must prioritize local farmers purchase (supermarkets must have a % of their total purchases coming from local producers, government tax incentives for supermarkets doing so).[1515]

Encourage or support local production of healthy food to prioritize the public health interests of the community.[1516]

E-commerce is redefining agri-food value chains (accelerated by Covid-19) and is helping more farmers to cut out the middle man.[1517]

It's the consumers that dictate the producers what he wants. The mindset of consumers needs to change to encourage them to eat local food. 75% of our vegetables are imported.[1518]

[1509] 76:9 p 8 in 103_Apr_8_21_Carrara E_Multi

[1510] 77:17 p 8 in 108_Apr_13_21_Carrara E_Multi

[1511] 103:9 p 10 in 007a_Dec_18_20_NAAGD

[1512] 143:42 p 12 in 231_May_19_21_MCD

[1513] 153:24 p 9 in 263_May_06_21_CCGA

[1514] 163:35 p 6 in 300_May_27_21_Alesso_Pommeret

[1515] 163:50 p 6 in 300_May_27_21_Alesso_Pommeret

[1516] 167:60 p 12 in 311_June_14_21_NCD Child

[1517] 169:39 p 11 in 327_May_18_21_CropLife

[1518] 183:46 p 10 in 341_May_28_21_Sewraj_KS

Ethnic cuisines link communities to business: Communities can meaningfully engage in food-based value chains and the hospitality industry, promoting diversified food commodities for consumers and markets. This appropriately places local cuisines in the era of technological development and the consumer-driven food industry and helps communities enhance their livelihood options.[1519]

Promote work among sectors and strengthen local production systems.[1520]

Deglobalize and Relocalize our food systems so that it is sustainable, a mitigation to climate change and it addresses the broader objective of society of addressing poverty, hunger, sustainability, food sovereignty and equitability.[1521]

There is the need to diversity crops being cultivated including indigenous crops and develop value chains for indigenous crops.[1522]

There should be a national focus on developing value chains of key staple crops.[1523]

Support strong local food/farmers' markets and connect producers and consumers (to harness their economic and political power). Consumer information, education and communication is essential. Scale up, not through corporatization or industrialization, but grow through aggregation with the support of appropriate local platforms controlled by local actors (e.g., food hubs) and local alliances.[1524]

Facilitate the process of selling native seeds by ending sales limitations, simplifying procurement requirements, and multiplying germplasm banks throughout the country.[1525]

Decentralize distribution - replicate the practice of imposing a limit on the number of food retail stores in a municipality, imposing minimum sustainable food purchase quotas for each retailer.[1526]

The dialogue also highlighted importance of strengthening the resilience of local food production systems (essential for reducing vulnerability) while strengthening global systems to enable a global response to local crises. The coexistence of local systems/strengthening of local production systems while strengthening global production is an important challenge that we face in reforming and transforming food systems. In the past, changes were made to the benefit of some, and to the detriment of others.[1527]

There is a need to increase resilience at the local level and concurrently capitalize on global food production resilience (global markets with transport and logistics systems which were considered essential). Each supply chain is going to have its own unique

[1519] 219:5 p 7 in 380_June_08_21_Shakya_Chettri

[1520] 236:11 p 8 in 277a_May_14_21_IICA_English

[1521] 250:4 p 7 in 486_June_23_21_AFA_Multi

[1522] 262:20 p 6 in 498_June_24_21_Danquah E

[1523] 262:47 p 7 in 498_June_24_21_Danquah E

[1524] 299:40 p 9 in 535_July_08_UNESCO Chair on Food

[1525] 301:17 p 7 in 537_July_08_21_ANP_WWF

[1526] 301:22 p 7 in 537_July_08_21_ANP_WWF

[1527] 302:9 p 7 in 538_July_09_21_IDS_Multi

vulnerability and solution profile. At the local level, greater attention to strengthening food sovereignty based on traditional systems is needed, and this should be accompanied by support to more sustainable production at a global level.[1528]

Supply chains should be shortened wherever possible - the closer children are to food growing or growing it themselves either in a school or community garden the more likely they are to be interested in it and appreciate it.[1529]

World Trade Organisation (WTO) Global food trade is against the principles of food sovereignty and local sustainability. There is a need to build sustainable local food production systems first. We, therefore, call upon the UNFSS to recognize local food sufficiency as the basis of national food security.[1530]

Promote value chain development involving food production linked to tourism, beekeeping, local products (ex. peppers and aromatic herbs) – inter alia for rural women's economic empowerment.[1531]

Discussions around nutrition-sensitive interventions also fall under the theme of inclusive value chains. Such interventions require that producers, value chain stakeholders and policy makers consider the nutritional needs and dietary preferences of consumers, while providing a compelling case for consumers to shift towards more nutritious diets. Rice will continue to play a key role in mediating the region's food and nutrition security goals as a staple crop that billions of individuals rely on for sustenance and livelihoods.[1532]

Improving agricultural value chains plays a critical role in rural reinvigoration: improving access to inputs, building storage and processing facilities, strengthening transportation systems and broadening market access through stakeholder linkages, digital platforms, and demand-driven production. Mitigating the impacts of male out migration through rural job generation, strengthening social safety nets, and safeguarding farmers' incomes through the enforcement of minimum standard pricing and the promotion of domestic production can also contribute to rural reinvigoration.[1533]

Financial policy should be designed to support an efficient management mechanism between demand and supply side and establish direct links between the two sides. Furthermore, the supply chain system should be built on proximity to support locally produced commodities and avoid unnecessarily long transport, thus minimizing gaps in timing and distance.[1534]

In south Korea, the youth tend to leave the rural areas and farmers are relatively old (> 60 years), have small plots of around 1,5 ha and have a hard time to make ends meet. Due to high price elasticity of the global food markets they are prone to high price fluctuations

[1528] 302:19 p 9 in 538_July_09_21_IDS_Multi

[1529] 308:9 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1530] 309:22 p 7 in 545_July_13_21_Mbenya R

[1531] 310:20 p 7 in 546_July_13_21_INDEP

[1532] 313:10 p 6 in 549_July_14_21_Meah N

[1533] 313:11 p 6 in 549_July_14_21_Meah N

[1534] 315:29 p 10 in 551_July_15_21_FAO_ESCAP_Multi

and small margins. Therefore the initiative advanced a potential disruption of global food value chains based on the successful experience of government programmes on local food markets and public meal centers. Potential for outscaling to other industrialised countries with rural areas characterised by an increasing elderly population of smallholder farmers was also identified. This is possible through: Government commitment in terms of financial investments, logistics, infrastructure and mechanisms in place for direct exchange with farmers. The local food market enables poor farmers to have stable prices so that they can diversify their cultivation to deliver throughout the year. Provision of small-scale food processing equipment and less strict certification, encouraging farmers to start processing such as the production of Tofu for the local food markets. Value for community engagement, citizen's organization and for farmers' group activities. Attached to the markets there are also public meal centres and connections for delivering meals to various schools and military bases. This provides women in rural areas additional employment, and provide fresh, quality meals for reasonable prices, affordable for ordinary people in the rural and urban areas. Rural communities become less depended on fluctuating and uncertain prices and money transfers from supermarkets and traders in urban areas but become more self-providing. Cultural change: consumers increasingly show interest in local food markets as it provides them fresh produce and a better feel to be connected with nearby producers.[1535]

Another important discussion is over the question of importation and production - some participants are of the view that countries should encourage greater production within the country, however there are also concerns over whether the higher cost of production for country might have other negative effects. While policymakers, private sector and civil societies are progressing to evolve into a more socially-sustainable food production, the lack of political will and leadership may pose a threat to the ongoing efforts to strengthen the social aspect of food production.[1536]

The valorisation of traditional knowledge by discovering local and ecological resources, and the use of local, accessible and already existing materials to reduce the use of chemical fertilizers, to increase nutrient cycling at farm and household level and recycling of crop residues, are important.[1537]

Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider: Training farmers on how to innovate and be competitive on the market. Training on how to link agricultural production to food and nutritional requirements. Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. In this respect, the active engagement of leaders in the rural communities is crucial. Not only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge (e.g. Traditional crops vs

[1535] 317:20 p 11 in 554_July_15_21_Lopez DE

[1536] 319:6 p 6 in 556_July_15_21_Von Goh_GenTan

[1537] 324:16 p 7 in 561_July_19_21_OCCAM

GMO; certification of local seeds, allowing and promoting locally-adapted, cheap and good quality seeds).[1538]

Increased consumption of locally grown foods and produce - also requires tracking of annual production quantities.[1539]

Collaboratively develop standards to fortify locally produced staple products - especially rice and cassava.[1540]

Increased local production and processing of diversified food crops.[1541]

They marveled at the growth of more localized processing and production options, recognizing the opportunity for both local job creation in rural communities and a more genuine connection of the consumer with the producer.[1542]

Vanessa: It depends more on the seasonal production of crops, in a relationship of food with the territory; not like supermarkets that keep everything imported, not fresh.[1543]

Despite the agro-export model, it's important to be aware that production should first be for local consumption. The surplus should then be sold at a fair and reasonable price and be good quality. But, it is also important to begin adding value to products rather than consuming products packaged and treated by big industries.[1544]

It is essential to incentivize primary production at the national level, carry out a survey in each community to quantify needs and prioritize aid. Likewise, improve storage aspects when food is perishable, provide tools to guarantee greater production of food items based on economic reactivation (easier credit, technical assistance and transportation). Define "incentivize", does this refer to financing? The prime rate is an incentive. Consider the participation of other sectors. Take into account vulnerable women groups, they have little access to these incentives and financing possibilities. Observe existing incentive programs and strengthen women's participation in them. The credit conditions of the banks do not allow the participation of small-scale producers. Government intervention should be considered to facilitate access to these programs by small-scale producers.[1545]

The planning processes should be carried out taking into account the territorial approach.[1546]

[1538] 324:46 p 11 in 561_July_19_21_OCCAM

[1539] 330:43 p 9 in 568_July_21_21_Cooper-Liverpool M

[1540] 330:73 p 13 in 568_July_21_21_Cooper-Liverpool M

[1541] 330:80 p 13 in 568_July_21_21_Cooper-Liverpool M

[1542] 336:6 p 3 in 494a_June_23_21_US Farmers

[1543] 342:6 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[1544] 345:10 p 7 in 419a_June_08_21_CLOC_Eng

[1545] 350:6 p 6 in 424a_June_28_21_PROLIDER_Eng

[1546] 350:17 p 8 in 424a_June_28_21_PROLIDER_Eng

Guiding Theme 14. Educate about Food Systems: Shift Perspectives, Revise Narratives, and Change Mindsets

Awareness, education, and communication for community

Promote the SDG in secondary school and churches.[1547]

Sensitization SDG through secondary and churches and mosques.[1548]

a) Campaign: Identify and document our "food heroes". b) Choose a name for the little league baseball team that reflects local farming. c) Coordinate with local schools to conduct annual planting and farm production projects as part of the curriculum. d) Involve children in the activities of the Agroecology School of Hatillo and the productive yard workshops.[1549]

Appeal to a public purchase mechanism for selling the food produced to the School Food Program or to municipal medical assistance centers.[1550]

Several panelists noted that skill development, including digital skills, use of earth observations tools will be useful to improve access to information (market, inputs, extension), hence increase agricultural production and create the necessary transformation.[1551]

Education in schools should be a priority, with communication strategies that value positive messages, as research shows that negative messages have little effectiveness in changing habits.[1552]

From Action 4 - to advance equitable livelihoods, it was agreed that Indigenous Peoples must be leading their own conversations of "advancement" with implementation and practice of international standards like UNDRIP, FPIC, etc. It was agreed that Indigenous Peoples' need to design their "access to market" and education that sustains their ways of life.[1553]

As a next point, emphasis was placed on the need to research and focus on development in order to adapt new techniques to the reality of each country. In turn, great emphasis was placed on the importance of intersectoral support. It is important to have sectoral approaches where knowledge can be shared and to also be able to evaluate the economic benefits of reuse.[1554]

[1547] 357:14 p 6 in 401_June_10_21_Ekwamu_A

[1548] 357:26 p 7 in 401_June_10_21_Ekwamu_A

[1549] 526:13 p 7 in 124a_July_18_21_FEA Hatillo_Eng

[1550] 526:14 p 7 in 124a_July_18_21_FEA Hatillo_Eng

[1551] 357:38 p 7 in 401_June_10_21_Ekwamu_A

[1552] 389:162 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[1553] 390:14 p 6 in 432_Dec_15_20_UNPFII_FAO

[1554] 516:6 ¶ 328 in 098a_June_10_21_Caballeros C_Eng

Approaches to achieving this rely on community-identified strengths and solutions and building and strengthening community capacity and skills…[1555]

To holistically improve local food system outcomes, cities and communities are starting to look at food sovereignty, land access, community-led processes, and improving city and community-wide communication and commitment.[1556]

Host demonstration projects, that train people how have a successful food endeavors followed by policy that enables these actions…[1557]

Provide the resources, financial support, and information needed for communities to create their own thriving food systems.[1558]

Schools connect people of many backgrounds. Cities can use that as an opportunity to build relationships between rural and urban children and residents…[1559]

Communicating information to the general public A point was raised that the general public does not understand where their food comes from, catalyzed by increased distances between consumers and food producers. When the general public engages with misinformation, especially in the ways that their food is produced, they have no avenues to verify information validity. And changing their ingrained perceptions with truthful information is very difficult. Food has become a way for anyone, anywhere, to express their values. This has many benefits when it comes to learning about diverse cultures but can also lead to food becoming a new form of identity politics, promoting exclusionary, versus inclusionary, perspectives. This has the potential to be very dangerous as it could lead people to disengage from anything from diverse foods to alternate points of view. The lens of food understanding has also shifted towards a more individually-focused lens - "what is best for my family" - that is based on deeply held beliefs, versus a more scientific, unbiased lens. A great example is the global fear of pesticides and their effects on children and overall health, as well as the complex (and sometimes inconsistent) mechanism of public and private food labeling and certification schemes like "organic" without any global unified definition.[1560]

Enhancing awareness and attitudes toward food system transformation and sustainable, climate-friendly, localized food production.[1561]

Raising community awareness, attitudes, and understanding of concepts such as food miles, sustainable food systems, plant-based diets.[1562]

[1555] 402:30 p 9 in 443_May_09_21_GIGH

[1556] 404:12 p 6 in 445_May_26_21_ICLEI USA

[1557] 404:23 p 7 in 445_May_26_21_ICLEI USA

[1558] 404:36 p 8 in 445_May_26_21_ICLEI USA

[1559] 404:52 p 13 in 445_May_26_21_ICLEI USA

[1560] 405:13 p 8 in 446_May_27_21_Lyons_Gould

[1561] 428:7 p 6 in 469_June_17_21_de Silva R

[1562] 428:18 p 7 in 469_June_17_21_de Silva R

Disaggregated information on what women are selling and eating.[1563]

We need Indigenous led curriculum in public schools and community education settings to teach people how to support their local food systems and better understand Indigenous Peoples' cultures, rights, knowledge and practices. There are good examples of these types of curriculums and programs being led by Indigenous Peoples in the United States and Canada. To reconnect and/or sustain our sustainable consumption patterns we need to be able to carry out hunting, fishing, and harvesting on the ceded territories, where perpetual right to hunt, fish, and harvest traditional foods is guaranteed by the treaties. This requires the environments to be healthy and free of toxic contaminants, and federal/state governments to prevent harassment by upholding the treaty rights and educate law enforcement and the public on Indigenous Peoples' rights to harvesting and land/water access. Teachings and strategies from Indigenous Peoples' approached and practices can provide essential solutions in reaching the SDGs. There is opportunity for Indigenous and non-Indigenous peoples and programs to collaborate on these shared goals. First we need a change in mentality to see Indigenous Peoples' food systems as vital to the solutions, which can help inspire the change to sustainable consumption.[1564]

We ask Member States and others to commit to granting and protecting unfettered access to ceded territories for Indigenous Peoples to practice traditional harvesting rights, including fishing, hunting and foraging. We ask Member States to educate law enforcement and public on Indigenous Peoples' protected harvesting rights, so to stop further harassment.[1565]

Community awareness build up and capacity strengthening to cope with disasters.[1566]

Policies that 1) treat family as a unit for entitlements and capacity building; 2) bring visibility and recognition to family farming and promote it as an economic activity; 3) create awareness and redistribution of labor across family members.[1567]

More women are required in farming; end subsidies on monoculture; we need stronger electoral accountability to ensure access to safe and nutritious food; introduce food knowledge (culture, nutrition, sustainability) into school curriculums; start to highlight people incl. farmers who are doing good deeds in agriculture; bring an end to globalization and concentrate on local markets.[1568]

Advance our understanding of the value of small-scale fisheries (e.g. Illuminating Hidden Harvests) and increase efforts to capture their contributions in national accounts.[1569]

Education was seen as the key to changing mindsets and heart-sets. "With knowledge comes compassion so together we can collectively manage a more sustainable system."

[1563] 430:43 p 11 in 471_June_08_21_van Liere M

[1564] 449:10 p 6 in 390_May_28_21_UNPFII_FAO

[1565] 449:25 p 8 in 390_May_28_21_UNPFII_FAO

[1566] 450:50 p 11 in 391_May_31_21_FAO_Multi

[1567] 455:40 p 11 in 063_Mar_04_21_Nanavaty_Multi

[1568] 476:12 p 8 in 264_May_06_21_Arrell Food_Multi

[1569] 485:50 p 10 in 288_May_20_21_GAN_Multi

Education is essential to understand where food comes from, to awaken one's sensitivity to Nature, to encourage youth to engage in agriculture, to understand the 9 planetary boundaries, and to transmit core values. The following have a fundamental role to play: governments, schools, universities, parents and families, the private sector, NGOs, chefs, industry leaders, farmers, and indigenous peoples. "We also need to let food itself be the teacher."[1570]

One group called for the need to "evolve a common language of empathy between ourselves and the Earth, and at every junction of the food chain." It highlighted the opportunity of digital spaces as "open public infrastructure where we can connect as farmers and citizens.[1571]

Second, schools should ensure that education on healthy food and nutrition is included in curricula and that healthy diets are promoted in school meals. Food is vital for children to be able to learn. However, education on food and nutrition is so much more than just memorizing facts. Education on food and education should be needs-based and experiential for children.[1572]

Third, parents and families at home also have a role to play in teaching children about the value of food, especially through important cultural experiences, such as cooking or farming. In this context, ancestral knowledge on food and nutrition should be promoted.[1573]

There is also a need to educate the community on how climate change affects food availability, cost and distribution.[1574]

Additionally, educational programs should focus on the health benefits of food, the importance of purchasing or growing native and local foods and learning about the history of food preparation methods from past cultures.[1575]

Local food movement - promoting awareness, more targeted to local context.[1576]

Increase public awareness why are these policies needed. Stop promotion of UP foods worldwide.[1577]

- redesign social conscience of restaurants, and educate them. Government can encourage restaurants to repurpose food and therefore help the community.[1578]

[1570] 486:34 p 7 in 291_May_21_21_Polman_Prabha

[1571] 486:35 p 7 in 291_May_21_21_Polman_Prabha

[1572] 486:64 p 12 in 291_May_21_21_Polman_Prabha

[1573] 486:65 p 12 in 291_May_21_21_Polman_Prabha

[1574] 487:19 p 6 in 293_May_22_21_City of San Antonio

[1575] 487:24 p 7 in 293_May_22_21_City of San Antonio

[1576] 497:30 p 6 in 314_June_16_21_ICC_US Farmers_Multi

[1577] 502:25 p 9 in 398_June_07_21_NCD Alliance

[1578] 504:65 p 10 in 400_June_09_21_Viera_Pollmeier

EDUCATION needs to be democratised: accessible and recognized by all class systems and in that process create channels and awareness[1579]

Promote community education initiatives in nutritional matters, with cultural relevance and co- responsibility between women and men.[1580]

"Higher focus on education at community level (how to grow and how to cook food)".[1581]

Empowering communities to take the lead is the key to a social movement - change will not be sustained through academia, non-profit institutions, and government. Educate families and communities to improve food access in backyards, urban gardens, vertical gardens, coastal areas/food sources.[1582]

Distribution needs to change its current way of working, namely to take the best products (in terms of product and nutrient quality) and send it to the bidder of highest price (wealthy nations or wealthy neighborhoods). In order to achieve this transition, we need to give education and access to all communities, not just those with status, power, and wealth.[1583]

Education and Public Awareness: caught through all of the major findings was the recognition of major communication gaps for healthy eating. One speaker reflected on how being overweight was a sign of success in more rural and pastorali communities whereas being skinny and in shape caused alarm and concerns over poor health. Other speakers reflected on the problems of the overabundance of advertising by major corporations and agribusinesses that flood the market with disinformation that confuses consumers over what is and what isn't healthy.[1584]

Focus on education and awareness-building of local communities. Although the current food system is a global problem, if we focus on local communities and stakeholders, we can improve the health of humanity collectively, one community at a time.[1585]

Consumer awareness is important. The role of the consumer is fundamental to understand that a seasonal product is seasonal, innovation while duly regulated is good, regenerative agriculture is the future, monoculture is damaging ett.[1586]

Invest in education and better communicate innovation to the public. The role of schools is particularly important.[1587]

[1579] 504:86 p 12 in 400_June_09_21_Viera_Pollmeier

[1580] 3:4 p 7 in 099_Mar_31_21_FAO_IFPRI

[1581] 18:23 p 12 in 114_Apr_19_21_Maurer H_Roskruge N

[1582] 19:14 p 8 in 115_Apr_24_21_Foronda_Multi

[1583] 60:23 p 8 in 021_Jan_27_21_Donati L

[1584] 92:3 p 6 in 225_May_13_21_Schwartz A

[1585] 92:4 p 8 in 225_May_13_21_Schwartz A

[1586] 99:26 p 9 in 285_May_20_21_TFFF_Multi

[1587] 99:40 p 13 in 285_May_20_21_TFFF_Multi

A need for more community-oriented projects with a strong emphasis on food education.[1588]

A point was raised that conservation organizations need to do a better job of clarifying and promoting the fundamental importance of nature in WEF systems. Often the focus is on climate change and similar (more technical) issues, so the message that we are wholly dependent on our natural systems can get lost.[1589]

Complementary awareness raising activities are critical for changing behaviour and attitudes at individual, household and community levels.[1590]

Education and raising awareness on the individual and community levels and mainstreaming elements to be applied on a day to day basis. For example, introducing urban gardening through hydroponic rooftop kits.[1591]

Increasing community awareness about the impact of climate change and their contribution to mitigation.[1592]

Raising awareness of rural communities on the impact of the climate change. Applying financing solutions such as 50/50 loans.[1593]

Conflict and climate change has been hampering the efforts to ensure food security in Nigeria. Access to climate information is important for farmers in rural communities as timely access to weather information from experts helps farmers to make adaptive decision. The small-scale farmers are not aware of information centres that provide relevant information.[1594]

As pertains sustainable consumption, the business, health and academic sub-sectors players including -dietitians, doctors, chefs, respective Ministries, Department & Agencies, have respective roles to play in advocacy and awareness creation through policies and curriculum upward reviews.[1595]

Promote Farmer Field Schools (FFS) as a strategy to build and empower communities for experimental learning, agriculture research agenda setting, data collection and analysis by farmers, decision-making and participation related to crop growing conditions in local communities.[1596]

[1588] 100:2 p 6 in 324_May_14_21_Guzanic J

[1589] 117:65 p 15 in 109_Apr_13_21_Jacobs-Mata I

[1590] 120:29 p 11 in 127_May_13_21_IAFN_CWFS

[1591] 132:22 p 8 in 193_Apr_19_21_Ringler_Kassim

[1592] 132:39 p 10 in 193_Apr_19_21_Ringler_Kassim

[1593] 132:46 p 10 in 193_Apr_19_21_Ringler_Kassim

[1594] 134:1 p 6 in 200_Apr_22_21_HEDA

[1595] 139:14 p 8 in 216_May_06_21_Ben_Aniabi

[1596] 140:27 p 9 in 223_May_12_21_Mushita A

Action 7 - Education on food safety and healthy diets: making plants the star of the show and being creative in how we showcase a better diet to our customers.[1597]

Educating community members on issues of farming practices, nutrition, and rights in order to mobilize the voices of individuals, particularly women.[1598]

Inspire members of the faith based community into practices of healthy and sustainable food transformation with its guiding principles, so that the wisdoms of faiths can be implemented into dietary practices.[1599]

Create community education projects for homes and community spaces on the importance of small gardens, water storage and management and regenerative techniques that strengthen food resilience + nutrition.[1600]

Improve community and industry education to train towards regenerative practices and bicultural foods systems.[1601]

Building capacity & raise awareness among IPs and their leaders about their rights in relation to their land and territories.[1602]

Agro dealer should provide new varieties in time and more awareness on food preservation.[1603]

Better communication about what each industry is doing on sustainability.[1604]

Educating the public about food production.[1605]

There is need to scale up the amount of information so that we are able to inform everyone that there is a market, that there is a demand for sustainable products.[1606]

Information is important: Using evidence to demonstrate to populations the impact their diet can have on their health is an important motivating factor. This evidence should be used with health care providers.[1607]

Education is necessary to create awareness. We could create an informed universal picture of what needs to be done.[1608]

[1597] 142:4 p 6 in 230_May_19_21_Allen K

[1598] 143:38 p 11 in 231_May_19_21_MCD

[1599] 145:8 p 7 in 233_May_22_21_CVS_Multi

[1600] 149:7 p 6 in 243_June_03_21_Schwartz A

[1601] 149:13 p 6 in 243_June_03_21_Schwartz A

[1602] 152:47 p 9 in 262_May_04_21_ILC_Multi

[1603] 154:17 p 7 in 265_May_07_21_CSONA

[1604] 156:50 p 11 in 275_May_13_21_Dornom H

[1605] 156:51 p 11 in 275_May_13_21_Dornom H

[1606] 158:49 p 10 in 279_May_18_21_Yoovatana M_Multi

[1607] 160:24 p 9 in 292_May_21_21_ProVeg_Multi

[1608] 160:35 p 10 in 292_May_21_21_ProVeg_Multi

Support community organizing, knowledge sharing, and collective action – management is about people, not just production.[1609]

Collect and utilize community-generated data, and ensuring community members are informed about management decisions.[1610]

Support local farmers and local growers by prioritizing the purchase through educational campaigns.[1611]

Urging school districts to implement sustainable nutrition education components, engaging community on ongoing events and educational sessions on sustainable nutrition.[1612]

Create a community education component on food systems and community growing in higher education.[1613]

Increase communication on opportunities in food system: market, job opportunities, financial perspectives.[1614]

Participants also felt that students, their parents, community members and farmers should be engaged in holistic health education, including physical activity and nutrition components (with modules for different diets, such as plant-based diets, and culturally appropriate ways of eating healthy) and that these individuals could cascade this education to the rest of the community.[1615]

Communication must be tailored to the audience.[1616]

Thus, awareness campaigns and intensive training by extension services and advocacy by civil societies on inclusion and support for women and youth is essential.[1617]

Industry needs to take on the challenge of communicating the good work and the total benefits delivered internally to ensure everyone in the sector has the awareness and understanding, as well as communicating to the wider public.[1618]

There also seems to be a lack of trust by the public in the science. This could be due to the boundless information available via social channels or by the conflicting science they see governments and global institutions arguing over in public arenas.[1619]

[1609] 161:22 p 6 in 296_May_25_21_Battista W

[1610] 161:25 p 6 in 296_May_25_21_Battista W

[1611] 163:66 p 10 in 300_May_27_21_Alesso_Pommeret

[1612] 163:126 p 16 in 300_May_27_21_Alesso_Pommeret

[1613] 163:145 p 18 in 300_May_27_21_Alesso_Pommeret

[1614] 163:148 p 18 in 300_May_27_21_Alesso_Pommeret

[1615] 167:24 p 7 in 311_June_14_21_NCD Child

[1616] 170:100 p 14 in 328_May_19_21_Lalor_Teagasc

[1617] 173:115 p 18 in 331_May_24_21_LNFU

[1618] 175:36 p 13 in 333_May_25_21_GMA_Multi

[1619] 175:37 p 13 in 333_May_25_21_GMA_Multi

Regulatory organizations need to actively be involved in communication, dissemination of information to support advocacy effort.[1620]

Education on these issues must be disseminated and promoted from an early age. The issues range from consumer empowerment, to real basic education about food, nutrition, sustainability, to give consumers a chance to truly have an understanding of what they are looking for.[1621]

Undoubtedly, transparency of information will allow a better distribution of that value along the food chain.[1622]

Science communication on biotechnology should be mainstreamed. There are negative perceptions of the public on this area, especially on the genetically-modified crops or animals.[1623]

The ministry of agriculture must intensify educational programs.[1624]

Outcomes from the discussion of barriers that prevent equitable and inclusive food systems include the need for an overall greater awareness of food systems to identify barriers.[1625]

Strengthening literacy and nutrition education for families, especially parents. Knowledge of local food, consumption of healthy, nutritious, and quality food is an important key in realizing sustainable food consumption patterns.[1626]

Raising crop production by vegetable garden at the homestead areas and the rooftop through conducting awareness campaigns using social media and small financial support.[1627]

There should be information on market access – good prices and where can they sell.[1628]

Inclusive approach for organizing the local institutions (farmer groups, cooperatives etc.) at grass roots level and campaigning must be initiated for increasing the level of awareness and sensitization of those institutions especially using digitization for accessing the all services across the board by ensuring "Leave No One Behind".[1629]

Communications should be first, rather than an afterthought, when it comes to the design of programs and interventions - they are strategic openings for possibilities.[1630]

[1620] 177:50 p 11 in 335_May_26_21_Laar_Multi

[1621] 178:13 p 7 in 336_May_26_21_CI_WFO

[1622] 179:13 p 9 in 337_May_26_21_CI_WFO

[1623] 181:38 p 9 in 339_May_27_21_Sayoc_Multi

[1624] 182:26 p 7 in 340_May_27_21_Mamba_L

[1625] 184:24 p 8 in 342_May_28_21_Peralta T

[1626] 185:51 p 10 in 343_May_28_21_Abdullah_S

[1627] 186:10 p 6 in 344_May_30_21_COAST

[1628] 190:6 p 6 in 348_June_02_21_ASF Pakistan

[1629] 190:17 p 7 in 348_June_02_21_ASF Pakistan

[1630] 192:8 p 6 in 350_June_02_21_Farm Radio Int

Entertainment is as important as information - to drum up interest, as well as provide education, entertainment alongside relevancy should be considered (a lesson from the Shamba Shape-Up TV programs).[1631]

For effective food systems we need to ensure that we are responsive to the needs of farmers, and this can happen through effective communications.[1632]

Improve nutrition education and behavioral change programs to enable children to learn and adopt healthy dietary habits.[1633]

Nutrition education for producers to deliver nutritious food products.[1634]

To take the nutrition message globally, "the processes of production and procurement of the food necessary for health and growth", into all farms, schools, homes, villages and the food chain.[1635]

There is an amazing food story to tell. From education to application our goal is to capture food data at source, analyse, edge compute, fuse, distribute, create digital twin farms and apply it in all parts of the food industry, from farm to fork. XR is about implementation, it will personalise the information to each individual from student, to farmer to researcher to policy maker, resulting in actions. Let's see it. A Celebration of Fusion.[1636]

The indigenous aquaculture production and bio-diversity (species, genetic, beels, haors, baors and estuarine ecosystem) is under threat. Preservation of indigenous genes, species and ecosystems is urgently required and should be promoted. There is need to sensitise communities on existing innovative approaches, ideas and adaptation measures especially indigenous adaptation processes. Deliberate efforts should be made to assess and tap voices and knowledge of farmers and fishers.[1637]

In partnerships with IPOs, colleges/universities, governments and donors, (i) undertake research and documentation of indigenous foods, including wild/uncultivated, and food systems (production, processing, distribution and consumption) and associated knowledge and practices; (ii) conduct nutrition analysis; and (iii) prepare educational materials in popular forms.[1638]

To increase markets for more sustainable products or alternatives, the group also acknowledged the role of educators and communicators in providing the general public with a greater depth of understanding about products and practice, with the aim of creating space for new markets and increasing acceptance of 'novel' alternatives.[1639]

[1631] 192:11 p 6 in 350_June_02_21_Farm Radio Int

[1632] 192:16 p 6 in 350_June_02_21_Farm Radio Int

[1633] 193:13 p 7 in 351_June_03_21_CIF_Multi

[1634] 193:57 p 11 in 351_June_03_21_CIF_Multi

[1635] 194:20 p 8 in 352_June_04_21_Troughton J

[1636] 194:54 p 15 in 352_June_04_21_Troughton J

[1637] 208:18 p 8 in 367_May_27_21_Kachulu_Thilsted

[1638] 221:12 p 8 in 382_June_08_21_AIPP_Multi

[1639] 240:19 p 9 in 319_June_30_21_Fredriksson O

Identify the role of HOI as an educator in its various platforms to ensure knowledge is disseminated and change ensured in both production and consumption. Examples: less meat, more plant based, no food waste, ensuring composting and regrowth, completing the food cycle. Ensure the whole community has access to this education and awareness of the need for sustainable food production and consumption.[1640]

With this, all community members should be equipped to solve poverty-related hunger within their realm. In order to build a network together, the lived experiences of individuals, particularly those that have faced adversity or experienced food insecurity themselves, needs to be acknowledged, valued, and respected. Finally, all community supports and institutions need to be equipped to screen for and address food insecurity in innovative ways. This includes academic institutions, healthcare settings, local businesses, and employers of all types. Screening for hunger and having a community structure in place to refer people is necessary. Too often organizations work in silos, and collaboration is necessary to deliver on zero hunger.[1641]

The group felt that education of citizens can be a powerful tool to empower change in individuals. The group discussed a need to engage a group of advocates to champion the need to reduce food waste, with a need to then use these advocates to mainstream arguments against food waste and ensure the topic is connected in peoples 'hearts and minds' to wider issues, such as climate change and biodiversity loss.[1642]

The group also developed slogans to call for actions to be used in the future food waste reduction works, that they felt best mirrored the direction and areas of focus for the future food system. These included "tasty food, balanced diet: reduce waste, act today "; "technology enables green low carbon lifestyle"; "Reducing food waste to respect life and nature"; "small step everyday, reduce waste with big impact"; "fight food waste with everyone in the food industry"; "innovative technology and business models can help achieve sustainable food life cycles.[1643]

The importance of education and communication to help all individuals of different socioeconomic backgrounds to become aware of sustainability and its benefits. One of the biggest barriers for sustainable development in low-income regions is poverty and food security. This must be addressed as a part of sustainable development.[1644]

Public education and awareness of plant-based nutrition and wellness. Public health campaigns to educate and empower individuals (i.e., new parents about nutritional foods, health care providers with education and how to use the guide). Educate the public with science based, evidence-based information on plant-based food system literacy; understanding the benefits of plant-based; and a good understanding of plant-based nutrition and health awareness. We need to increase the field of plant-based food system literacy. Draw attention to the interconnectedness between public health, environmental

[1640] 243:6 p 7 in 479_June_20_21_Yang_Shanna

[1641] 252:2 p 6 in 488_June_22_21_Harrison_CC

[1642] 253:10 p 8 in 489_June_22_21_Rare China Centre_Multi

[1643] 253:13 p 9 in 489_June_22_21_Rare China Centre_Multi

[1644] 256:33 p 12 in 492_June_23_21_Liu JA

health, and animal health and welfare. Support course development that can be offered in universities and schools, i.e. plant-based food system literacy, plant-based nutrition elective.[1645]

An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the challenges holistically, avoiding trading off one aspect against another b. Design/test for - and commit to - scaling up, at speed c. Cater to more different individuals and communities and unmet needs d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving and supporting mindset and cultural shifts e. Decentralise access to good food f. Empower people through food skills and knowledge.[1646]

Get the right message across to the society and fight fake news are very important elements.[1647]

For a successful business case for regenerative agriculture, it is essential to bring together knowledge about farming, ecology, communications, technology and finance.[1648]

Agriculture is very often mentioned as harmful for the environment on school books. The government and companies should advertise on the good practices of the vast majority of the players, so that the new generation realizes that agriculture is actually an important part of the solution for a sustainable living.[1649]

Communication is key in fighting fake news. We need to find ways to get good and correct information to the society. It is also an education process.[1650]

Communication access as well as the standardization of the retailers are key to benefit from a sustainable footprint in the retail industry.[1651]

Raise awareness and reduce gender-based violence in aquatic food systems.[1652]

Keeping the community at the core of the industry.[1653]

Education and Awareness among coastal communities/farmers as well as chefs and consumers.[1654]

Also the Dialogue saw the Church as the one closest to the people. It can move its communities and people so more consultations with the church-based groups is seen

[1645] 257:5 p 6 in 493_June_23_21_Kevany_Van

[1646] 259:3 p 6 in 495_June_23_21_Forum for the Future

[1647] 261:38 p 6 in 497_June_24_21_Fontes_Multi

[1648] 261:69 p 11 in 497_June_24_21_Fontes_Multi

[1649] 261:80 p 11 in 497_June_24_21_Fontes_Multi

[1650] 261:94 p 12 in 497_June_24_21_Fontes_Multi

[1651] 261:99 p 13 in 497_June_24_21_Fontes_Multi

[1652] 263:47 p 9 in 499_June_25_21_GANSF

[1653] 264:85 p 13 in 500_June_26_21_Edible Issues

[1654] 264:86 p 13 in 500_June_26_21_Edible Issues

urgent so church leaders can also include healthy food values in their church and social teachings and programmes - and to move their members into healthy activities and taking healthy foods.[1655]

Changing the mindset of the people is the main challenge and Government needs to intervene in certain areas like restricting the sales of unhealthy foods to school children and serving imbalanced foods in restaurants and banning the importation of super fatty foods. The Church based groups need to also 'preach' these in their outreach to their members and schools need to teach these values to students.[1656]

Reduce greenhouse emission. There is a need to transform the knowledge from research into practice with the help of communication specialists to relay the information to all stakeholders within our Pacific Food Production systems.[1657]

Develop aging advisory services to educate and promote innovative methods in rural communities to adapt to Climate change.[1658]

Champions can also include local people affected by the challenges facing food systems, who are empowered and supported to advocate for themselves and communicate their stories as often they can be the best advocates. Finally, messages used by Champions will need to be presented in formats that easily accessible and understood by the general public to have impact.[1659]

Local role models in society and local celebrities with huge followings who are willing to serve as Champions and use their platforms to raise awareness or rally behind the food systems transformation agenda. These can include footballers, musicians, actors, youth leaders (esp. given that Africa is a young continent), and others that amplify and advocate key food systems transformation messages. The messages will need to be presented to them in formats that easily accessible and understood by the champions and their followers.[1660]

There is need to empower and strengthen the capacities local people affected by challenges facing food systems to advocate for themselves and communicate their stories to raise awareness on the challenges they face can be an effective way to raise awareness and drive change.[1661]

...which can be solved by empowering the local communities to use and generate data and evidence and interlink it with local knowledge and local knowledge systems.[1662]

[1655] 265:13 p 6 in 501_June_28_21_Kairo K

[1656] 265:43 p 8 in 501_June_28_21_Kairo K

[1657] 268:25 p 8 in 504_June_30_21_Susumu_Leiva

[1658] 268:30 p 9 in 504_June_30_21_Susumu_Leiva

[1659] 271:19 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[1660] 271:32 p 9 in 507_June_30_21_AKADEMYA2_FANPRAN

[1661] 271:35 p 9 in 507_June_30_21_AKADEMYA2_FANPRAN

[1662] 278:34 p 9 in 514_July_01_21_Bolling_Multi

Also, agriculture should be budgeted for appropriately, there is need to streamline the mandate of government bodies on implementation of the budget and last but not least to create awareness and education for the political class regarding agricultural policies.[1663]

Effective communication is needed to build inclusivity across the food system.[1664]

Civil society and non-governmental organizations offer important links between government responses and the most impacted. Front line non-governmental organizations and social support organizations such as food banks are essential for government responses to be able to reach the most vulnerable and less accessible populations. Cooperatives can play an important role in crisis situations because they are already embedded in the communities and are setting up production diversification systems, to support communications on COVID, protection measures, etc. More active and dynamic cooperatives set up awareness-raising activities, sought seeds to diversify people's diets and kept the commercial channels open to sell production. Their members were less impacted by public health measures than those from less dynamic ones.[1665]

Community can also play a key role in this; encouraging everyone to be active members in their food system and use their voices for change. Schools could be at the centre of urban growing initiatives (example given in discussion topic 2) in support of their community and vice versa. We need to be a part of nature's ecosystem again and show children how to be part of that ecosystem rather than detached from it.[1666]

Food literacy needs to happen in tandem at school and at home and we can use innovative ideas to help teach parents how to cook such as mobile teaching kitchens which have already been shown to be successful in India and funding chefs to give community cooking classes.[1667]

Emphasis should be placed on the importance of community in this. Educating parents and children is important but if building healthy lifestyle and positive food habits can be embedded into a community, everyone benefits. E.g there is a school feeding program in Benin where the community created the school garden and tends to the school garden, growing the food which feeds the school children and has food left over to go to the community living in proximity to the school. The parents therefore know exactly what their children are eating and the close proximity of the growing food means that the meals are fresh and nutritious.[1668]

Difficulties in reaching farmers with technologies and limited know-how. To overcome this obstacle, sharing knowledge among farmers and within farmers groups on how to use technologies is important. It is also important to work on a bottom-up process that takes into consideration farmers' needs, a process that involves all steps of the food chain, from

[1663] 279:7 p 7 in 515_July_01_21_EastAfricanFarmers

[1664] 280:78 p 12 in 516_July-01_21_Anastasiou K

[1665] 302:17 p 8 in 538_July_09_21_IDS_Multi

[1666] 308:7 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1667] 308:14 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1668] 308:28 p 9 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

the preparation of seeds and soil to the distribution of products to their disposal and recycling.[1669]

Behavior change communications for people in hard-to reach areas with increased awareness of nutrition for health outcomes and nutritious foods.[1670]

The group were able to highlight an action that should be taken in order to benefit our future, and that was to establish an effective food education system such that society would be able to make the best informed decisions about their food. This would include ethical purchasing, and taking into account how the production of our food affects others and the environment; does the production allow for mistreatment of workers, or does it harm the environment in any way? Food education is a responsibility that everyone should take, because ultimately it affects everyone in the future.[1671]

Actions to educate the whole community regarding the importance of local food, stories and diversity and training with dinner ladies, new recipes, especially in light of the new guidelines for the School Meals Program (FNDE Resolution 6).[1672]

Greater dissemination of information about school meals to the population: make citizens aware of its importance so that they defend the Program from "attacks" and setbacks, such as those that have been occurring. Better communication: especially with family farms in rural areas, who do not have access to the city's website.[1673]

The imposition of foreign food programs has encouraged the substitution of own community farming practices. To counteract its effect, they propose the preparation of recipe books for traditional dishes for the recovery of techniques for the conservation of native seeds such as chigo, kupe, guapo, healthy food and traditional gastronomy, taking advantage of the communities' existing collective memory. Apply ancestral knowledge and own technology to generate greater production and benefit of food.[1674]

Women are concerned that the healthy and nutritious food preparation methods of their ancestors are no longer prepared today and very few women know these techniques for preparing fish, meat and vegetables. They advocate for the recovery of food production and conservation within the uses and customs of the peoples. Indigenous women ask to take care of ancestral food systems, take care of the earth and not abandon it. The earth is an element of sustenance of life, water, light, air, energy.[1675]

Awareness, education, and communication for consumers

[1669] 324:28 p 9 in 561_July_19_21_OCCAM

[1670] 330:36 p 9 in 568_July_21_21_Cooper-Liverpool M

[1671] 332:9 p 4 in 156a_Apr_27_21_Dong_Quyang

[1672] 339:41 p 11 in 393a_June_01_21_Food of Tomorrow_Eng

[1673] 339:65 p 15 in 393a_June_01_21_Food of Tomorrow_Eng

[1674] 343:5 p 6 in 417a_June_18_21_Fernandez L_Eng

[1675] 343:12 p 7 in 417a_June_18_21_Fernandez L_Eng

The region could increase food access and utilization by providing incentives to steer food consumption towards more diverse, healthy, and balanced diets by populations, especially women, children, and the urban poor, and improvement in food marketing and raise awareness[1676]

Build and grow civil society competency and national protection for underage consumers.[1677]

Abuse of the color green in advertising and labeling. Changes in advertising and labeling of food products, to include the sustainability of the product and whether it is healthy.o It is necessary to find ways of action to have a marketing of sustainable products, without 'Green Washing' and that respect permaculture.o Need to explore the power of consumers in greater depth.o Take into account diversity and different cultures, claim local diversity.[1678]

Consumer education is a key step, also raising awareness about the power of consumers for social transformation.[1679]

Need to promote a culture of responsible consumption in more vulnerable sectors: Importance of consumer nutrition education, responsible purchase education, purchase planning and food preference.* Promotion of healthy lifestyles and physical activity in schools with the support of public policies.*[1680]

This education must be given from a young age so that they become aware of the whole production process up to the finished product offered to the consumer. You can for example link between city youth and rural youth, to create an enabling environment and stimulate inclusive, sustainable and just practices. Youngsters are the ones who can promote the new norms. It would help if people knew the true cost, e.g. through an application or innovative labelling. E.g. a climate change stamp on food, helping consumers to lower their GHG emissions.[1681]

Consumer education: transparency is key Educating consumers about what a true price is, e.g. via an application, building your supermarket around sustainable products, ensuring transparency about the product's origins and what happens to the price increase, helping consumers make the right choice. Consumer education is very powerful because we are all consumers. Consumers also make policies and sit in boardrooms. Yet, this alone is not enough: some consumers cannot afford it or have other things on their minds while shopping.[1682]

[1676] 359:10 p 6 in 403_June_10_21_ESCAP_Multi

[1677] 361:26 p 6 in 405_June_10_21_NCD Alliance

[1678] 513:13 ¶ 264 – 267 in 090a_May_29_21_Theunissen D_Eng

[1679] 513:14 ¶ 270 – 280 in 090a_May_29_21_Theunissen D_Eng

[1680] 515:12 ¶ 286 – 289 in 094a_June_09_21_Luchetti T_Eng

[1681] 364:9 p 6 in 415_June_16_21_van Schoonhoven M

[1682] 364:19 p 8 in 415_June_16_21_van Schoonhoven M

Educating consumers on the origins of their food. In general, people have no idea what the cost of their food is. We need to educate people about where their food comes from. There is a big role for schools and education. We need to educate people from all sorts of backgrounds and age groups.[1683]

We need education campaigns and consumer awareness about external costs. Inform about the impact on people's lives and the planet during the purchase of a product.[1684]

Consumer education: transparency through labels Labels, an ethical purchase label could have an effect, it could lead the consumer to orientate himself towards the product. Generally, labels work quite well.[1685]

Consumers' education is important in order to build trust around new varieties thanks, among others, to traceability systems;[1686]

Information and dialogue with legislators, policy makers on the science behind latest breeding methods, educating farmers with better extension services and educating consumers to give them a better choice on what to buy.[1687]

It was highlighted the need of promoting a consumer ethic that links individual choices to the well-being of the community and the food diversification leverage the synergies between biological, economic, social and cultural diversity. The need of a paradigm shift was highlighted in which food needs to be considered a right and not just a "commodity", and as it was pointed out a green transition cannot exist without a social equity.[1688]

It was pointed out that the transformation of food systems needs to take place by acting on both supply and demand with an integrated approach on the food environment to influence consumer choices through a process known as "soft power", i.e. education and positive examples of best practices and lessons learned.[1689]

In the synthesis of the dialogue "Local Action, Global Connection", the food transition was highlighted as an expression of a diversified, territorialized and responsible production and consumption system. It was pointed out the need that this transition takes place through: promotion of demand through a local vision of food sovereignty; landscape protection with agro-ecological production models; affirmation of the centrality of family farming; strengthening short supply chains and local markets; promotion of technological and social innovation to enhance local traditions; development of food education programs; enhancement of the role of networks, cities and public policies.[1690]

Business leadership toward the food systems' transformation was mentioned as a means to strengthen public-private partnerships linked to the adoption of technologies by producers

[1683] 364:27 p 9 in 415_June_16_21_van Schoonhoven M

[1684] 364:34 p 10 in 415_June_16_21_van Schoonhoven M

[1685] 364:38 p 11 in 415_June_16_21_van Schoonhoven M

[1686] 369:21 p 6 in 413_June_15_21_WFO_ISF

[1687] 369:31 p 7 in 413_June_15_21_WFO_ISF

[1688] 386:15 p 6 in 429_July_05_21-CIHEAM Bari

[1689] 386:19 p 7 in 429_July_05_21-CIHEAM Bari

[1690] 386:27 p 8 in 429_July_05_21-CIHEAM Bari

and industries, the role of retailers in consumer education, and the potential of joint initiatives involving distinct stakeholders aimed at mitigating food loss and food waste, and increasing access to healthy foods.[1691]

Finally, proper communication to internal and external consumers of products obtained from the Brazilian socio-biodiversity as the result of sustainable practices is an important challenge.[1692]

A low percentage of consumers read food product labels. Health and sustainability must be analyzed together, as such this information should also be in labels. The private sector should have a role in encouraging consumers to read and understand labels, in addition to disseminating information on how to choose and prepare different foods, highlight aesthetic issues, redesign leftovers from meals, fully enjoy the food and consider the recommended portion per person. It is important to encourage the consumption of unconventional food plants (PANCs) and engage the industry in the development of these new products.[1693]

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…scale up consumer education to strengthen sustainable consumption….[1696]

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Increase public awareness in terms of the sustainable food system a. single SMEs are not able to change consumer awareness on their own b. Promote food education.[1698]

b. Consumers in China are often hesitant towards products from SMEs, and when it comes to food and agri-products, we are extremely price-sensitive. Good Food can be expensive,

[1691] 389:22 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[1692] 389:30 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[1693] 389:57 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[1694] 389:90 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[1695] 389:104 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[1696] 389:145 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[1697] 389:151 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[1698] 393:21 p 7 in 435_June_08_21_FAO_ICC_UNFSS

and we need to better guide them to make that justification. We need to keep educating the public, make sure the government is on board as well from kids to senior people.[1699]

Regulations on product advertisement.[1700]

Use of Front pack labeling system on food products. Adopting behavioral change communication in advocacy. Leveraging on the mass media as a means of education.[1701]

Adopting behavioural change communication is imminent for sustainability.[1702]

At the same time, it was discussed that influential stakeholders are not explaining to consumers what is happening in agriculture, from the issues such as monocultures to the opportunities offered by agtech and genetic engineering. More needs to be done to explain the potential benefits of agricultural innovation to consumers and not engaging with new and innovative food systems ideas is a missed opportunity. There is a need to start explaining general food systems trends, the "big picture", to consumers and engage with them more on the topic of sustainability to reduce information asymmetry and polarization. There is also a will to motivate this communication. Retailers, food distributors, and the hospitality industry have a voice and want to get their messaging right as they have a financial stake in consumer trust - loyal consumers make sure these industries are resilient to current and future food systems shocks such as COVID-19.[1703]

Food Systems Messaging It is important to find the right people to deliver private sector food systems messages. Identifying the voices people want to hear - farmers from local communities, markets, etc. - and amplifying their messages will ensure that the messages are being heard by the general public, as trust in these food systems actors is high. There was also a call for producers to get more involved in consumer-facing communication to combat misinformation and promote transparency along the food supply chain. Additionally, the content of food systems messages to the general public needs to interest consumers. For example, rather than championing agtech as a private sector innovation, the messaging needs to pivot to show how agtech has benefitted farmer livelihoods. Or instead of focusing on sensational headlines on the dangers of animal protein, the focus could shift to the ingenuity and scientific progress made in the sector increasing its sustainability. As well, messaging needs to be tailored to each geography to accommodate national and regional markets and key areas of interest, as these may vary greatly. There is potential to use the digitally savvy next generation to elevate better food systems messaging, utilizing digital tools to meet future consumers "where they are" on digital platforms.[1704]

Make link to educational purpose of procurement. Can be a legal loophole, but it's also a fundamentally important opportunity to improve children's diets, and to teach them about the links between food choices and environment. Implementing interesting idea to

[1699] 393:29 p 9 in 435_June_08_21_FAO_ICC_UNFSS

[1700] 397:29 p 8 in 439_June_17_21_INAI

[1701] 397:31 p 8 in 439_June_17_21_INAI

[1702] 397:53 p 12 in 439_June_17_21_INAI

[1703] 405:15 p 8 in 446_May_27_21_Lyons_Gould

[1704] 405:23 p 10 in 446_May_27_21_Lyons_Gould

"circumvent" local procurement prohibition by integrating food education (e.g. Farmers visits) in public food tenders. Worth expanding the idea! Food education to be integrated in all school curricula (good food and good food knowledge are basic rights and skills are important.[1705]

The Ministry of Health, Institute of Public Health, the Bangladesh National Nutrition Council should increase and diversify their campaigns to increase more consumer awareness on healthy dietary habits, especially among those sections of society that can have a multiplier effect- such as school children and mothers. A good example is the Healthy Food Plate - a nutrition counselling tool for pregnant women to promote dietary diversity through a healthy and balanced diet.[1706]

Information centres (also remotely accessible) can be established to satisfy the inquiries of urban consumers about food safety, hygiene, standards, sources, and authenticity.[1707]

Share the evidence of sustainable production with consumers, help them understand that livestock production can be a solution to help increase demand for sustainable production.[1708]

Consider the consumer. Educate the consumer. We see changing perceptions on the quality of food, and we need farmers in the conversation because a gap exists.[1709]

Share a balanced message. Speak to healthy consumption rather than increased or decreased consumption (context-specific).[1710]

Consumer education is key, as it will allow consumers to: o Understand the impact of excessive consumption of animal-sourced foods. Understand how animal-sourced foods are produced to help them make choices accordingly (ultimately increasing demand for sustainable production practices).[1711]

Empowering consumers to be drivers of change.[1712]

The participants generated more new ideas across groups after the panel discussions. The "Buy One Donate One" model of some social enterprises mentioned by the participants in the discussion of Sunshine School Meal reminded the host of another case, which connected the Sunshine School Meal and Monday's "Ecological Diet Day" on group discussion. In this case, if a consumer shares a vegetarian meal on a review website, the website will donate one dollar to poverty alleviation. If this method is applied in the two cases group discussion, it will establish a connection between the public's awareness of the problems of excessive consumption and food shortages in the food system, create encouragement for the public to transform into sustainable diets, and at the same time it

[1705] 417:7 p 8 in 458_May_31_21_Madsen BB

[1706] 418:30 p 8 in 459_June_01_21_Rashid Md J

[1707] 418:47 p 11 in 459_June_01_21_Rashid Md J

[1708] 429:154 p 10 in 470_June_17_21_Burian_Multi

[1709] 429:236 p 16 in 470_June_17_21_Burian_Multi

[1710] 429:256 p 18 in 470_June_17_21_Burian_Multi

[1711] 429:257 p 18 in 470_June_17_21_Burian_Multi

[1712] 432:10 p 6 in 473_June_18_21_Sheridan S

helps poverty alleviation nutritional improvement business to dig out commercial resources.[1713]

Adapting bio technology, Increasing awareness on safe, nourished and healthy food, Promoting bio safety technology with government subsidy, Expansion of appropriate agricultural mechanization for small and marginal farmers…[1714]

Educate and create awareness about hidden environmental costs of food production to the general consumers. Address the role of media, celebrities and large corporates / brands in promoting harmful dietary habits and junk food.[1715]

Key emerging findings across the different language dialogues and visions focused on three core needs: (1) the need for the international community to create inclusive, facilitated dialogue platforms (digital and in-person), (2) the need to reduce the gap between consumers and farmers and change behaviour through awareness raising campaigns, and (3) the need to develop enabling policies and environment to deliver progress on all 17 Sustainable Development Goals (SDGs). The discussion groups also stressed the central role of appropriate responsible co-production and use of data for agriculture (production, logistics, demand, weather etc.) underpinning most proposed solutions.[1716]

Recommendation 3: there is a need to reduce the gap between consumers and farmers and to shorten value chains. Who: Governments, industry leaders/retail and merchandising, UN, Farmer organizations, consumers, civil society How: this can be achieved by influencing structural changes and food consumption patterns, such as direct trade, direct communications between the producers and consumers; segmenting the markets. Creating awareness about the food products that we consume. There is a need to enhance trust in the value chains and promote value networks rather than individual actors. At the same time, the actors of the social networks need to ensure there are mechanisms to support the most vulnerable in the communities so that their situations don't further deteriorate. It is important to consider gender as a core part of social networks: by encouraging women and young people to form associations, by involving men to encourage and enable their wives to engage in production. The palm oil industry is an example of positive steps towards these consumer-producer changes. Another example is the chocolate industry where smaller firms establish partnerships with local producers.[1717]

Improving food distribution therefore, would require: 1) heightened consumer awareness on the nutritional and environmental benefits of organic/natural products; 2) improved market demand estimates; 3) more community-shared post-harvest facilities; and 4) more organic trading posts and product consolidators to reduce delivery cost for aggregated products.[1718]

[1713] 444:29 p 13 in 027_Feb_02_21_CBCGDF_UNFSS

[1714] 450:36 p 9 in 391_May_31_21_FAO_Multi

[1715] 455:31 p 8 in 063_Mar_04_21_Nanavaty_Multi

[1716] 459:39 p 8 in 125_May_11_21_Mauderli_COSUDE

[1717] 459:58 p 12 in 125_May_11_21_Mauderli_COSUDE

[1718] 460:79 p 7 in 131_May_25_21_IISLA Ventures

The important role of the government was highlighted for increasing producers' awareness and compliance with the GI product's specification. Their role in increasing consumers' awareness was also noted, including with campaigns for public awareness and with the objective of making local people proud of their own GI product.[1719]

This vision should also be better communicated to consumers, citizens and tourists, through education activities, while reflected in the GI products' specifications.[1720]

It is also important to build awareness among national authorities on the importance of accompanying producer communities in the sustainability pathway, by showing them the interest in preserving local resources, explaining the link between the GI impact on ecosystem preservation, the food and diet diversity and the interest in economic benefits. National authorities should also be supported for creating awareness on GIs among producers and consumers and enforcing GI regulations.[1721]

Consumer education: Consumers around the world have significant leverage in influencing the direction of agricultural and food policy. If consumers demand a clean, environmentally-friendly and sustainable food system through their purchasing decisions, businesses and governments will take heed and adopt policies to encourage such a system. But consumers need to be educated on the benefits of organic. Education to consumers should focus on the benefits of organic to environmental health and human health. The more we can connect organic as a climate solution, the more compelling it is for the younger generation. We need to elevate the multi-spectrum story of organic regulation and oversight, and use that story to educate consumers about the trust and integrity behind the organic seal. While there is confusion over competing label claims, this is an opportunity to educate consumers on all the benefits of supporting organic. Consumers want accountability and transparency in their food, and being honest and accountable are the main objectives of everyone under the organic umbrella.[1722]

Investment in ways that consumers receive information that helps them with their choices and helps them understand the way healthy diets and sustainability can be built. The panelists argue that education at all levels is key. Panelists emphasized the importance of knowledge that is held by and shared within Indigenous communities, recommending that a focus is put on intergenerational knowledge and the knowledge transfer that needs to occur from the elders to the youth. A next step identified would be investment in ways that consumers receive information that helps them with their choices and helps them understand the way healthy diets and sustainability can be built.[1723]

Some participants argued that consumer demand promotes the uptake of regenerative farming while others emphasized that there is generally a limited understanding of the

[1719] 462:20 p 8 in 133_May_27_21_CIRAD_Multi

[1720] 462:24 p 10 in 133_May_27_21_CIRAD_Multi

[1721] 462:43 p 12 in 133_May_27_21_CIRAD_Multi

[1722] 468:52 p 7 in 219_May_10_21_OTA

[1723] 472:14 p 7 in 241_May_19_21_IFAD_Food Tank_Multi

topic amongst consumers. However, all agreed that more education is needed to help the public understand the impacts of their purchasing decisions.[1724]

Access to safe and nutritious food Better education of consumers; monocultures do not necessarily produce more nutritious food; eliminate waste in consumption; water and food must be considered basic human rights.[1725]

Consumers chose sustainably produced food Promote diet diversity at all levels of society including in schools; there is a lot of mis-information about health foods; learn to cook and grow local and indigenous foods; farmers offer fresh foods to food banks.[1726]

Also, by learning from the other elements in the food system, we can raise awareness of how one's own behaviour can be influential.[1727]

The education and cultural values shared with children and all consumers empowers them to make healthy food choices for them, the planet, and for all members of society.[1728]

Any platform through which people can communicate, must bring voices from the ground to an obviate restrictive hierarchies.[1729]

Additionally, there is a need to focus on education. Education was a top priority among participants throughout all the actions tracks. Incorporating more hands-on learning activities throughout the lifespan was encouraged through school and community gardens.[1730]

Participants mentioned the need to better understand all sectors of the food systems and the role stakeholders can have on supporting each sector.[1731]

While making these shifts, it's important to promote education within the community on native plants and the benefits of growing or purchasing local produce.[1732]

More effective communication to the general public (consumers) is also necessary for them to understand the use of technologies in agriculture and the science that demonstrates their safe use.[1733]

Consumers must understand the conditions around food production in Latin America Today consumers are more and better informed, and prefer to purchase food produced with certified socio-environmental standards, for this reason it is necessary to sensitize

[1724] 472:18 p 8 in 241_May_19_21_IFAD_Food Tank_Multi

[1725] 476:5 p 7 in 264_May_06_21_Arrell Food_Multi

[1726] 476:6 p 7 in 264_May_06_21_Arrell Food_Multi

[1727] 486:40 p 9 in 291_May_21_21_Polman_Prabha

[1728] 486:62 p 12 in 291_May_21_21_Polman_Prabha

[1729] 486:77 p 13 in 291_May_21_21_Polman_Prabha

[1730] 487:17 p 6 in 293_May_22_21_City of San Antonio

[1731] 487:31 p 8 in 293_May_22_21_City of San Antonio

[1732] 487:32 p 8 in 293_May_22_21_City of San Antonio

[1733] 491:42 p 8 in 301_May_27_21_CropLife Latin America

them so that they can dimension food production in all its complexity, especially the conditions imposed by tropical climates.[1734]

Finally, it is important for consumers to appreciate what SMEs are doing, particularly as they make quality improvements. They should be educated to accept higher prices for better quality products.[1735]

Invest heavily in education about how food is produced, the quality of the food available in our market, and what consuming different types of food does to us as consumers but also to others in the system.[1736]

For the above, education and communication play a very important role in re-teaching people to consume and produce in a healthy way, change the cultural perception of overvaluing foreign products, fried foods, highly processed products and rather promoting crops. healthy by publicizing their history, nutrition and presenting them with attractive packaging.[1737]

Promotion of projects to raise awareness of products that have a healthy and healthy diet. Information and educate consumers.[1738]

Increased consumer awareness regarding their food choices.[1739]

Dedicated policy/private support to increase awareness and to connect consumers to food; strong food and nutrition policies.[1740]

The plan includes a package of interventions in agriculture (i.e., incentives for agroecology and small farmers, food loss, public procurement, regulation of glyphosate), health (i.e., targeting children's first 1000 days, revised dietary guidelines, public awareness campaigns), food environments (i.e., taxing unhealthy processed foods, front-of-pack warning labels, food advertising restrictions), and school environments (i.e., space, curricula, and nutrition standards).[1741]

Consumer voice and needs with the producers point of view Food literacy as a tool for mindset shifts in every part of the food chain (teaching the value of good food and impacts)[1742]

EDUCATION IS KEY to bridging inclusivity and social equity across all cultures. EDUCATION needs to be democratised: accessible and recognized by all class systems to

[1734] 491:48 p 9 in 301_May_27_21_CropLife Latin America

[1735] 494:19 p 6 in 308_June_09_21_FAO_Pinduoduo_Multi

[1736] 494:20 p 7 in 308_June_09_21_FAO_Pinduoduo_Multi

[1737] 496:14 p 6 in 312_June_15_21_FAO_ICC_ Multi

[1738] 496:27 p 7 in 312_June_15_21_FAO_ICC_ Multi

[1739] 497:20 p 6 in 314_June_16_21_ICC_US Farmers_Multi

[1740] 497:21 p 6 in 314_June_16_21_ICC_US Farmers_Multi

[1741] 501:3 p 8 in 397_June_04_21_WHO_Multi

[1742] 504:21 p 6 in 400_June_09_21_Viera_Pollmeier

ensure adoption and a shift in behaviors. It should also be responsive to the diverse communities and represent food customs and heritage.[1743]

- acknowledging food ingredients and their virtues. Create awareness within the consumers, educate young minds at school, professionals at hospitality, producers etc., on traditional methods of preservation and that throwing away parts of ingredients that are perfectly edible is throwing away energy (water, work, light, effort etc.).[1744]

- A chef in its restaurant can be a platform to educate and bring awareness to the consumer.[1745]

Promote the participation of consumer organizations to strengthen education and access to information on healthy eating.[1746]

While the availability of nutritious food is a key element, participants agreed that consumer awareness, education, and choice are equally important. As has been seen with COVID-19 vaccines, just because a product or service is available and proven effective does not mean that every consumer will take advantage of it. Educating the public on how all foods can be made more sustainably must be a priority addressed by the FSS. Embracing animal agriculture's potential and amplifying the cutting-edge work taking place will also help attract brilliant and inspired minds into the ¦eld of agriculture. Discussions about food choice and any attempts to make recommendations also need to be considerate of cultural relevance, religious beliefs, and other familial reasons for why people eat what they do.[1747]

Ensuring sufficient awareness, understanding, and positive attention to these advances is critical to incentivizing stakeholders to continue to invest in these practices and to increase their efforts. Efficiency and productivity must be encouraged and celebrated (no other sector denigrates efficiency; for example, fuel-efficient cars pollute less and are encouraged), and there must also be consideration of farmers' interests in being good stewards and protecting economic viability.[1748]

The meat industry needs to improve its image: Despite the existence of a wide variety of jobs in a range of environments, many people outside the sector are only aware of a narrow selection of roles, usually limited to farming and butchery. These preconceptions are compounded by an increasingly negative dialogue around the environmental and health impacts of meat production. Examples of best practice within businesses include engaging with local communities, creating internships and job placements, showcasing female role models on literature and advertising and using gender-neutral language

[1743] 504:25 p 6 in 400_June_09_21_Viera_Pollmeier

[1744] 504:54 p 9 in 400_June_09_21_Viera_Pollmeier

[1745] 504:71 p 11 in 400_June_09_21_Viera_Pollmeier

[1746] 3:8 p 8 in 099_Mar_31_21_FAO_IFPRI

[1747] 4:13 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

[1748] 4:20 p 10 in 104_Apr_8_21_Animal Agriculture Alliance

during recruitment. Initiatives such as MBW's One to Watch prize help showcase female talent in the sector and make role models more visible.[1749]

The participants noted: Educating consumers should be a priority: Improving consumer education around healthy, sustainable diets could be a genuine game-changer in terms of the shift to sustainable consumption patterns.[1750]

Consumers may expect "all natural" products, though such programs can be hard to implement; or they may want year-round crops, which are a challenge in times of water shortage or increased pest pressures. This also raises the question of North America's respect for and understanding of food – which is cheaper here than in most places on Earth. Does the price we're willing to pay for our food reflect the value we place on our environment? It's a question ripe for a national and global dialogue.[1751]

Participants in the Wellbeing group agreed that improved consumer awareness and knowledge on healthy and sustainable food is the key to support the transformation of consumption pattern which will lead to a healthy and productive life, particularly for the future generation.[1752]

Therefore, government and relevant stakeholders need to develop and strengthen programs to improve knowledge and access to quality food, for the poor and marginalized groups.[1753]

Other issues discussed were related to consumer awareness of the diversity of food sources in Indonesia so that they should not depend on only certain food products to cover their nutrition needs.[1754]

Overall the UK beef industry needs to develop an industry and production systems that we are proud of. A clear narrative of why people can continue to eat beef, for example, efficient beef production that is socially, environmental and economic sustainable needs to be developed. There is a need to further highlight the benefits for human nutrition. The role of grass, forage and co-products (and lack of soya) within beef supply chains needs to be highlighted. All members of the supply chain have a responsibility to engage with consumers. This is alongside a focus on consistent products to consumers keep choosing beef.[1755]

We need to scale up indigenous knowledge and promote generational knowledge transfer that is rapidly dying out due to the pressures of food security and urban rural migration through adequate collaboration and partnerships with stakeholders at the national, state, local government levels, civil society organizations and the private sector.[1756]

[1749] 6:11 p 8 in 166_Apr_14_21_Meat Business Women

[1750] 6:13 p 9 in 166_Apr_14_21_Meat Business Women

[1751] 8:34 p 12 in 169_Apr_6_21_Shea E

[1752] 10:1 p 7 in 181_Apr_8_21_Miranda

[1753] 10:11 p 10 in 181_Apr_8_21_Miranda

[1754] 10:12 p 10 in 181_Apr_8_21_Miranda

[1755] 11:2 p 6 in 184_Apr_14_21_Genever_Multi

[1756] 12:2 p 7 in 192_Apr_19_21_Okafor_A

Create interest in traditional vegetables through information campaigns emphasizing taste, cultural value and ease of preparation as well as nutritional, health and environmental benefits.[1757]

Use social media marketing for traditional vegetables.[1758]

Educating the public through popular media like reality cooking shows on television, soap operas and other forms of entertainment are proven to have impact and can bring about changes in behaviour and attitudes because they are enjoyable and restore pride in local cuisine. Communication campaigns including social campaigns, are needed to counteract the fast food marketing with promotion of fresh and locally produced food that is properly labelled.[1759]

Sustained advocacy for the preservation of indigenous knowledge around food is very important and should be done as a global effort of island communities.[1760]

Education – understood in its broadest sense and including a diversity of people. Firstly, there were calls for food literacy, including cookery skills, to be developed among young people. Secondly, it was felt that knowledge about the benefits of a healthy, nutrient-rich, local diet was needed in the wider population in order to encourage a transition towards it. The links between agricultural production systems (such as, organic or grass-fed) and nutrient density in food products also need to be clearer.[1761]

Education and engagement with people were seen to be important, including information about the importance of local and seasonal food for human health, the environment, local economies and communities.[1762]

Participants expressed undisputed consensus regarding the need for clarity in the information provided to consumers. Although the existence of standards regarding safety or low environmental impact help to encourage a transition to healthier and more sustainable diets, it is not always appreciated by consumers. Sometimes, in fact, the existence of too many labels such as environmental, nutritional, and health claims can be misleading and confusing. In addition, it is worth noting that the existence of different legislative frameworks in different countries can be a barrier for producers to market their goods.[1763]

The consensus was that the government's role should involve providing information and awareness to consumers while also implementing behaviour change interventions such as removing sugary foods from checkout counters and promoting indigenous foods and kitchen gardens in schools. Government schemes and systems that are already in place,

[1757] 16:12 p 8 in 251_Jan_25_21_World Vegetable Center

[1758] 16:16 p 8 in 251_Jan_25_21_World Vegetable Center

[1759] 19:15 p 8 in 115_Apr_24_21_Foronda_Multi

[1760] 19:23 p 8 in 115_Apr_24_21_Foronda_Multi

[1761] 20:1 p 6 in 116_Apr_21_21_Hein JR

[1762] 20:13 p 8 in 116_Apr_21_21_Hein JR

[1763] 24:7 p 9 in 323_Apr_28_21_Giuliodori A

such as mid-day meals and Anganwadis, can be used to facilitate sustainable consumption at the local level.[1764]

To increase demand and consumption of nutritious food, the discussants recommended measures such as awareness campaigns, decentralizing procurement and distribution under the Public Distribution System (PDS), strengthening local markets (such as mandis) for farm produce and ensuring cooked, healthy meals to children under the Anganwadi and Mid-Day Meal programmes.[1765]

Educating consumers from a young age about nutrition and food systems is key.[1766]

Enhance marketing strategies (Identification of food groups for vulnerable groups).[1767]

Raise awareness on nutrition and promote the education on nutrition.[1768]

Raise awareness, educate and empower consumers on the 'value' of food.[1769]

Water and energy efficiency systems need to be more widely deployed in support of the food system. There is need for comprehensive educational reform to enhance an appreciation of local food, locally grown and processed and marketing local food through festivals, fairs, school programs.[1770]

Create regional food and agricultural festivals in order to heighten the awareness, and thus the value, of our local products and the diversity of these products. We need to become primary producers of our biodiversity and seek to go up the value chain. There needs to be regional sensitisation to the value of biodiversity.[1771]

Propose a World Nutrition Day. Increase consumer awareness and motivate and enable them to make good and healthy choices through social media, training and educational workshops, and providing offers on health products. Raise awareness among media workers of the importance of healthy food. Raise awareness among media workers of importance of healthy food and building on consumers' interests and perceptions of nutritional risks to change their food behavior. Set up appropriate educational programs, courses and group activities targeting children and youth to changing consumer behavior, and use social media to achieve this goal.[1772]

Enhance the role of health institutions in raising consumers 'awareness of the need to change their unhealthy. Enhance food integration departments, where each department

[1764] 26:12 p 8 in 023_Jan_29_21_Bharat K S

[1765] 26:20 p 7 in 023_Jan_29_21_Bharat K S

[1766] 28:13 p 7 in 064_Mar_4_21_Farming First

[1767] 30:4 p 6 in 071_Mar_11_21_ESCWA_FAO

[1768] 30:9 p 6 in 071_Mar_11_21_ESCWA_FAO

[1769] 34:30 p 9 in 089_Mar_22_21_Gee S

[1770] 35:61 p 9 in 095_Mar_27_21_Chinapoo C_Multi

[1771] 35:72 p 10 in 095_Mar_27_21_Chinapoo C_Multi

[1772] 36:27 p 8 in 096_Mar_29_21_ESCWA

coordinate among its members to address the quantitative or qualitative food shortage under the supervision of the United Nations as technical support.[1773]

Encourage self-production and educating consumers about the importance of supporting local products. Improving practical education on agriculture in communities, homes and buildings so that everyone can produce food.[1774]

Reduction in malnutrition and hidden hunger can be achieved through appropriate nutrition education; mandatory positioning of nutritionists or nutrition practitioners in the primary healthcare systems and other levels of health institutions; improved agricultural extension services; and the intentional re-orientation on socio-cultural issues toward the consumption of rich diversified diets.[1775]

Increase consumer knowledge about where their food comes from and how, to incentivize more direct, local purchases and sustainable consumption habits. Proposed methods: Educational campaigns/consumer marketing campaigns to improve perception of the value of food and farm workers to the community at large.[1776]

National public educational campaigns can help inform consumer choices, by explaining the vital role of farmers and food service workers in the web of food systems, elevating their profession and creating more social capital to support their role in community food and health. Education and empowerment for food and farm workers funded by the food industry, government, or public campaigns can shift food service toward supporting environmental and public health goals.[1777]

Target primary & secondary school children to buy-into the importance of food production / food security. Also public re above note. Address manner in which Agriculture is taught in schools / find new, innovative formation dissemination methods.[1778]

EMPOWER CONSUMERS TO MAKE INFORMED, HEALTHY, SAFE AND SUSTAINABLE FOOD CHOICES. An empowered society is a society that knows, is willing and able to make a change. There is a change of habit to make a society empowered. Lack of education regarding food is also the main cause because the average person who gets sufficient education tends to be more aware of this problem. The government is also aware of this by launching the Healthy Community Movement. Empowering consumers to make informed, healthy, safe and sustainable food choices can start with product branding, to create healthy food, especially sustainable local production, it is necessary to educate producers who are adapted to the local socio-culture about the importance of transparency and low emission food production.[1779]

[1773] 36:30 p 8 in 096_Mar_29_21_ESCWA

[1774] 36:43 p 10 in 096_Mar_29_21_ESCWA

[1775] 44:6 p 6 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[1776] 49:10 p 6 in 086_Mar_20_21_Rosatan B

[1777] 49:25 p 8 in 086_Mar_20_21_Rosatan B

[1778] 52:31 p 7 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[1779] 57:12 p 6 in 008_Dec_19_20_Niode AK

Providers of facilities / platforms are needed to enable local communities to access healthy and sustainable food items, such as bulk stores, recycling stores, and uglyfood. Also important to provide facilities for communities to purchase as well as self educate about environmentally friendly products.[1780]

Campaign to create awareness and encouraging consumption of healthy food. This is likely to create demand and increase capacity utilization.[1781]

Communicate the message of the urgent need to reduce food waste at all levels.[1782]

Education programs for consuming healthy food, saving food, and reducing consumption of unplanned food.[1783]

A change in consumption and dietary habits is required to enable food security based on local agriculture, a reduction in animal food consumption and food waste. We need to strengthen the connection between people and their environment and the ability of citizens to know the sources of the food they consume. Bring the population closer to food sources and producers, and producers to their consumers.[1784]

Education: consumers must be equipped with knowledge on how to prepare healthy plant-based foods.[1785]

Education related to food is fundamental for developing new healthier food habits and practices. Rethinking educational strategies is necessary: Move on from initiatives focused on food guidance, with the use of guides or graphic materials, to developing holistic, experiential, and fun educational processes. Move on from strategies with a negative focus (solving problems such as obesity) to strategies with a positive focus (promoting a sustainable lifestyle, fostering creativity in the kitchen). "Close the circle" of educational strategies by working with adults as well as children, adolescents, and teachers. Develop quick interactions in the design of educational initiatives and strategies, with the participation of citizens, in order to learn what does and doesn't work.[1786]

Establish a network of community health promoters who conduct nutritional oversight and develop educational and recreational activities in the communities and precincts of Mérida. Utilize social networks, new technologies, and marketing strategies to communicate the benefits of a good diet, promote a healthy lifestyle, and conscious eating. Develop explanations about the nutritional benefits of local foods and the different ways of preparing them. Better communicate the advantages of sustainably produced food. Conduct guided field trips in order to know producers in the region and their food production practices. Conduct guided field trips in order to know the work of organizations dedicated to promoting the reduction of food loss and waste. Proposals for

[1780] 57:14 p 6 in 008_Dec_19_20_Niode AK

[1781] 63:44 p 10 in 037_Feb_12_21_Food Systems for the Future_Multi

[1782] 64:30 p 7 in 041_Feb_17_21_Adler D

[1783] 64:67 p 11 in 041_Feb_17_21_Adler D

[1784] 64:94 p 13 in 041_Feb_17_21_Adler D

[1785] 66:69 p 13 in 052_Feb_25_21_EUFIC

[1786] 75:7 ¶ 47 – 51 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

promoting access to fresh and healthy food for everyone close to home: Promote the establishment of gardens in the city. Foster collaborative and community-supported networks among neighbors. Promote a network of markets for supplying the city's "food deserts". Establish community kitchens with nutritional counseling for workers who must travel long distances. Explore new strategies for promoting access to fresh and healthy foods: swap plastic waste for food.[1787]

Education is essential to raising society's awareness about the economic, social, and environmental implications of our food decisions and for promoting a cultural change toward eating more responsibly and sustainably.[1788]

During the first topic discussion relative to ensuring nutritious diet for all, the importance to promote and invest in high quality infrastructure for healthy food distribution, reduce the number of intermediaries and strengthen local value chains, ensure affordability of healthy diets and raise public awareness on healthy diets among populations was highlighted.[1789]

In some countries, there is the risk of increased intake of processed food. Therefore, improved education and raising awareness on the health benefits of nutritious and fresh diets is key.[1790]

There is a lack of consumer awareness and education on the importance of healthy diets. Therefore, there is a need to promote healthier diets (e.g. starting in schools from an early age) and raise awareness about the impact of diets on health but also about the sustainability of the food systems (fostering local, seasonal products, reconnecting the consumers with the raw products, etc.). This can be done through a number of ways: First, encourage increased consumption of fruits and vegetables, wholegrain cereals, nuts and pulses, particularly locally-produced varieties. Second, promote more sustainably-produced food products/meals. It is important to create a food environment that makes it easier to choose healthy and sustainable diets. In this sense, it is crucial to increase the availability and accessibility of healthy, sustainable food options by ensuring that citizens can easily access places where a diversity of healthy food is sold. … Third, create platforms and mechanisms that bring food system stakeholders together for discussion or shared implementation of effective solutions and compliance. For example, UN Food Systems Summit or shared mandatory due diligence can be implemented in the European Union for instance. Fourth, use public procurement for public facilities serving food (e.g., school canteens, hospitals) to support the intake of healthy diets and the promotion sustainable produce. Fifth, promote healthy cooking practices with local fruits and vegetables through local authorities, (inter)national institutions and NGOs in the food and health sector so that malnutrition is addressed.[1791]

[1787] 75:8 ¶ 53 – 63 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1788] 75:15 ¶ 76 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[1789] 76:3 p 7 in 103_Apr_8_21_Carrara E_Multi

[1790] 77:13 p 8 in 108_Apr_13_21_Carrara E_Multi

[1791] 78:10 p 8 in 110_Apr_14_21_Carrara E_Multi

The proportion of plants in diet needs to be promoted but this doesn't exclude animal husbandry which has multiple roles for many households.[1792]

Education and communication regarding food systems should also be increased in developed countries so that consumers are aware of food related issues.[1793]

The majority of the participants agree that the awareness of aquatic food should be raised to increase consumption and provide job opportunity. The scientific knowledge about aquatic food should be communicated to the general public such as the health benefit and combating global food insecurity. This can be done through public figures and social media influencers. Such information should also be made aware cross-sectionally. These together will enhance the reliability and accountability of aquatic food and thus its value chain at both regional and global scales, thus, leading to encountering ongoing biased opinion against aquatic food.[1794]

The public wants more information about how to eat nutritiously, sustainably and affordably. They would be better served through ongoing education about how/where food is produced, and how a diverse food supply supports food systems sustainability from an environmental, health, social and economic perspective.[1795]

Participants also discussed the need for more engagement with consumers and younger generations, noting their understanding of cow's milk production and the unique nutrient profile dairy foods provide (compared to non-dairy, plant-based alternatives). Targeted nutrition education efforts, focused on helping consumers understand date labels (e.g., differentiating between "use by" and "best if used by"), were referenced as ways to help reduce food waste.[1796]

Participants emphasized the importance of educating the public and younger generations on how their food is produced. They felt the public doesn't fully grasp the significant investments farmers put into their work and there is little awareness about the economic reality that farmers face. The U.S. dairy community has done a great deal in terms of environmental sustainability across the supply chain (from farm gate, processing facility, transportation, retail and consumer-level), but participants encouraged the sector to continue to share with consumers what is being done and why.[1797]

Education of consumers: Participants alluded to the importance of consumers several times. This was in the context of the perceived divide between consumers and production practices as well as the challenges of conveying complex environmental initiatives to the consumer. Consumers were identified as imperative to ensuring 'sustainable consumption' because consumers drive market trends and are the buyers of the product.[1798]

[1792] 79:8 p 6 in 118_Apr_21_21_Huvio T

[1793] 79:34 p 9 in 118_Apr_21_21_Huvio T

[1794] 82:23 p 9 in 150_Apr_30_21_GANSFOIWFSN

[1795] 84:12 p 7 in 153_Apr_28_21_GCNF_Multi

[1796] 84:25 p 10 in 153_Apr_28_21_GCNF_Multi

[1797] 84:27 p 11 in 153_Apr_28_21_GCNF_Multi

[1798] 90:9 p 6 in 206_Apr_27_21_CCANCC

In addition to technology being available, knowledge needs to be accessible to producers. Lastly, consumers acceptance of science and innovation in agriculture needs to be maintained or gained.[1799]

The longer the list of ingredients, the less that consumers know what's in it. Consumers send market signals by what we purchase. There is a need for more consumer literacy and following guidance of the World Health Organization such as on salt content.[1800]

They can help connect people with the moral and compassion argument to respecting food, the planet and natural world that provides that food and ultimately changing consumption patterns. Progress can be assessed through the number of faith/indigenous leaders connected with and the number of sermons/talks given educating on food consumption behaviors.[1801]

In order to change consumption patterns there must be increased education and awareness campaigns to connect environmental destruction and climate change to food systems and human health.[1802]

The consensus position was that overall, there is a need to rebalance policies and discussions about consumption of livestock-derived foods related to local needs/context; to follow dietary recommendations on nutrition & health (avoid ultra-processed food), and ensure livestock is produced sustainably. Consumers need to make informed choices through more information, understanding, metrics, policies and incentives.[1803]

A better understanding of the relationship between livestock derived foods and balanced, diverse, holistic diets with consumption better aligned to dietary requirements and life stage (e.g. increase in women and children in first 1000 days; decrease in highly developed economies).[1804]

More robust information on nutrition and health outputs from the consumption of animal-sourced food and incentives to use this information for decisions, policy changes and education throughout societies. Invest in improving understanding of the imbalances to better target solutions and actions. Create greater awareness of the need for balance (in diets & sustainability), informing debates, and raising awareness of context in relation to livestock-derived foods.[1805]

Food should not be seen only as nutrition and energy; the cultural aspects of food also need to be considered in the future SPIs.[1806]

Market mountain food as "smart food" due to their not depending on intensive and harmful agricultural inputs. Increase consumers' awareness and understanding of the

[1799] 90:18 p 10 in 206_Apr_27_21_CCANCC

[1800] 91:20 p 6 in 217_May_6_21_Schwartz A

[1801] 92:7 p 8 in 225_May_13_21_Schwartz A

[1802] 92:16 p 10 in 225_May_13_21_Schwartz A

[1803] 93:19 p 9 in 227_May_18_21_Tarawali S

[1804] 93:21 p 9 in 227_May_18_21_Tarawali S

[1805] 93:26 p 9 in 227_May_18_21_Tarawali S

[1806] 95:2 p 6 in 252_Apri_29_21_EU Commission

importance of mountain products though narrative labels, traditional production certification and organic certification, moving from the "commodity" approach to products with a face, story and heritage.[1807]

Scale – innovation can be difficult to scale up, due to costs but also behaviour. It is hard to make people change their behaviour because of culture and habits. For this we need communication, data.[1808]

Consumers are able to make informed choices, they need to be well-educated, starting at school. Quality of the information should be transparent and science based. Access to information (my carbon footprint, my nutritional needs) will be easy and digital.[1809]

More food education, particularly about typical Mediterranean products (olive oil, grains, cheese) needed in German speaking countries.[1810]

There is need for awareness creation among households in the county, especially on the consumption of nutritious diets. Consumption patterns are mainly affected by income levels, perceptions and creating awareness through sensitisation campaigns can contribute towards shaping the right perceptions on nutrition. For farmers, sensitisation campaigns can also drive transformation towards a more sustainable agricultural production.[1811]

(a) To deepen understanding by local grassroots communities on challenges based on a food systems framework; (b) To raise awareness on food security issues, particularly brainstorming on possible solutions that are sustainable and linking elements in the food systems at different levels and sectors; (c) To share information on innovative practices that can contribute to achieving SDGs; and (d) To promote continuing dialogue and reflection for collective action and greater collaboration among different sectors.[1812]

At present, there have been some international actions to change the food system, such as providing fortified edible oils rich in vitamin A and vitamin D, increasing the range of beneficiaries of social security, exploring the most scientific agricultural production planning, encouraging private sector financing and assistance of small and medium-sized enterprises, paying attention to and guiding the needs of consumers, and the use of scientific research results.[1813]

There is no ethnic-specific nutrition education.[1814]

The world needs to be literate on Sundanese ethnofood, so that's where the plant based diet and planetary diet come in.[1815]

[1807] 98:28 p 9 in 282_May_18_21_Romeo R

[1808] 99:25 p 8 in 285_May_20_21_TFFF_Multi

[1809] 99:32 p 10 in 285_May_20_21_TFFF_Multi

[1810] 100:3 p 6 in 324_May_14_21_Guzanic J

[1811] 102:14 p 6 in 326_May_5_21_ICLEI Africa_Multi

[1812] 103:70 p 38 in 007a_Dec_18_20_NAAGD

[1813] 105:23 ¶ 20 in 176a_Mar_25_21 AGFEP

[1814] 106:13 p 7 in 004_Nov_30_21_Kustipia R

[1815] 106:16 p 7 in 004_Nov_30_21_Kustipia R

Consumers need to be better understood and their voice brought more into the debate, recognising that there are many different 'publics' with differing views. Clearer communication and messaging is needed with consumers, which will require a greater level of consensus and collaboration across the whole food system.[1816]

Consumers will need to be educated on the true cost of sustainable/welfare-friendly food, however a divergent view also emerged that consumers don't necessarily have much power to make change – they buy what is on the shelf.[1817]

It was agreed that there is significant confusion among consumers – that they are lacking robust, clear, factual information from verified sources on the topic of livestock production and that actions are needed in that respect to enhance communication with consumers.[1818]

Consumers need to be educated on the innovations used and the science behind everything to trust the farmers.[1819]

Participants came up with three concrete suggestions to break down these barriers: (i) public education, (ii) marketing and media that highlight the nutritional benefits of seaweed, and (iii) creating a centralized institution that can implement an international coordinated effort to increase knowledge and demand.[1820]

The need for advocacy, education, and promotion around the consumption of diversified food resources, including seaweed.[1821]

They also emphasized the need for governments to get involved in raising awareness around the potentials of seaweed as a carbon sink, a feed source, and a nutritious food source. Participants felt that if governments could pave the way in the awareness campaign on seaweed, then the private sector would be more successful in selling higher value seaweed products.[1822]

Promote high-quality protein foods to improve health outcomes in the first 1000 days. This can be done by improving women's access to and control over livestock by women. With the focus on women, there is much higher likelihood that this protein nutrition will also reach the rest of the family.[1823]

Public Health and nutrition education (also using local knowledge) should include educating men on the importance of adolescent, maternal and child nutrition, and also on available maternal services.[1824]

[1816] 112:16 p 6 in 074_May_18_21_O'Mara_Teagasc

[1817] 112:65 p 12 in 074_May_18_21_O'Mara_Teagasc

[1818] 112:84 p 14 in 074_May_18_21_O'Mara_Teagasc

[1819] 113:41 p 11 in 075_Mar_10_21_IFAN

[1820] 119:29 p 9 in 121_Apr_28_21_Doumeizel V

[1821] 119:47 p 13 in 121_Apr_28_21_Doumeizel V

[1822] 119:63 p 16 in 121_Apr_28_21_Doumeizel V

[1823] 120:32 p 12 in 127_May_13_21_IAFN_CWFS

[1824] 120:35 p 12 in 127_May_13_21_IAFN_CWFS

Tourism and the hospitality sector can play a positive role in making healthier diets easier to access. Policies and campaigns to promote local produce can become part of tourism promotion.[1825]

At the highest level of governance of islands, campaigns should be mounted to "eat local", "grow and gather local" and "eat healthy" within the context of indigenous wisdom and cultural heritage.[1826]

Need strong promotion among children and adults on nutrition, food safety and effects on health. Provide nutritional information about organic products. Reduce food wastage.[1827]

Need to enhance information dissemination via the social media. Educate the consumers about true cost accounting in organic production systems.[1828]

On the consumption side, there is a need to educate the public to diversify their diets and to reduce their dependence on a single major staple crop – wheat. In addition, the nutrition of the diet should also be considered.[1829]

The perceived low value of some nutritious and lower-cost foods needs to be challenged.[1830]

Problem 4 is the perception that nutritious foods are more costly when they may not be. A potential solution is public awareness campaigns with commercial knowhow.[1831]

Finally, participants also noted that consumers need to understand the value of water and how climate change may jeopardize water security. Raising awareness of consumers of the water embedded in the food they consume may encourage shifts in consumer behavior and mentality toward more sustainable food consumption patterns.[1832]

Consumer Behavior: Consumers need to understand the value of water and how climate change may jeopardize water security. Raising awareness may encourage shifts in consumer behavior and mentality toward more sustainable food consumption patterns. Policy makers should highlight and incorporate this issue across the educational system to encourage all age-groups and generations to consider food consumption's role for water security.[1833]

[1825] 121:25 p 7 in 130_May_22_21_Foronda R_Gloria C

[1826] 121:33 p 9 in 130_May_22_21_Foronda R_Gloria C

[1827] 122:2 p 6 in 135_June_08_21_Calub_Gregorio

[1828] 122:9 p 6 in 135_June_08_21_Calub_Gregorio

[1829] 127:20 p 10 in 159_Apr_21_21_Hafeez M

[1830] 131:6 p 6 in 190_Apr_16_21_Cullen N

[1831] 131:27 p 10 in 190_Apr_16_21_Cullen N

[1832] 132:15 p 6 in 193_Apr_19_21_Ringler_Kassim

[1833] 132:16 p 8 in 193_Apr_19_21_Ringler_Kassim

Shifting consumer preferences towards climate-smart foods and transforming crop cultivating ways (e.g. creating awareness about climate smartness to end-users thereby creating an economic context for farmers to produce climate smart crops/livestock).[1834]

Awareness and education are critical pieces. Each individual needs to be able to think critically in order to know how we should move forward and consume sustainably.[1835]

The speaker from GOAL Global based in Niger showed innovative methods to addressing malnutrition through mass awareness by using digital technologies to spread information. Reaching communities that were further away from the sample site.[1836]

Chefs must focus on creating strategies to deliver key information to their clients/customers in a way that suits their local reality, as this may vary from a small village in Kazakhstan to a huge hotel chain in the UK. No matter what a chefs circumstance, it was agreed that they all have a role to play to contextual the urgent message of fixing failed food systems, by striving to change: how consumers make choices about food (from sourcing, buying and variety); knowing where our food comes from (protecting livelihoods); how it impacts both people and planet; to advocating for all people to have access to affordable, good food.[1837]

Educating consumers, chefs, farmers, retailers and everyone who is a key driver of food systems around promoting a more plant based diet and sustainable living.[1838]

Consumers need to know and be reminded of what is happening. What needs to be done. What are the options to contribute, to consume, to act (they are many) and also understand that the winning game must be built, together.[1839]

In terms of community-level action, participants agreed on the need for advocating with governments and big retailers to prioritize local foods, campaigning to eliminate the use of plastics, and prioritizing education surrounding sustainable and nutritious foods at the early childhood level.[1840]

Need to have strategies to make sure there is a level playing field in terms of consumer awareness.[1841]

The objective of many brands is to establish effective communication with consumers in a positive way to better contribute to changes in diet and food systems.[1842]

Nutritional education must be contextualized / specific for the population, ideally easily understandable and accessible to all (schools, health centers, etc…) and for that laws need

[1834] 132:53 p 12 in 193_Apr_19_21_Ringler_Kassim

[1835] 135:2 p 6 in 202_Apr_24_21_Hao_H

[1836] 136:14 p 9 in 211_Apr_30_21_Chisholm N_Multi

[1837] 142:5 p 6 in 230_May_19_21_Allen K

[1838] 142:13 p 7 in 230_May_19_21_Allen K

[1839] 142:23 p 9 in 230_May_19_21_Allen K

[1840] 143:5 p 6 in 231_May_19_21_MCD

[1841] 144:16 p 7 in 232_May_20_21_Schwartz A

[1842] 145:5 p 6 in 233_May_22_21_CVS_Multi

to be created, including laws to promote companies towards social benefits and cleaner products.[1843]

Change a culture of blindness, of a blinding advertising culture of damaging foods (fried, sodas, canned) or agricultural chemicals and pesticides. A need to generate a counter-culture against the unregulated products and propaganda (like in Europe from health entities).[1844]

Advocacy and Education are essential.[1845]

The need for food systems advocate aware chefs, to incorporate into their work and time the role of an EDUCATOR. Chefs must focus on creating strategies to deliver key information to their clients/customers in a way that suits their local reality, as this may vary from a small village in Kazakhstan to a huge hotel chain in the UK. No matter what a chefs circumstance, it was agreed that they all have a role to play to contextual the urgent message of fixing failed food systems, by striving to change: how consumers make choices about food (from sourcing, buying and variety); knowing where our food comes from (protecting livelihoods); how it impacts both people and planet; to advocating for all people to have access to affordable, good food.[1846]

Education starts from home but is up to us to continue the work and really emphasise that small changes can have a big impact. The change can be as small as reimagining vegetables not as a side dish but as the star of the main meal, and highlighting lesser-known crops; or be as big as pushing plant-based meals front and centre on restaurant menus. Advocating for good food and clean eating should be our priority for the next 3 years.[1847]

Education – Education is critical to engage the SE FL community on improving food systems. Includes education of consumers about the environmental impact of diets and shelf-life, young people about careers in Food System and farmers about sustainability.[1848]

Implement sustainable nutrition education components in schools, expand composting efforts through a municipal-based pick-up and drop-off system for composting facilities.[1849]

Local government can carry out public awareness campaigns at the consumer level to encourage a movement away from impulsive to rational consumption patterns.[1850]

Importance of raising awareness / informing consumers (and SMEs!) About what healthy and sustainable food is so that they can make conscious (!) Enlightened choices, put the

[1843] 146:12 p 8 in 235_May_25_21_Gonzalez B_Multi

[1844] 146:40 p 15 in 235_May_25_21_Gonzalez B_Multi

[1845] 147:2 p 6 in 239_May_27_21_Allen K

[1846] 147:8 p 6 in 239_May_27_21_Allen K

[1847] 147:15 p 7 in 239_May_27_21_Allen K

[1848] 163:27 p 6 in 300_May_27_21_Alesso_Pommeret

[1849] 163:38 p 6 in 300_May_27_21_Alesso_Pommeret

[1850] 163:106 p 13 in 300_May_27_21_Alesso_Pommeret

consumer at the center / heart of the system food so that they push and influence SMEs to produce and transform better and better.[1851]

In addition, participants recognized that consumers must be empowered to choose traditional rather than processed foods through other means.[1852]

Consumers need to be brought back into the conversation so that they feel connected to where their food comes from.[1853]

Consumer perceptions need to be addressed head-on with more science-based communication.[1854]

Educating consumers from a young age about food systems (including farming practices, diets and nutrition) can help them be more informed into adulthood.[1855]

Farm families and consumers are key. Consumers are often unaware of good things happening on farms and are unaware of the value of quality food.[1856]

In this group, much emphasis was placed on education and the importance of bridging the knowledge gap between farmers and consumers. This begins in schools, including school canteens, and it ends in the supermarket where consumers need more information about the way of production in order to make sustainable choices.[1857]

First of all, once again, education was considered to have a key role to play. Both consumers and farmers need to be well informed about existing initiatives and regulations.[1858]

The voice of the producers with special attention to women and youth must be considered in the formulation of policies, incorporating among others e-extension services and the clientele be empowered to use these ICT platforms. Open trade needs regulation based on local supply levels.[1859]

Use consumer driven advocacy: Often industry responds to public demand or the demands of the consumer. Advocacy efforts could be used to change food consumption preferences by consumers.[1860]

Need to create awareness by both producers and consumers regarding seasonality of foods. You cannot expect to eat certain products when they are off season.[1861]

[1851] 164:28 p 10 in 304_June_02_21_FAO_Multi

[1852] 167:49 p 10 in 311_June_14_21_NCD Child

[1853] 169:22 p 7 in 327_May_18_21_CropLife

[1854] 169:28 p 9 in 327_May_18_21_CropLife

[1855] 169:29 p 9 in 327_May_18_21_CropLife

[1856] 170:68 p 14 in 328_May_19_21_Lalor_Teagasc

[1857] 171:11 p 7 in 329_May_19_21_CI_WFO

[1858] 171:13 p 8 in 329_May_19_21_CI_WFO

[1859] 173:21 p 10 in 331_May_24_21_LNFU

[1860] 177:51 p 11 in 335_May_26_21_Laar_Multi

[1861] 177:57 p 11 in 335_May_26_21_Laar_Multi

Once again, the importance of awareness and access to information was stressed, underlining the enormous power consumers have and the ability to influence both what to produce and how it should be produced.[1862]

A general consensus was reported on the importance of increasing awareness and information among consumers, who are too often victims of both political and commercial biases.[1863]

In terms of strengthening consumers' purchasing power, educating consumers about their food can help them understand the value of their food, which enables them to pay the prices of different types of food.[1864]

Access to professional information on nutrition to accompany people in using their resources for a diet that really nourishes them.[1865]

Engaging in sensitisation campaign not only to educate farmers but also to consumers is equally important as they are the one setting the demand aspect.[1866]

Investing in sensitisation campaigns to promote consumer awareness on resilient blue economy pathways as demand comes from consumers, which could be a very powerful incentive for farmers to adopt resilient practices.[1867]

Consumer demand is less for local aquaculture species; this should be changed through awareness and marketing.[1868]

Improving consumers' knowledge.[1869]

Enhanced consumer awareness of food system sustainability and healthy eating.[1870]

Nutrition education of consumers.[1871]

Reviewing how information is communicated and adapted to cultural and economic settings. This includes ensuring transparent, fit-for-purpose food safety information in geographies with and without access to digital communications. For example, using media such as radio, which is still a key source of information in certain parts of the world (especially where there is less digitization) to communicate with and educate consumers using influencing groups such as religious leaders and local celebrities.[1872]

[1862] 178:8 p 6 in 336_May_26_21_CI_WFO

[1863] 178:9 p 7 in 336_May_26_21_CI_WFO

[1864] 179:15 p 9 in 337_May_26_21_CI_WFO

[1865] 180:14 p 7 in 338_May_27_21_UNHCR

[1866] 183:67 p 12 in 341_May_28_21_Sewraj_KS

[1867] 183:104 p 16 in 341_May_28_21_Sewraj_KS

[1868] 183:108 p 16 in 341_May_28_21_Sewraj_KS

[1869] 196:6 p 6 in 354_June_07_21_NAMAC

[1870] 198:18 p 6 in 357_Apr 14_21_Harfouche S

[1871] 198:21 p 6 in 357_Apr 14_21_Harfouche S

[1872] 207:18 p 8 in 366_May_27_21_Cumbers S

Incorporating food safety into campaigns around nutrition, diet and wellbeing.[1873]

One way is to promote production and consumption of micronutrient-rich small indigenous fish. There is also need to increase nutrition awareness and improve understanding on consumption of aquatic foods to meet nutritional requirements at different stages of the life cycle for people living in different social, economic, cultural and environmental context. Promotion of nutrition-sensitive aquaculture measures can help tackle the existing challenges of malnutrition. Nutrition education should build awareness and knowledge about processing, cooking and preparation of food mixed with nutrient rich fish for feeding minor children. Production and consumption of fish based products (fish powder and fish chutney) can help meet nutritional requirements of pregnant women, lactating mothers and minor children. Fish based products should also be included in school feeding programmes. The country should develop aquatic food based dietary guidelines and make it available to all people of Bangladesh.[1874]

The primary production was in focus here, and that there needs to be more dialogue and knowledge around how food is produced. Changing diets has been in focus, but participants wanted to emphasize the ”how is it produced” rather than the ”what do we eat”.[1875]

Farmer/consumer rapprochement Bring together those who produce and those who consume, through a process of education and raising of food awareness, development of community-based tourism (especially with traditional communities).[1876]

Encourage the consumption of safe/nutritious foods.[1877]

It was concluded that there is a need for clearer regulations to prevent confusion among consumers, especially with similar products that say they are made with meat when they are not. This could support responsible consumption as well as the destruction of the myths around animal protein.[1878]

The importance of knowing how to recognize proteins and their consumption was also emphasized, thus allowing for a better understanding of the importance of protein for nutritional development in the regional population.[1879]

The livestock-meat sector faces continuous reputational crises. Intensifying proactive and positive communication is a challenge that the sector must face as a priority. The sector must transmit to society the work it carries out in matters such as caring for the environment, animal welfare or innovation, among others. It is essential that citizens have sufficient knowledge of the real contributions of Food Systems and the true attributes and values of food beyond myths, interested propaganda or false messages; therefore, truthful,

[1873] 207:19 p 8 in 366_May_27_21_Cumbers S

[1874] 208:6 p 7 in 367_May_27_21_Kachulu_Thilsted

[1875] 211:10 p 9 in 370_June_01_21_WWF Sweden

[1876] 228:32 p 10 in 222a_May_11_21_FTI_ZHI_English

[1877] 228:59 p 18 in 222a_May_11_21_FTI_ZHI_English

[1878] 235:18 p 10 in 276a_May_13_21_CCIE_English

[1879] 235:20 p 10 in 276a_May_13_21_CCIE_English

complete and updated information and communication made available to consumers and society in general must be promoted. … Communication has its own rules and the livestock-meat sector must know them thoroughly. Citizens must be known and listened to, attractive messages must be developed in order to spread their positive values, the most appropriate formats and times must be adapted for each of their audiences and the impact of their communication actions to introduce improvements must be measured.[1880]

Many members agreed that public opinion, awareness, and consumer demand will be key to establishing more sustainable aquaculture practices. To caveat this, it was also broadly agreed that shifting this awareness should be the responsibility of industry, researchers and governments - not solely on consumers to self-educate. By creating streams of reliable, science-based information both on social media and user endpoints (like supermarkets), consumers can be nudged towards the best options.[1881]

This also goes hand in hand with a dire need for greater education amongst the general population about less common but more alternative seafoods (e.g. lower trophic species) to boost market sizes for these products.[1882]

Additionally, the group highlighted the importance of alternative feed sourcing as a key factor for reducing environmental impacts. Promoting increased production of lower trophic or passive feeding species (e.g. bivalves or seaweed) through increased consumer awareness programmes or legislative incentives could shift focus away from more resource reliant fed species (e.g. finfish) and open space for 'no-input' alternatives.[1883]

The speakers also highlighted some of the elements needed to enable food systems transformation. These include the need to: foster multi-stakeholder partnerships at national and regional level to build trust and commitments based on shared understanding and inclusion; mobilize resources to implement actions at scale, through sustainable investments (public, private, blended) and other instruments such as public incentives (subsidies, taxes); harness the potential of innovation and technology, making them accessible to farmers/fishers/foresters; identify trade-offs between actions/sectors and strategies to minimize them; foster behavioural change across food systems actors through education and awareness building.[1884]

Panel 3 discussed how capacity development and awareness raising are key to the transformation of food systems, which requires deep behavioural change of both producers and consumers, respecting diversity, plurality of cultures and opinions, but at the same time trying to stick to common guiding principles.[1885]

In discussing the major barriers to implementing best practices, communication was emphasised by participants. Participants from the agricultural sector felt that the biggest barrier they have found is communicating to farmers the overall benefits of certain

[1880] 237:17 p 14 in 284a_May_19_21_INTERPORC_English

[1881] 240:2 p 6 in 319_June_30_21_Fredriksson O

[1882] 240:10 p 6 in 319_June_30_21_Fredriksson O

[1883] 240:14 p 8 in 319_June_30_21_Fredriksson O

[1884] 244:16 p 8 in 480_June_21_21_CIHEAM_Multi

[1885] 244:34 p 11 in 480_June_21_21_CIHEAM_Multi

practices. There was also reflection on the role consumers play in driving best practices, but if there is not strong consumer awareness and transparency of the impacts of certain practices it is more challenging to send a price signal to farmers to shift practice.[1886]

The other speaker expressed his view regarding the same by sharing one of his experiences with the young students from all over the world. He believes that the awareness of the origin of the food and the industrialized process it undergoes and the understanding of our connection with nature can bring a change in our awareness and we will be able to make more conscious food choices as individuals of one big family.[1887]

There is a great deal of interest to continue to figure out the dark matter of nutrition to understand all of the unknown compounds within foods, the variation of nutritional quality in different foods and their connection to different growing practices, and how to better educate not only consumers but also policy makers and the medical community around the importance of nutritious food that come from responsible growing practices.[1888]

How to educate more people around nutritional wisdom. This could be specific to individual health and dietary needs, people learning more about their bodies and being their own health advocates, guiding them through the change of mindset and confidence in what they are doing, increasing comfort around cooking healthier foods, bring in people that are good communicators. This also includes educating farmers to understand that they have the ability to do something better and deliver high quality nutrition, or other supply chain actors to recognize this and fund farmers for that work.[1889]

There are opportunities to educate consumers around food and nutrition, and the existing food in low cost grocery stores that can serve nutrition needs and access to better tasting foods.[1890]

Call for stronger unity, engagement and cooperation among stakeholders. Farmers and consumers should organize themselves, government and agencies should respect farmers rights so that there could be a foundation of lasting food systems around the world. There needs to be an improvement in consumers' knowledge about organic food. This includes community engagement activities involving research with other partners to focus on ecological research & livelihoods, engaging the communities to participate in the research themselves to better understand, better understanding so that they work towards improving what they eat, plant.[1891]

Seafood sector is not good at telling stories. Its image is not good, and huge potential exists here, including by communicating its role in relation to other food systems, and its potential as a nutritious and healthy food option - But fundamental questions like "what is seafood" need to be effectively communicated – this encompasses a huge diversity of

[1886] 245:9 p 7 in 481_June_23_21_Global Counsel

[1887] 247:9 p 8 in 483_June_24_21_Mandal_Goodman

[1888] 249:3 p 6 in 485_June_22_21_Levesque_SD

[1889] 249:19 p 9 in 485_June_22_21_Levesque_SD

[1890] 249:24 p 10 in 485_June_22_21_Levesque_SD

[1891] 250:14 p 9 in 486_June_23_21_AFA_Multi

species – over 3,000 – and each has its unique environmental footprint and nutritional value.[1892]

Conversations across the dialogue highlighted that behavioral insights can be a powerful tool to empower individuals across the food system. Traditional behavioral levers might focus on monetary short term benefits or regulation to encourage a reduction in food waste, and while these remain an important part of the solution, transformative change needs to go beyond this and truly consider and understand the attitudes, motivation, background and cultural context of individuals when looking to enable change. Through understanding this, we can better look at other levers which effectively enable behavior change. This can include using emotional appeals to drive a shift in behavior, or building a system of choice architecture to change the context in which choices are made, prompting behaviors which can reduce food waste. Likewise, ensuring individuals have information on what the desired behavior is and why it matters can help lead to lasting change, in addition to using social influences the utilize the behavior and beliefs of others to fight against food waste.[1893]

Education is needed to bring consumers closer to sustainable food production at a younger age. School curriculums need to create experiences for early learners to experience where their food is from. For low-resource regions, providing school meals could be an incentive for education.[1894]

To limit this, there is a need for increased transparency, governance and regulation in marketing/labelling so these can be trusted by consumers. The group also agreed that achieving a sustainable food system cannot rely solely on labels/marketing: it requires a multi-pronged approach from policymakers, regulators, consumer advocacy & education. These are the main solutions identified by the participants: 1. Labels are valuable tools for communicating with consumers, but these need to be transparent, regulated and governed in order to be trusted by consumers and to create meaningful impact. 2. Labels should capture social, economical and environmental sustainability metrics. 3. Labels need to be supplemented by consumer knowledge & engagement: be it through the education sector, independent research etc. 4. Small-scale farmers should be incentivised or given affordable access to sustainable certification to dismantle barriers between small-scale farmers and consumers.[1895]

Empower people through food skills and knowledge, enabling them to grow food and cook more from scratch, understand more about what they're eating, and help others to do the same (eg skills sharing between chefs).[1896]

Communication: consumers have to be aware of the sustainable initiatives being developed by the Companies and their impact. There is a transition price to be absorbed by the whole

[1892] 251:9 p 7 in 487_June_29_21_Selwyn_Multi

[1893] 253:6 p 6 in 489_June_22_21_Rare China Centre_Multi

[1894] 256:12 p 6 in 492_June_23_21_Liu JA

[1895] 256:23 p 10 in 492_June_23_21_Liu JA

[1896] 259:15 p 8 in 495_June_23_21_Forum for the Future

society, consumers will only agree to pay more for a sustainable product if the hidden benefits are communicated.[1897]

Communicate to final consumers what has been done in order to promote a more sustainable agriculture and empowerment to choose the right type of product to buy according to their environmental practices.[1898]

More consumer awareness/demand.[1899]

However, the collective actions of lots of people and changing consumer behaviour through educating them on the ocean's environmental issues and making it easier for people to live sustainably.[1900]

Well known, well-respected, of influential academics can help to raise awareness through their networks can help to amplify messages using their influence and gravitas.[1901]

Lots of knowledge has been built up and introduced to farmers, but processors, retailers and consumers have to be educated as well.[1902]

Participants looked at which stakeholders have the potential to have the largest impact on raising awareness and public support. The main groups identified were: Farmers and Food producers - they have the chance to become independent and have autonomy for the value they put into food. Next generations - young people are making these approaches mainstream, demanding more than sustainability (which, to them, is "table stakes") - it's all about regenerative and circular economy. Companies - can use their marketing power and experience to share stories and inspire consumers (who may have a hard time getting their heads around the complexity that is inherent to this topic ("they still don't understand organic and now here comes something new and different). Policymakers & Authorities - can help to validate and and add credibility - e.g. through labeling schemes. The important thing here is to allow for experimentation and change, and not to overregulate. How do we find this balance?[1903]

Develop clear targets to understand the nature of consumers, thereby changing/raising their awareness by applying behavior change approaches.[1904]

Communication and advertising: encouragement of advertising foods with added nutritional value, encouraging adoption of a healthy life style.[1905]

Support strong local food/farmers' markets and connect producers and consumers (to harness their economic and political power). Consumer information, education and

[1897] 261:28 p 6 in 497_June_24_21_Fontes_Multi

[1898] 261:77 p 11 in 497_June_24_21_Fontes_Multi

[1899] 264:84 p 13 in 500_June_26_21_Edible Issues

[1900] 267:15 p 7 in 503_June_29_21_Schnyder_Boura

[1901] 271:33 p 9 in 507_June_30_21_AKADEMYA2_FANPRAN

[1902] 273:22 p 6 in 509_June_30_21_FFA_Nestlé

[1903] 273:91 p 13 in 509_June_30_21_FFA_Nestlé

[1904] 277:47 p 9 in 513_July_01_21_Weise S

[1905] 297:31 p 8 in 533_July_07_21_Gazit GS

communication is essential. Scale up, not through corporatization or industrialization, but grow through aggregation with the support of appropriate local platforms controlled by local actors (e.g., food hubs) and local alliances.[1906]

Finally, the government should educate consumers on what constitutes nutritious food while also ensuring that such food is readily available and affordable.[1907]

Awareness: educate consumers to choose certified products (that meet principles, criteria, and indicators); informed and science-based education, instead of biased information and/or cherry-picked messages, especially for youth; integrate in school syllabus issues on diets and sustainability, adapted to local contexts.[1908]

Raise consumer awareness about buying in local markets and/or participating in producer-consumer or consumer-only cooperatives, to be able to gain access to sustainable food more cheaply (favoring value chains without intermediaries).[1909]

Apply more detailed traceability and make this information (e.g., origin) available to the consumer at all points of sale or consumption (including restaurants).[1910]

In many countries in Africa, malnutrition and obesity lives side by side. This is a direct result of urbanisation and the glamorisation of fast food. In these countries, effort needs to be made to eliminate the stigma around growing your own food so that is no longer seen as poverty but community initiatives could come together to create urban gardens and remove the stigma. Chefs can play a major role in removing this stigma and teaching people how to cook with indigenous varieties of crops.[1911]

Power needs to be taken away from the pharmaceutical industry in controlling the approach to public health and placed back into the hands of the individual. We need to move from disease care to preventive health care. Nutritionists should be available for appointments at GP surgeries and new parents should see a nutritionist as part of their baby care lessons. People do not realise the power that they do have over their own health and the earlier food literacy is taught, the earlier connection to nature is realised, the more we will have populations that are able to take care of their own health.[1912]

Emphasis should be placed on the importance of community in this. Educating parents and children is important but if building healthy lifestyle and positive food habits can be embedded into a community, everyone benefits. E.g there is a school feeding program in Benin where the community created the school garden and tends to the school garden, growing the food which feeds the school children and has food left over to go to the community living in proximity to the school. The parents therefore know exactly what their

[1906] 299:40 p 9 in 535_July_08_UNESCO Chair on Food

[1907] 300:20 p 6 in 536_July_08_21_Musabyimana JC

[1908] 301:9 p 6 in 537_July_08_21_ANP_WWF

[1909] 301:15 p 7 in 537_July_08_21_ANP_WWF

[1910] 301:51 p 9 in 537_July_08_21_ANP_WWF

[1911] 308:11 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1912] 308:19 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

children are eating and the close proximity of the growing food means that the meals are fresh and nutritious.[1913]

Promote nutrient-dense, whole-food diets underpinned by diversified food production adapted to different microclimates and sociocultural contexts. Create positive food environments that provide equitable access, healthy dietary guidance, controls on food advertising and marketing especially to children, a precautionary approach to new products, and special consideration for vulnerable groups and women's role as agents of change.[1914]

Establish supporting schemes for slow food systems, with a view to encouraging local producers to introduce sustainable systems of production, economize the local area, and encourage citizens to consume locally-produced food items.[1915]

Educating consumers about making healthy choices on the type and quantity of food they consume.[1916]

An adaptation of the legal framework is necessary to make food donations easier and riskless for businesses so they are not liable if they donate food and someone falls ill accidentally. On the other hand, people need the education to distinguish good, edible food from food that has gone bad without looking at a best before date, but by using their own senses. Usually, this starts in families already. Educational institutions, e.g. schools can contribute here. The adaptation of the legal framework should also include the legalization of dumpster diving.[1917]

The nose to tail trend contributes to food waste reduction. By changing the definition of what people regard as inedible food loss vs. food waste that they could have saved, we can feed more people with less food. In this area, cultural exchange is extremely valuable. A participant mentioned that in South East Asia for example, it is much more common to consume all parts of the animal, including the feet of chicken for example. Other participants mentioned that they started to use the green of carrots or the stem of broccoli for example. This is holistically sustainable, as it contributes to healthier nutrition with more fibers and vitamins, helps people to save money and also creates more business opportunities: If people in the DACH region get more accustomed to eating "more" parts of vegetables again, restaurants can design new, creative dishes and also startups find creative opportunities to market food that has been regarded as food loss in former times. Cooking classes, also in schools, can greatly support everyone in their journey to become a more reflective cook and not to regard a broccoli stem as "waste" because it has always been done that way in the past.[1918]

Efforts at public persuasion must be informed by understanding of the factors that drive food choices, which include pre-existing beliefs, social circles, local environmental and

[1913] 308:28 p 9 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[1914] 309:20 p 7 in 545_July_13_21_Mbenya R

[1915] 310:28 p 8 in 546_July_13_21_INDEP

[1916] 310:33 p 9 in 546_July_13_21_INDEP

[1917] 311:5 p 6 in 547_July_14_21_Heilinger K

[1918] 311:8 p 6 in 547_July_14_21_Heilinger K

cultural factors, affordability, convenience and taste preferences that can stem from exposures from an early age (starting in the womb).[1919]

Unhealthy diets are socially acceptable and generally unquestioned. Proposed solution: Part of the communication around the guidelines needs to de-normalise that way the majority of the population are eating. A key policy lever is limiting TV and digital marketing of unhealthy food to children (as Chile has done).[1920]

Communication and messaging has a crucial role in supporting dietary guidelines implementation. Among key ideas, participants emphasised: Messaging and supporting programmes should reflect what we know about behaviour change; for example encouraging people to make small but meaningful changes such as one plant-based meal a day ensures that the shift is perceived as achievable and worth trying. Efforts tailored to specific audiences' needs are also key. There are some prevalent misconceptions around meat consumption being fundamental to masculinity and the Australian way: it is essential to challenge this. Social marketing is a key opportunity and increasingly important to help popularise evidence-based messaging in the face of media noise and efforts by vested interests to sow confusion and unscientific messaging. Micro-influencers, celebrities, chefs and athletes can help change social norms and 'speak to' diverse audiences.[1921]

The disruption of value chains due to COVID-19 mobility restrictions have underscored the challenges of bringing produce to market. A number of short-term solutions were identified, including emergency transport interventions, but there was consensus that more sustainable solutions are needed to shorten the value chain and establish the necessary storage and processing facilities, coupled with marketing initiatives to promote local production and consumption.[1922]

The Dialogue also identified the challenge of communicating the interdependence of all food system players in a way that is easy to understand. At the consumer level, sustainable food businesses need to make it convenient and easy for eaters to think about eating not only for human health but planetary health. New labels, for example, can frame carbon footprints similar to calories on food packaging. Companies must find simple ways to show that their products are part of many solutions to a large, interconnected problem.[1923]

Other participants underscored the need to inform citizens on the need to consume nutritious diets and make nutritious food desirable. Citizen's food choices need to be informed and individuals should make food choices basing on general knowledge on nutritional value. Food manufactures need also to improve quality of food products such that they provide consumers with diverse nutrients they require for growth and development.[1924]

[1919] 312:11 p 8 in 548_July_14_21_Genoni A

[1920] 312:19 p 9 in 548_July_14_21_Genoni A

[1921] 312:23 p 10 in 548_July_14_21_Genoni A

[1922] 313:34 p 11 in 549_July_14_21_Meah N

[1923] 316:15 p 7 in 553_July_15_21_Food Tank_Oatly

[1924] 325:17 p 7 in 562_July_19_21_Zombe K

Plant-based food and alternative protein - while the market for these products is still relatively small in Thailand, in many export destination countries, the markets are more mature. Leveraging this international market potential can help promote domestic market as well. Plant-based proteins should be more actively promoted, and support on both the supply side (e.g. R&D funding, training) and demand side (communications campaign) are necessary.[1925]

The Food Education group concluded that concluded that food education is vital in order to allow people to make "good choices" about their food, and it's also important to our health as a society to ensure that everyone gets a good food education. Food education not only affects our physical health, but it also affects the health of our environment (our water, our land, the air) and our future generations as well. Furthermore, it is the media's and government's responsibility to also inspire society to care more about food and how our choices affect not only us, but also one another.[1926]

Education: U.S. consumers do not necessarily have a deep understanding of how to utilize fresh food products—how to prepare them in a healthy way. Education outlets are necessary to reconnect a less-informed population with fresh, whole foods. From one farmer in the dialogue, "We are, in the U.S., producing a very safe and well-priced crop that is certainly able to feed our people and obviously, as experience shows, is able to feed a substantial portion of the world, outsized for our acreage. But as society is sort of split into the Whole Foods crowd and the Walmart crowd, we need to do something to find crowds outside of those and let them rediscover something about how to actually buy [food], locally, where appropriate. Education is where we come in, and education is where we can get agriculture to get involved..." As populations have continued to concentrate in urban areas, the farming and ranching sector has a need and willingness to reconnect the end consumer to the farm through personal farm/ranch visits and direct communication between the producer and the end consumer. As one rancher put it, "we want to remove as many degrees of separation as possible between the people who grow food and the people who eat food. This happens through personal relationships—not social media relationships."[1927]

Resistance to change: there are strong cultural challenges, both on the part of consumers and farmers. Firstly, from the consumer perspective, greater awareness and sensitization are needed to change consumption patterns and encourage more sustainable consumption and reduce food waste. On the other hand, for farmers, the "traditional" nature of the sector means there is great resistance to changing traditional cropping systems, and there is often a certain reluctance to use new techniques and innovative solutions.[1928]

It is necessary to provide the means within a context of reduction of its human and financial resources. Consumers and key stakeholders must be able to make and impose enlightened choices. To do this, effort must be made on the subject of information and education on nutrition, especially with the youngest and most sensitive audiences. In

[1925] 329:7 p 9 in 566_July_21_21_Dej-Udom N

[1926] 332:4 p 3 in 156a_Apr_27_21_Dong_Quyang

[1927] 336:12 p 4 in 494a_June_23_21_US Farmers

[1928] 337:5 p 7 in 132a_May_27_21_Forética_Eng

parallel, information and awareness-building must take place regarding the new "outside the home" modes of nutrition which have been growing significantly because of the evolution of lifestyles, in which collective food service occupies an important place (awareness-building on the level of school cafeterias, university food services).[1929]

Stimulate local consumption of agroecological AFCI products by all possible means (short distribution channels, internet sales, public procurement, gastronomy sector, etc.), avoiding unnecessary transportation of products insofar as possible. Food education (e.g., community gardens as an urban learning space and the local markets themselves). As for animal production, there is the limitation on whether slaughtering can be formalized in accordance with the FF's property, e.g., mobile slaughter units. Processing plants in the organizations that allow the training of both farmers and consumers in practices that will prevent food loss, add value and, on the other hand, the adaptation of product qualification regulations for the marketing of safe food.[1930]

Dedicated points of sale for consumers to easily access AFCI products. Promote fairs, exhibitions, tastings, in intermediate and major urban centers, to connect FFs with operators and consumers. Hold quality competitions, which enhance the prestige of the award winners, and allow for bargaining tables and meetings with local buyers and buyers from other areas. Reorient social programs that buy hyper-industrialized food, so that they buy from the FFs. The pandemic has made it necessary to have points of sale other than supermarkets and farmers' markets, due to the agglomerations. Ideally, we should support points of sale networks supplying fresh and processed organic produce with natural inputs. Also, itinerant FF markets, taking their supplies to different locations. Consumers are looking for healthy food and this is an opportunity.[1931]

Patricia: Working with the consumer, encouraging the consumption of healthy products.[1932]

Finally, indigenous women state that women and men should be informed about the importance of consuming healthy and nutritious food before doing agricultural work.[1933]

In North America governmental policies can be very influential, while subsidies 70 in the EU play an even more important role. Communication between industries, 71 local farmers, governments and communities and education of local communities 72 and final consumers towards sustainability issues is another crucial point.[1934]

Awareness, education, and communication for farmers

Promoting active virtual learning opportunities between small farmers around the world.[1935]

[1929] 338:3 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

[1930] 340:31 p 12 in 406a_June_10_21_COPROFAM_CLOC_Eng

[1931] 341:10 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

[1932] 342:4 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[1933] 343:13 p 7 in 417a_June_18_21_Fernandez L_Eng

[1934] 353:16 p 2 in 505a_June_29_21_Borchard_UNC

[1935] 356:62 p 8 in 409_June_13_21_Mone S

Promoting active learning between BIPOC small farmers and all small farmers (global) on successful cooperative models from small farms around the world. We could work together.[1936]

There is a lack of sufficient understanding of sustainable food education among the public and government education departments; scarce supply of teachers with a background in sustainable food education.[1937]

Ensure ease of access to technologies: It is essential to ensure ease of access to technologies and, in particular, a widespread connectivity that includes high quality networks, which is essential for the continued development of digital agriculture. Connectivity is a central aspect of digital agriculture and has become an essential element in rural life within the context of the pandemic.[1938]

Need to create habits and educate the population about healthy eating, inclusion of fruits and vegetables in the daily diet.[1939]

Popularize the production of plants to support the development of the breeding sector. Classify, promote, and protect local species.[1940]

Black Indigenous small farmers and farmers of color need to know how to develop strategies to be recognized and to speak across borders and issues - to empower the ability of BIPOC small farmers/socially disadvantage farmers to exist beyond this generation.[1941]

So educating people and making them understand what the new normal is, is key.[1942]

Educate consumers and companies.[1943]

Producers underestimate the cost of labour when family members work with them in agricultural production. In addition, they do not account for certain resources such as water, even though they spend money to acquire it (installation and maintenance of wells for market gardening, for example); as a result, the true value of products is not really estimated. The impact of the environment is not always taken into account, and a lot of awareness-raising is needed for the actors to be aware of it and take it into account in the future. It is the role of NGOs to teach producers to make the right calculations, the cooperatives do not have enough power to influence the prices determined at the international level (in the exchanges).[1944]

[1936] 356:65 p 8 in 409_June_13_21_Mone S

[1937] 508:3 p 8 in 069_May_16_21_SFEAN_Multi

[1938] 509:1 p 3 in 073a_May_18_21_IICA_Eng

[1939] 515:7 ¶ 274 in 094a_June_09_21_Luchetti T_Eng

[1940] 524:20 p 7 in 119a_July_08_21_Moussavou B_Eng

[1941] 356:72 p 9 in 409_June_13_21_Mone S

[1942] 363:4 p 6 in 414_June_16_21_Le More_d'Antino

[1943] 363:14 p 7 in 414_June_16_21_Le More_d'Antino

[1944] 364:11 p 6 in 415_June_16_21_van Schoonhoven M

Information and dialogue with legislators, policy makers on the science behind latest breeding methods, educating farmers with better extension services and educating consumers to give them a better choice on what to buy.[1945]

One of the highlights was that farmers learn from peer groups, so increasing awareness of access to seeds is crucial. However, information is not always fully shared with farmers, so they are not aware of the availability of resources.[1946]

We must include the community, as they are the ones impacted by hunger and directly impacted by climate change-community should be educated on climate change so they can advocate and provide accountability.[1947]

Bring awareness about market trade to allow farmers to sell their crops to secure living wages and prosperity.[1948]

Reach all farmers, because in some contexts, farmers don't have access to knowledge and resources. Additionally, access to technology may not be affordable, and many new technologies are not made for small scale farmers; small scale farm technology can be substandard/outdated.[1949]

Train farmers to use the tools - learning and literacy. Have farmer organizations partner with the minister of agriculture and other government partners such as education and health and the private sector.[1950]

Increase awareness to cultivate rabi vegetables.[1951]

Recommendation 2: there needs to be a radical change in valorisation of food triggered throughout society; production and services delivered by farmers need to be valued beyond production costs; consumers should be more aware of all the services provided by the farmers beyond production of food (e.g. ecosystem services) Who: local governments (Min of Ag, Min of Finance), farmers and consumer associations. How: this can be achieved through awareness campaigns targeting both producers and consumers on issues of fair trade and the value generated by farming to society. [1952]

Key factors have been highlighted to increase GI contribution to the preservation of the natural heritage: producer awareness on the importance of their natural resources, collective agreement on the modalities to implement and regular self-assessment of the GI impacts on the territory, in particular in the environmental dimension. In this view, raising awareness and building the capacities of producers is crucial.[1953]

[1945] 369:31 p 7 in 413_June_15_21_WFO_ISF

[1946] 369:35 p 9 in 413_June_15_21_WFO_ISF

[1947] 424:17 p 7 in 465_June_16_21_Congressional Hunger

[1948] 429:125 p 7 in 470_June_17_21_Burian_Multi

[1949] 429:190 p 13 in 470_June_17_21_Burian_Multi

[1950] 429:270 p 19 in 470_June_17_21_Burian_Multi

[1951] 450:51 p 11 in 391_May_31_21_FAO_Multi

[1952] 459:51 p 10 in 125_May_11_21_Mauderli_COSUDE

[1953] 462:22 p 9 in 133_May_27_21_CIRAD_Multi

Raising producers' awareness on this issue could be an effective strategy to encourage stakeholders' commitment to additional (and/or stricter) rules and to enhance the implementation of best practices for resource management.[1954]

Further investment in public goods relevant to agriculture and rural livelihoods, to create an enabling environment in which farmers are empowered to make the right choices. This includes improving infrastructure, sharing knowledge through climate advisory services or advice on markets, disease and pest threats, as well as building evidence on what works. This will also incentivize and pull in private sector investment. Closing the economic development gap through health, education and other infrastructure will position smallholder farmers on a level playing field and enable them to compete;[1955]

The farmers organizations committed to working with the Forest and Farm Facility (FFF) to further develop farmers understanding of climate resilience through peer-to-peer knowledge exchanges facilitated by the FFF, through new training and information materials and through active small grants programmes funded by the FFF. A set of 30 resilience options for forest and farm producers will be widely circulated as the basis for increasing farmer knowledge of these issues.[1956]

…educational program to farmers: increase food production according to seasons, now covid we need foods with high zinc, vitamin index…[1957]

The participants identified contributions they could make through measurement and provision of real-time data, independent validation of methodologies and education for farmers on the use of smart technologies.[1958]

Farmers spoke about the need for clear communication and materials that can be disseminated in local dialects.[1959]

Need to educate farmers and producers about underlying principles of organic agriculture beyond crop production. Need topics on entrepreneurship, marketing, organizational strengthening, as well as post-harvest technologies, packaging and processing of food and non-food organic products, organic standards and certification. Lack of competent trainers on relevant topics.[1960]

Civil society organizations need to use their influence to educate farmers in adopting adaptive measures that improve their resilience to climate change such as water saving, improved varieties, change in dietary patterns, use of nutritious diet.[1961]

[1954] 462:29 p 11 in 133_May_27_21_CIRAD_Multi

[1955] 463:40 p 7 in 155_Apr_27_21_FCDO_Multi

[1956] 473:13 p 6 in 244_June_09_21_Macqueen_Multi

[1957] 492:16 p 7 in 302_June_01_21_FAO_ICC_Multi

[1958] 112:80 p 13 in 074_May_18_21_O'Mara_Teagasc

[1959] 116:1 p 6 in 093_Mar_25_21_Adeboye_T

[1960] 122:3 p 6 in 135_June_08_21_Calub_Gregorio

[1961] 127:25 p 10 in 159_Apr_21_21_Hafeez M

Addressing climate change in local farming communities to educate farmers on the importance of crop diversity.[1962]

Raise awareness, provide information completely and timely for farmers on environmental protection, clean agricultural production, enhance the nutritional value of products.[1963]

Vietnam Farmers' Union at all levels should strengthen propaganda and mobilization to raise awareness and participation of farmers in eco-friendly production and nutrition improvement through agriculture, promote the development of collective economy.[1964]

Farmer/consumer rapprochement Bring together those who produce and those who consume, through a process of education and raising of food awareness, development of community-based tourism (especially with traditional communities).[1965]

Others stressed the clear need to educate producers, because creating healthy environments for aquatic animals and aquatic food sources is in the best ethical and economic interest of all producers. The group also noted that not all producers have access to the best knowledge, research and innovation, and thus will inevitably make poor decisions despite the desire to improve.[1966]

Agroecology in Agroforestry: Solidarity among farmers provide services to members that enables them to manage natural resources in an environmentally friendly manner, produce quality products that meet market demands, achieve fair and sustainable returns for their work and improve the wellbeing of all members of farming families. Diversification is key strategy to coping with uncertain conditions, promoting innovations in integrated farming, which involves a combination of food crops, cash crops, livestock and forest products. Through Farmer to Farmer Learning (F2F), members gain new knowledge on organic agriculture production diversification. The action research help farmers do the research by themselves. Recognize the Local knowledge and wisdom on agroecological approach to farmer. Youth engagement is important for continuity and sustainability.[1967]

Education is critical to moving the needle on widespread adoption & implementation of climate-smart practices that help to build resilience in the soils, improve water retention, and increase knowledge and understanding about what works where, why it works, and why it is economically beneficial. Farmers and ranchers play an important role in helping to inform agricultural educators, and in so doing, helping to improve the efficiency of carrying the message of achieving soil resiliency to a greater number of producers across the country.[1968]

[1962] 143:27 p 8 in 231_May_19_21_MCD

[1963] 217:1 p 6 in 378_June_07_21_My Mai Bac

[1964] 217:15 p 7 in 378_June_07_21_My Mai Bac

[1965] 228:32 p 10 in 222a_May_11_21_FTI_ZHI_English

[1966] 240:33 p 11 in 319_June_30_21_Fredriksson O

[1967] 250:7 p 7 in 486_June_23_21_AFA_Multi

[1968] 336:17 p 6 in 494a_June_23_21_US Farmers

The exploration of the nexus between water-energy-food-climate or between food-nutrition-health to understand the complexity of food systems and the need to communicate what the crop-livestock-forest nexus is…[1969]

Need to introduce Indigenous knowledge in schools and curriculums.[1970]

Promoting urban agriculture can help residents, especially residents of color to build job skills, generate income, contribute to community development, increase food access and security, and foster connection to broader efforts that combat the root causes of structural inequities such a racial and economic justice.[1971]

Both 'boosting' compost creation and education will be the focus of this table.[1972]

Provide school-based agriculture education, including experiential opportunities.[1973]

With schools, to provide agriculture education and provide a market for local farmers by providing locally grown sustainable food, especially in countries greatly relying on smallholder farmers.[1974]

Provide school-based agriculture education. Include an experiential model to develop young people for farming.[1975]

Recommendation 1: increase awareness on principles of agroecology, sustainability, and nutrition Who: governments, producers, civil society How: the government should inform communities, the private sector, and the population more about agroecology e.g. through TV, education, including school meals. The consumer could be informed about the sustainability and nutritional quality of a food through traffic light type communication systems. This labelling should be regularly updated with the best available data. Also, labelling could include aspects of "storytelling" to give a voice to the producers behind the products.[1976]

Policy: Avoid the high use of pesticides within the food system. Stricter laws are needed on the use of agro-toxins, with campaigns that inform about the human and environmental risks of such toxins. Such as with the Ministries of Health and Education, with agro-toxins as a public health issue.[1977]

…among different social components to improve inclusiveness and awareness, and improve the capacity of aquatic food production.[1978]

[1969] 389:35 p 9 in 431_June_22_21_CEBOS_EMBRAPA

[1970] 394:60 p 12 in 436_June_16_21_GIYC_Multi

[1971] 404:38 p 9 in 445_May_26_21_ICLEI USA

[1972] 427:8 p 7 in 468_June_18_21_Mayne A

[1973] 429:122 p 7 in 470_June_17_21_Burian_Multi

[1974] 429:131 p 7 in 470_June_17_21_Burian_Multi

[1975] 429:280 p 20 in 470_June_17_21_Burian_Multi

[1976] 458:66 p 16 in 123_May_04_21_Mauderli U

[1977] 474:34 p 7 in 246_June_09_21_Boza_Kanter

[1978] 485:32 p 6 in 288_May_20_21_GAN_Multi

In Michigan, speakers mentioned "Taste the Local Distance", an organisation whose core idea is "taking the small holder farms and making them more mainstream.", specifying that it is not just about artisanal food, but also about building ties with education: "a real change can be made when children go get food and see and know how that food was made and who made it". "We need A 10 year program and should take national funding to do that".[1979]

Seventh, farmers can bring us the production side of food closer to us and educate us on how to farm.[1980]

Educate and enforce practices for sustainable fisheries.[1981]

Resistance to change: there are strong cultural challenges, both on the part of consumers and farmers. Firstly, from the consumer perspective, greater awareness and sensitization are needed to change consumption patterns and encourage more sustainable consumption and reduce food waste. On the other hand, for farmers, the "traditional" nature of the sector means there is great resistance to changing traditional cropping systems, and there is often a certain reluctance to use new techniques and innovative solutions.[1982]

Awareness, education, and communication for health sector

The promotion of healthier eating patterns by expanding the blueprint of nutrition education, literacy and, care by the mandatory positioning of nutritionists or nutrition practitioners in the primary healthcare systems and other levels of health institutions. The optimization of overall nutrition in the country by strengthening programs (both existing or otherwise) that sensitize rural farming households on how to utilize available crops and foods.[1983]

Education, as a basis for transforming food systems, was highlighted. In this sense, transforming educational models is necessary so that Central Americans can better understand production processes.[1984]

Lastly, the group proposed the promotion of information capsules on strategic planning, especially in purchasing. This is in order to prevent the consumer from buying more than he/she needs. It is important to start the process of identifying what corresponds to waste and how much is considered waste. Also, nutrition education was mentioned, especially when evaluating the nutritional value and safety of food.[1985]

Popularize the production of plants to support the development of the breeding sector. Classify, promote, and protect local species.[1986]

[1979] 486:59 p 11 in 291_May_21_21_Polman_Prabha

[1980] 486:69 p 12 in 291_May_21_21_Polman_Prabha

[1981] 503:38 p 8 in 399_June_9_21_AFA_Multi

[1982] 337:5 p 7 in 132a_May_27_21_Forética_Eng

[1983] 44:12 p 7 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[1984] 89:20 ¶ 82 in 186a_Apr_15_21_Caballeros_eng

[1985] 516:14 ¶ 382 in 098a_June_10_21_Caballeros C_Eng

[1986] 524:20 p 7 in 119a_July_08_21_Moussavou B_Eng

Physician researchers in Taiwan have influenced their healthcare system on the scientific benefits of plant-based diets and have successfully incorporated healthier food options for patients.[1987]

The primary concern that participants expressed when discussing the consumer perspective was the challenge of popularizing seaweed as a food source to a Western audience. They cited the lack of familiarity and understanding as a challenge that marketing and PR would need to overcome with an awareness campaign about the benefits of eating seaweed.[1988]

Public health and nutrition education (also using local knowledge) should be incorporated into school feeding programmes which are also a point of entry into communities. There is need to stimulate and increase public private partnership for collaborations to improve nutrition & health.[1989]

…providing nutrition education to health care students and workers.[1990]

Participants also recognized the importance of teaching people living with non-communicable diseases (PLWNCDs) the specifics of their dietary needs and risk factors (such as overconsumption of animal protein) and providing this education at health institutions.[1991]

Community mobilization, sensitization, and extension services through various health care services, to drive nutrition education in guiding parents and caregivers on how to change children's eating behaviour.[1992]

Access to food, healthy nutritious food, is a human right…[1993]

Create more awareness on food nutrition…[1994]

Use of school and churches to create awareness on health food.[1995]

Dialogues have been framed around the Summit action tracks or with a focus on country-relevant topics such as access to food, vulnerability to malnutrition, production of higher quality food, nature positive production systems for local farmers and fishers, resilience of food systems including interventions designed to ensure resilience at small farm level, making farmers' livelihoods stronger and secure, educate the public on nutritious and healthy patterns, and environment friendly and nutritious production.[1996]

[1987] 92:20 p 6 in 225_May_13_21_Schwartz A

[1988] 119:36 p 11 in 121_Apr_28_21_Doumeizel V

[1989] 120:15 p 7 in 127_May_13_21_IAFN_CWFS

[1990] 167:35 p 9 in 311_June_14_21_NCD Child

[1991] 167:52 p 10 in 311_June_14_21_NCD Child

[1992] 193:55 p 11 in 351_June_03_21_CIF_Multi

[1993] 356:79 p 10 in 409_June_13_21_Mone S

[1994] 357:29 p 7 in 401_June_10_21_Ekwamu_A

[1995] 357:30 p 7 in 401_June_10_21_Ekwamu_A

[1996] 359:3 p 7 in 403_June_10_21_ESCAP_Multi

Education on nutrition is important as the biggest drive for malnutrition is consumption behavior.[1997]

Education for behavioral changes on nutritional consumption amongst low-income families.[1998]

By considering the erosion of the MD as an intangible UNESCO Cultural Heritage and by considering that the data show that the adherence of the Italian population to the MD is very low, it was also highlighted the need of more institutional communication to promote the DM, not only as a healthy diet, but also as a sustainable diet, with multiple socio-cultural, environmental, economic, and health/nutrition benefits, including food waste reduction.[1999]

The private sector should have a role in encouraging consumers to read and understand labels, in addition to disseminating information on how to choose and prepare different foods, highlight aesthetic issues, redesign leftovers from meals, fully enjoy the food and consider the recommended portion per person. It is important to encourage the consumption of unconventional food plants (PANCs) and engage the industry in the development of these new products.[2000]

The persistent difficulty in patronizing communication and efforts to educate on healthy and sustainable diets was highlighted, as there are still controversies on the definition of these diets.[2001]

From the bottom up: the promotion of food-related education and advocacy at a societal level is also important c. In addition, financial support is also needed in some cases.[2002]

Implementing activities in schools: schools are important avenues globally to reach the target population for better nutrition, physical activity, as well as education for the same.[2003]

Schools were mentioned as an important avenue to implement prevention and care activities through. This was a shared experience from several cities that participated in the Dialogue, from high-income countries and low- and middle-income countries, thus making schools an effective avenue to deliver interventions to children and youth. Integrating healthy eating and a healthy lifestyle into the school curriculum can support knowledge and awareness on a healthy diet among children and their parents.[2004]

[1997] 383:10 p 6 in 425_June_30_21_CIPS

[1998] 383:17 p 7 in 425_June_30_21_CIPS

[1999] 386:12 p 6 in 429_July_05_21-CIHEAM Bari

[2000] 389:151 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[2001] 389:159 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[2002]393:24 p 8 in 435_June_08_21_FAO_ICC_UNFSS

[2003] 426:7 p 6 in 467_June_17_21_NWGN_Multi

[2004] 426:44 p 11 in 467_June_17_21_NWGN_Multi

Further, raising awareness on interventions to combat childhood obesity through marketing and branding was considered beneficial.[2005]

Promote Chefs' Leadership It is always agreed that there are only two kinds of food in the world: delicious ones and the contrary. Participants all believed that chefs should play a critical role in promoting healthy and sustainable food.[2006]

Utilizing behavioral interventions to effectively guide dietary habit change. Behavioral science can also provide many ideas to guide healthy eating through food education and advocacy. For example, the widespread application of the "Nudge" principle can have a multiplier effect. In recent years, some experience has been gained from experiments and studies, for example, discussion participants mentioned.[2007]

In terms of this increasingly difficult challenge, on the basis of the above discussion on building a localized food system, the participants in the discussion mainly contributed their experience from the perspective of how to systematically improve the nutritional level of chefs and carry out food education for students. For example, the development of online courses, while linking with local chef associations and cooking schools, combining online and offline to empower chef groups in a manner of from point to the area. "Food Rainbow Spell" uses gamification to establish the most direct connection between children's minds, food, and nature, and at the same time provides an intuitive and easy reference for chefs to purchase diverse ingredients which are rich in multiple nutrients.[2008]

Recommendation 2: multiple actors need to be involved in awareness-raising strategies on healthy eating and responsible consumption aimed at the general population, taking into account the intercultural nature of communities. Who: governments, civil society, farmer networks, teachers, parents How: the school canteen must be a vector in society for the message of healthy eating. This will require accompanying school canteens with didactic/educational tools such as school gardens and field trips on sustainable food production.[2009]

Information on healthy and sustainable diets, agroecological management must be disseminated on a large scale while valuing local knowledge and know-how. Also, disseminating good consumption criteria, reducing huge post-harvest losses, incentives and scaling up certain practices that facilitate access to food such as e-commerce will help make the transition.[2010]

Nutrition awareness/ Healthy school meals: Integration of nutrition in school curricula, maternal and infant care, and promotion of agro-ecologically sourced meals in school & community kitchens will improve performance of students in school and people in their work. Recommendation 1: ensure schools have adequate food production units and complementary infrastructure Who: policy makers, schools, local communities How:

[2005] 426:52 p 12 in 467_June_17_21_NWGN_Multi

[2006] 444:12 p 6 in 027_Feb_02_21_CBCGDF_UNFSS

[2007] 444:15 p 6 in 027_Feb_02_21_CBCGDF_UNFSS

[2008] 444:27 p 11 in 027_Feb_02_21_CBCGDF_UNFSS

[2009] 457:95 p 18 in 120_Apr_27_21_Mauderli_U

[2010] 458:47 p 8 in 123_May_04_21_Mauderli U

schools need to have adequate access to land, vegetable beds, water, and complementary infrastructure, specifically storage and canteen facilities and the administrative capacity to manage the entire process from procurement to serving food on premises. Other recommendations include providing recipe books for school chefs, opening up school canteens to local communities (E.g., in the evening as income generating opportunities), using nearby food kiosks to assist and complement school meals.[2011]

Recommendation 4: ensure adequate term definition: "healthy nutrition / diets / foods", and include water aspects (e.g. safe drinking water), in policies, guidance and curricula Who: international actors, civil society, and governments How: use of the term agro-ecologically produced – does not guarantee healthy food. In connection to school meals and awareness raising efforts it is important to emphasize safety and diversity of foods, and also recognizing that due to seasonality and locality, some food will necessarily be imported or not local. In school meals it is important to use diversified food products (and include them if necessary, in the programme at production level) whose combination will ensure nutritional balance. However, fortification of food products as appropriate could be recommended.[2012]

Improving food distribution therefore, would require: 1) heightened consumer awareness on the nutritional and environmental benefits of organic/natural products; 2) improved market demand estimates; 3) more community-shared post-harvest facilities; and 4) more organic trading posts and product consolidators to reduce delivery cost for aggregated products.[2013]

Hence, consumer awareness on 'nutrition vs. aesthetics' (e.g. Ugly Food Movement) and farmers leveraging on the heightened demand for food traceability should be simultaneously adopted.[2014]

Governance/Policy: The current pandemic context must be considered, where it has been shown that the consumption of fruits and vegetables reduces the risks of getting sick. We must start by implementing greater nutrition education from the first stages of life, accompanied by public policies that promote healthy eating and facilitate access to healthy food. We must demolish myths with powerful educational campaigns.[2015]

More educational and marketing campaigns are needed around healthy eating, but such campaigns also needed to be accompanied with support for both greater physical and economic access to such healthy foods.[2016]

[2011] 458:70 p 18 in 123_May_04_21_Mauderli U

[2012] 458:76 p 18 in 123_May_04_21_Mauderli U

[2013] 460:79 p 7 in 131_May_25_21_IISLA Ventures

[2014] 460:87 p 10 in 131_May_25_21_IISLA Ventures

[2015] 474:18 p 6 in 246_June_09_21_Boza_Kanter

[2016] 474:38 p 12 in 246_June_09_21_Boza_Kanter

Access to culturally appropriate and traditional food Have students and universities create food maps; need an indigenous food guide and preparation book; access to education on the topic is highly important.[2017]

We also need to continue to focus on fair pay for all individuals working within the food system as well ensuring all nutritious food is affordable for all.[2018]

… need good food without use of fertilizers, pesticides - train people to use alternatives, people need to be more aware and invest - and make it affordable…[2019]

Need to focus on food quality and nutrition rather than ingredients and single nutrient approaches.[2020]

How much is left to learn about food and nutritional dark matter, and the role dietitians are playing to spread more knowledge about this place and build the connection to responsible agricultural practices. Conventional medicine focuses more on a diagnosis as opposed to thriving, having the right nutrients, reducing inflammation, maximizing metabolic health, and failing individuals. Historic and traditional medical practices made the connection between food and nutritional quality with health, but there has been a lack of science for this that has steered conventional medicine away from nutritional wisdom. Medical schools teach as little as a single session around nutrition that future doctors can bring into their future practices. The health care community needs to catch up through community shared knowledge, nutrition education for the medical community, strategic partnerships between nutrition and medical entities, partnerships between responsible food service and medical institutions.[2021]

Connecting regenerative agriculture and organic agriculture with institutional health care. Some of the worst food in the world is presented at healthcare facilities, but people don't understand the true scale of the sector. This includes hospitals, senior care facilities, long term care facilities, and community based food services (e.g. meals on wheels) that have not contributed to the human body with true nutrition towards some of the most vulnerable population. It is a $16b marketplace almost entirely serviced with conventional food, with 40% of this spend on animal protein. The increasing connection between nutrition and the wider medical field because of the pandemic. Antibiotic free, chemical free, higher nutrient density, anti-inflammatory is what is needed. The public policy piece will follow what the medical community wants, as medicine can be a push for some bi-partisan areas.[2022]

Ensure that the education of healthcare workers and nutrition professions is one where they understand, deeply, the connection between food insecurity and community health.

[2017] 476:16 p 8 in 264_May_06_21_Arrell Food_Multi

[2018] 487:48 p 12 in 293_May_22_21_City of San Antonio

[2019] 492:12 p 7 in 302_June_01_21_FAO_ICC_Multi

[2020] 502:20 p 8 in 398_June_07_21_NCD Alliance

[2021] 249:16 p 9 in 485_June_22_21_Levesque_SD

[2022] 249:35 p 14 in 485_June_22_21_Levesque_SD

These future workers should know how to screen for food insecurity, reduce the stigma associated with it, and prioritize dignity in how they interact with and care for clients.[2023]

The role of public health - educate public health professionals to recommend plant based diet; engage with physician groups, health authorities, nursing unions, nutritionist -- similar to the lobbying efforts against cigarette companies.[2024]

Power needs to be taken away from the pharmaceutical industry in controlling the approach to public health and placed back into the hands of the individual. We need to move from disease care to preventive health care. Nutritionists should be available for appointments at GP surgeries and new parents should see a nutritionist as part of their baby care lessons. People do not realise the power that they do have over their own health and the earlier food literacy is taught, the earlier connection to nature is realised, the more we will have populations that are able to take care of their own health.[2025]

Since doctors only receive 8 hours of nutrition training in their degree and there is an ever growing base of evidence to support the connection between diet and mind and body health, nutritionist and dieticians should be a larger part of the health service. Each GP should have a nutritionist where patients who would benefit from lifestyle and diet changes can go and have a longer appointment. There are initiatives such as Culinary Medicine UK which provide training to doctors in nutrition with a chef and a dietician. Interdisciplinary work such as this can play a key role in connecting the missing dots between diet and poor health outcomes.[2026]

A package and plan for dissemination of dietary guidelines is required. This includes funding and materials for health professionals (e.g. webinars, videos, other education) and social marketing to ensure the key messages reach the public. Those messages must include practical food literacy and cooking skills.[2027]

Healthy and sustainable nutrition must be widely taught across the health professions so that awareness is far greater and patients are provided with a 'nutrition first' approach to disease prevention and treatment. A thorough understanding of the ADGs should be a fundamental requirement.[2028]

Scale-up advocacy on exclusive breastfeeding for babies and importance of nutrition for nursing mothers.[2029]

Public-Sector Managers– we must urgently carry out training and raise awareness regarding the execution of the Program, its scope, intersectoriality and guidelines, in order

[2023] 252:4 p 7 in 488_June_22_21_Harrison_CC

[2024] 257:7 p 7 in 493_June_23_21_Kevany_Van

[2025] 308:19 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[2026] 308:32 p 9 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[2027] 312:10 p 8 in 548_July_14_21_Genoni A

[2028] 312:12 p 8 in 548_July_14_21_Genoni A

[2029] 330:23 p 7 in 568_July_21_21_Cooper-Liverpool M

to improve its implementation. Many are unaware of the need to supplement federal resources and use the transfer as the only source for purchasing food.[2030]

Nutritionists – Nutrition courses do not always address the school meals program, and ongoing training is needed for implementation, legislation, institutional purchasing, intersectoriality, waste management, food waste, etc.[2031]

Awareness, education, and communication for stakeholders

Raising awareness on sustainable production and consumption of food through 1) educating stakeholders about how to lower their ecological footprint.[2032]

Communication with real estate developers -Increased transparency of communication can facilitate WET market transformation.[2033]

1. Sustainable food education is important to promote public understanding and practice of sustainable food behaviors.2. Sustainable food education can promote positive youth development.3. The concept and popularity of sustainable food education in China is still in its infancy 4. Sustainable food education organizations and stakeholders in China need to unite and take action.[2034]

Raise awareness: Carry out awareness campaigns on the potentiality of right-based approaches as a solution to the world's greatest challenges.[2035]

Improvements to be made in the field of Education in healthy and sustainable habits.[2036]

Child nutrition and food education at home and at school.[2037]

The authorities must educate agricultural sector players by disseminating all the regulations in force, especially to farmers' organizations, indigenous populations, local communities, and multinationals, who are often unaware of the content of these legal texts.[2038]

Promote tourism focused on farm production.[2039]

Making it clear to consumers, investors and other stakeholders, the transparency and traceability of products throughout the chain.[2040]

[2030] 339:75 p 17 in 393a_June_01_21_Food of Tomorrow_Eng

[2031] 339:76 p 17 in 393a_June_01_21_Food of Tomorrow_Eng

[2032] 166:14 p 7 in 355_June_14_21_FAO

[2033] 368:12 p 10 in 412_June_15_21_CBCGDF_Multi

[2034] 508:1 p 6 in 069_May_16_21_SFEAN_Multi

[2035] 512:12 p 7 in 088_May_28_21_Divine NTF

[2036] 513:6 ¶ 246 – 253 in 090a_May_29_21_Theunissen D_Eng

[2037] 513:18 ¶ 357 – 362 in 090a_May_29_21_Theunissen D_Eng

[2038] 524:2 p 6 in 119a_July_08_21_Moussavou B_Eng

[2039] 526:6 p 6 in 124a_July_18_21_FEA Hatillo_Eng

[2040] 389:34 p 9 in 431_June_22_21_CEBOS_EMBRAPA

Co-responsibility and equity as the basis for education about the sustainability of the food chain was mentioned. More transparency is needed, making traceability technologies more accessible and widely implemented, also widening and integrating multi-stakeholder communication and education, throughout society, in schools and across consumer classes.[2041]

Create awareness about environmental threats and their impact on our well-being.[2042]

Create awareness about environmental threats and their impact on our well-being.

a) Regulate construction of new septic systems.b) Promote educational and informative campaigns on soil and water contamination.c) Encourage the management and use of waste and solid wasted) Organize one-day neighborhood courses for firebreaks and fire prevention.[2043]

Making it clear to consumers, investors and other stakeholders, the transparency and traceability of products throughout the chain.[2044]

Edu Communicative practices were recommended, as they are based on dialogue, respect for human rights, a critical reading of the media and must be co-constructed between different actors.[2045]

Social enterprise work based on traditional knowledge focused on rotational farming. We use this process to understand and respect nature. It is a sustainable mechanism to maintain resources in our community.[2046]

We want to communicate this to more communities, and we use our food and the number of species we are able to grow to share the importance and benefits (such as increased biodiversity) of rotational farming Little Farm in Big Forest connects storytelling to communicate base knowledge by using social media to help communicate traditional knowledge. It also helps build awareness from space of experience to customer: tastings, rotational farming workshops, learn together, bring in people from outside the community and all bring together ideas Capacity building and community funding, making space to transmit knowledge, use a local curriculum and elders come to teach in the schools including nutrition education.

Education of non-farmers on the need to pay attention and get involved in agriculture through investment.[2047]

[2041] 389:53 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[2042] 526:8 p 6 in 124a_July_18_21_FEA Hatillo_Eng

[2043] 526:20 p 8 in 124a_July_18_21_FEA Hatillo_Eng

[2044] 389:116 p 9 in 431_June_22_21_CEBOS_EMBRAPA

[2045] 389:161 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[2046] 394:67 p 13 in 436_June_16_21_GIYC_Multi

[2047] 397:65 p 11 in 439_June_17_21_INAI

Pay community members to be part of advisory boards. Include residents that aren't usually involved in these processes and aren't already affiliated with organizations that already have access to power in the city.[2048]

….fragmentation and fracture of the sector, investors, there is a need for a greater understanding of different institutions and opportunities…[2049]

Education should also stem from multi-disciplinary teams and processes.[2050]

Further, communication is required to keep all parties involved. This includes both external communication towards the target population, as well as internal communication within the stakeholders organizing the approach.[2051]

For the purposes of internal communication, participants mentioned the need for a dedicated interdepartmental board to work with multiple stakeholders and ensure everyone is working towards the same direction and vision. This interdepartmental board was described as important because of its ability to implement 'cross-cutting communication', i.e., communication that goes beyond departmental boundaries and involves all stakeholders to successfully implement a systems approach.[2052]

Sixth, chefs and other thought or industry leaders can also help with education on food and nutrition by making it fun.[2053]

SMEs could be brought together to educate them about the Sustainable Development Goals. Once SMEs understand them, there may be opportunities that SMEs spot where they can innovate to meet goals. SMEs will be able to innovate in ways that large corporations cannot.[2054]

An SME from Bulgaria has set up a successful nationwide campaign that focusses on public attitudes to food, and food literacy. It is a good example of how public attitudes towards food can be changed. The campaign involves kindergartens, schools and professionals, and also includes awards for those who make positive contributions to the food systems. This campaign brings together government, NGOs, universities and farmers, and so ensures link-up across all areas of the food system. This system could be replicated.[2055]

Normally we need to educate the consumer - but it's very hard to educate 6 billion people. Maybe what we can do is try to educate food manufacturers. They should be more aware of the real value of food; it is not just a commodity. A simple solution could be with labeling,

[2048] 404:26 p 7 in 445_May_26_21_ICLEI USA

[2049] 411:20 p 7 in 452_Apr_27_21_IFAD_Multi

[2050] 415:39 p 8 in 456_May_17_21_Ekwamu_A

[2051] 426:26 p 8 in 467_June_17_21_NWGN_Multi

[2052] 426:49 p 12 in 467_June_17_21_NWGN_Multi

[2053] 486:68 p 12 in 291_May_21_21_Polman_Prabha

[2054] 495:23 p 7 in 309_June_10_21_ICC_EIT_Multi

[2055] 495:24 p 7 in 309_June_10_21_ICC_EIT_Multi

for example, labels about expiry date can be confusing and food that is still very edible is thrown away as a consequence.[2056]

Educational programs that demystify migration, spreading the information of the reality of those who migrate in search of food.[2057]

Consumers across the population as a whole need help to regain/maintain their connection with the land and its products.[2058]

Education and engagement with people were seen to be important, including information about the importance of local and seasonal food for human health, the environment, local economies and communities.[2059]

Moreover, the two changemakers highlighted the important responsibility everyone has to share positive, diverse and inclusive narratives, because it is thanks to the sharing and repetition of narratives, that the mantra eventually influences reality. In addition, these narratives should focus on what we gain through a change, instead of what we lose (share over shout), and they should lead to advocacy. Through social media, people are able to share the well-articulated narratives and advocate for concrete aligned actions. However, to do so and to be successful, the incentives on social media should change so that the true values, diversity and inclusion are part of our everyday feed.[2060]

The connection between farmers and consumers needs to be strengthened so that we all understand better how and where our food comes from and the conditions that farmers navigate to produce our food each day.[2061]

Raise awareness on the effects of malnutrition and its cost on health and importance of consuming healthy food, reduce the consumption of junk food especially for children and provide system-wide solutions to address the issues of malnutrition and obesity.[2062]

Open up new growth opportunities with Cross Marketing; utilize various media when marketing and promoting.[2063]

The link between true value and well-being was underlined and the need for providing consumers with more and more easily accessible information highlighted. The group also talked about the multi-dimensionality of affordability which not only refers to the financial capacity of a consumer to access a good but also embeds awareness, education, information,… eventually relating to inequalities.[2064]

[2056] 504:66 p 10 in 400_June_09_21_Viera_Pollmeier

[2057] 5:1 p 6 in 105_Apr_8_21_Vieira J

[2058] 18:25 p 12 in 114_Apr_19_21_Maurer H_Roskruge N

[2059] 20:40 p 8 in 116_Apr_21_21_Hein JR

[2060] 22:8 p 8 in 191_Apr_16_21_Donati L

[2061] 28:9 p 6 in 064_Mar_4_21_Farming First

[2062] 31:11 p 7 in 077_Mar_09_21_ESCWA_FAO

[2063] 35:81 p 11 in 095_Mar_27_21_Chinapoo C_Multi

[2064] 39:19 p 9 in 175_Mar_16_21_Donati L

Holistically identify critical areas of development and missed opportunities within the agricultural sector. This will justify an increase in budget allocation to the agriculture sector or departments within. Education of the general populace on the importance of the agricultural sector.[2065]

Knowledge and education are needed in all sectors to make food become a public and social good, thus giving back its true value.[2066]

In addition, an important role is also played by the image attributed to food: It would be suitable to present a positive image, leading to a shared awareness and, above all, to both an individual and a collective responsibility. We should also try to see food as a nourishment of the mind and be able to make free personal choices based on awareness and knowledge, without getting overwhelmed by the confusion due to the huge offer of choices which characterizes the current world narratives.[2067]

The most effective information systems are those that are close to users – whether closeness means accessibility of information services via digital tools (e.g. phones) or via radio or small-group training organized directly with young (prospective) entrepreneurs in the ¦eld. For either approach to be really game changing though we need a lot of curation of information content, as this needs to be really relevant to young people's practical needs, accessible (not too abstract or "fancy"), and focused on concrete experiences and lessons learned. This may be packaged into a multi-lingual app with localised content related to specific markets, commodities, and financial systems, or it may be delivered through local information points e.g. in mini business centers located in postal offices.[2068]

Educate consumers through transparently shared information to guide their choices, and consider including financial incentives that reward purchases of less packaged, plant forward foods. Creativity in the kitchen is key to promote plant-based diets to mass consumers, so education for food professionals and chefs on how to cook plants creatively, and balance nutrition without meat, is crucial. Consider relying on blockchain technology to inform consumers of packaging implications of the food they are considering, as well as the environmental footprint, especially important with meat-centered vs. plant-centered main dishes.[2069]

Greater local content Improve awareness of the nutrition.[2070]

Areas that need further exploration More participants had the notion that Food Systems was all about food. With experts in the dialogue, they were able to grasp few understanding of the general scope of food systems. This means more explorations needs to

[2065] 44:33 p 11 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[2066] 45:10 p 8 in 043_Feb_17_21_Donati L_Multi

[2067] 45:11 p 8 in 043_Feb_17_21_Donati L_Multi

[2068] 46:12 p 8 in 049_Feb_23_21_SAFIN_Multi

[2069] 49:32 p 10 in 086_Mar_20_21_Rosatan B

[2070] 52:18 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

be done to further educate and highlight the importance of a robust food systems to productivity and efficiency.[2071]

HEALTHY EATING 1. A diet that takes health into account is what ensures nutrition. It is better to take foods from nature and reduce processed food. In addition, education is also needed for food producers to maintain food hygiene and sanitation during food processing to ensure health. 2. An environmentally friendly diet is one that does not have a large carbon footprint. This diet can be achieved by: a. Paying attention to locality, naturalness, and type of product (reduce consumption of animal products, prioritize more carbon-friendly vegetable products). b. Reducing food waste and plastic packaging that is not environmentally friendly c. Guarantee the totality of the full use of food ingredients so that food loss does not occur. d. Processing of kitchen waste in the form of compost and replanting. e. To maintain food sustainability, it is necessary to pay attention to locality. We need to explore food ingredients that are widely developed in our area and diversify food sources. 3. In order for all levels of society to be involved for a diet that takes into account health and is environmentally friendly, education is needed starting from the pre-production, processing, to marketing stages. Education is carried out to producers, distributors, and consumers.[2072]

Education and trust should be the entry points to create new important supply opportunities and consequently a higher quality of life for all. We define this approach using the term of social proximity. This implies more sensibilization, awareness, passion, curiosity, knowledge, and inclusion in all sectors of the food systems.[2073]

We need to further connect networks of people, producers, consumers, distributors so that there is transition of information along the value chain, transparency, care, and understanding about how a product is made. This will imply changing the status of food from commodity to public good.[2074]

As for households – the solutions should focus on education and changing the culture around food storage. Urban community centers, changing agents like teachers, parents, health practitioners, and NGO's campaigns could be trained to educate for reducing consumption in all its forms.[2075]

Communicate the message of the urgent need to reduce food waste at all levels.[2076]

Raising the public awareness. A course on sustainability and health to different governmental ministries with learning on the ground to see and learn the problems.[2077]

[2071] 55:12 p 5 in 005_Dec_11_20_Aggrey J

[2072] 57:3 p 6 in 008_Dec_19_20_Niode AK

[2073] 60:14 p 7 in 021_Jan_27_21_Donati L

[2074] 60:24 p 8 in 021_Jan_27_21_Donati L

[2075] 64:29 p 7 in 041_Feb_17_21_Adler D

[2076] 64:30 p 7 in 041_Feb_17_21_Adler D

[2077] 64:77 p 12 in 041_Feb_17_21_Adler D

Consumers need to be represented and have a stronger voice in the food system. They also must understand that the price of food is generally low, and does not include externalities.[2078]

Education and food environment should be considered together and not as 'false dichotomy'. Education is important to give people the skills to navigate the food environment, and food environment needs to make the healthy and sustainable choices the easy ones. One-health policy: putting health at the centre, underpinning all policies, and educating people on the link between sustainability and health is important.[2079]

Educating and Training the Public on how to access inexpensive, quality, and healthy food.[2080]

A culmination of the dialogue was also the interest of the panelists and participants to initiate a social media movement to spark the food systems dialogue across all frontiers including healthy foods and sustainable consumption, capacity building for youths, empowering women and small-scale farmers in sustainable and climate-smart agriculture.[2081]

In order to diversify production, it is also important to give guidance to producers about what people are demanding.[2082]

Promote agrotourism so that both locals and visitors know and value the local products and culture, as well as the role food products play in the food system.[2083]

The Asian region needs to evolve practices in order to ensure the highest level of sanitation, hygiene, and handling of foods. This could be done through consults, workshops, guidelines, and improved sector communications. In this regard wholesale markets can stay up-to-date with the latest best practices on sanitation, hygiene, and handling of foods. They can implement these practices and continue to be sustainable places of excellence in the food system. They can commit together to common guidelines.[2084]

Many participants and speakers emphasized that there's no easy solution for well-functioning food systems globally but with awareness and discussion, we can start to form solutions to the complex issues.[2085]

It is a very complex environment where build awareness is a key.[2086]

[2078] 66:65 p 12 in 052_Feb_25_21_EUFIC

[2079] 66:79 p 14 in 052_Feb_25_21_EUFIC

[2080] 73:6 p 6 in 204_Apr_27_21_YASIF_UYSG

[2081] 73:8 p 6 in 204_Apr_27_21_YASIF_UYSG

[2082] 75:33 ¶ 119 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[2083] 75:42 ¶ 128 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[2084] 77:18 p 8 in 108_Apr_13_21_Carrara E_Multi

[2085] 79:62 p 3 in 118_Apr_21_21_Huvio T

[2086] 81:28 p 9 in 145_May_6_21_Vandenschrik J_Multi

Awareness-building and knowledge transfers - Build awareness about the benefits of wild foods; hold activities that will facilitate knowledge and skills transfer.[2087]

Improving communication of the benefits of innovations and the science that supports them, and reducing the distance between academia and politics, are essential factors for a better understanding of scientific data in the definition of public policies.[2088]

There are 5 main themes suggested by the participants including: advancing science & technology; policy making and reinforcement; improving awareness and education; enhancing collaborations and business development. Improving the science and technology including research on nutrient benefits, environmental impacts, data transparency and sharing, policy making, diversifying marine resources (e.g. seaweed), technologies of food processing and knowledge transfer. Policy making, which includes developing incentives, financing relevant industries, strategies for different time and spatial scales, equal opportunity for small scale fisheries, following the 3 pillars of FAO, and incorporating aquatic food into policies.[2089]

Improve communication & education: Participants saw a role for better communication between farmers and the public, so that the public has a better appreciation for on-farm conditions. They urged more prevalent food/nutrition education to improve public health and combat unreliable information about food production. They also wanted young people to gain better access to and understanding of where food comes from and how it is produced.[2090]

This issue approaches healthy consumption from an equity lens, highlighting social determinants across socioeconomic lines. Establishing a living wage and increasing worker dignity can increase food affordability and autonomy of workers. Local governments should ensure that individuals who work in community gardens/other agricultural spaces that produce fruits and vegetables are compensated through a higher, living minimum wage and allow them to purchase the food they help to produce at a highly subsidized rate. Because these individuals are often low-income, this can help increase the affordability of healthier food across socioeconomic lines. In a market-based economy, insufficient income will reduce consumption. When it comes to food, that can lead to food insecurity and/or malnutrition. To reduce food insecurity due to affordability barriers, we recommend increasing the minimum wage to a living wage rate. Increased income will improve food access by bringing the minimum standard of living to a sustainable level. This will help all low-income, food insecure individuals and families obtain sufficient, healthy nutrition and demonstrate that we value the food systems employees.[2091]

[2087] 408:18 p 7 in 449_March_08_21_Wild Foods_Multi

[2088] 491:33 p 7 in 301_May_27_21_CropLife Latin America

[2089] 82:26 p 9 in 150_Apr_30_21_GANSFOIWFSN

[2090] 84:5 p 7 in 153_Apr_28_21_GCNF_Multi

[2091] 86:17 p 9 in 162_Apr_16_21_Fountain G

Continue working on this process of improvement, of creating awareness, in which the interinstitutional matrix, business link, entrepreneurship, science, and technology play very important roles.[2092]

Civil Society: CSOs should take a leading role in advocating for the rights of the farmers, the plights of farmers, and things that affect stakeholders within the food system. Documentaries can be used to articulate the plight of the farmers. They also need to emphasise the challenge of food prices. Food-related CSOs need enabling policy environment to function effectively.[2093]

We need to ensure guidance and regulations are clearly communicated and incentivised to ensure maximum support from farmers and land managers.[2094]

Dialogue participants emphasized improving policy coherence among key ministries through better inter-sectoral coordination and capacity building and raising awareness among researchers, policymakers, government officials, and farmers about the benefits of WEF nexus modelling approaches to optimise agriculture production in the Indus Basin.[2095]

Informing about the term Food Systems is essential to raise awareness across all levels of engagement - explanation/storytelling is needed to create necessary common approach/synergies.[2096]

Communication about healthy diets and nutrition with different stakeholders in different parts of the world could benefit from clearer messaging, and from integration as part of broader approaches.[2097]

Little shops should sell healthier option and their vendors could be the agents of change, receiving themselves that nutritional education too.[2098]

It is important to raise awareness, provide education and collaboration. Indeed, governments are concerned about providing food to their population without knowing the importance of nutritious food.[2099]

Educating stakeholders about how to lower their ecological footprint.[2100]

Raising awareness on sustainable production and consumption of food through 1) educating stakeholders about how to lower their ecological footprint.[2101]

[2092] 97:6 ¶ 62 in 258a_Apr_23_21_IICA_eng

[2093] 102:22 p 8 in 326_May_5_21_ICLEI Africa_Multi

[2094] 124:9 p 7 in 142_May_11_21_Carter L_Dennis S

[2095] 127:4 p 7 in 159_Apr_21_21_Hafeez M

[2096] 138:12 p 8 in 214_May _05_21_50by40

[2097] 141:32 p 13 in 229_May_18_21_NFP_Rabobank_Multi

[2098] 146:13 p 8 in 235_May_25_21_Gonzalez B_Multi

[2099] 151:31 p 9 in 261_May_03_21_Carrara_Le More

[2100] 165:13 p 7 in 310_June_14_21_FAO

[2101] 166:14 p 7 in 355_June_14_21_FAO

Communication must be bi-directional, from leaders to stakeholders and the grassroots members.[2102]

Financial Institutions must understand that it is not the whole agriculture value chain that is implemented in the rural areas, some aspects such as packaging and transport logistics can be carried out in urban centers.[2103]

Within the discourse of sustainable investment, participants also identified need for investment in financial education for market actors to increase financial fluency, including teaching producers the importance of creating business models.[2104]

Fortunately, in parallel, satellite and communications systems and devices provide the high volume pipe for universal connectivity in real time. This multidirectional communication between all parts of the food system, including food production and nutrition scientists, farmers, transporters, economists, bankers, processors, marketers and consumers, will ensure knowledge is always in any hands, in the right form at all times.[2105]

The participants noted that once these basic issues are addressed, it is key to provide education and entrepreneurship training and resources.[2106]

Change in marketing language; Nutri-score (nutrition label that converts nutrition value into a 5 letter code).[2107]

Strengthen advocacy capacity of family farmers and local communities to fight for their land supported by research.[2108]

They explored the work of women in educating future generations on a better use of agricultural resources, nurturing the integral development of communities, and transferring knowledge in support of resilient, inclusive and sustainable food systems. This work, often unrecognized in public spheres, should also be supported through political and economic measures. The session was closed by Catalina Hinojosa López, from the Agriculture and Justice Village of the Economy of Francesco, who gave an inspiring testimony of her experiences with indigenous women in Ecuador and their role in perpetuating the buen vivir philosophy, by transferring knowledge to future generations about how to live in harmony with their communities and their environment. Working the land to ensure food for all, while caring for the earth and its people is possible.[2109]

Links with educational institutions to promote awareness and build capacity on the opportunities along the food system value chain (primary, secondary schools and universities). Awareness programs should also be incorporated in institutions such as

[2102] 177:68 p 13 in 335_May_26_21_Laar_Multi

[2103] 182:69 p 12 in 340_May_27_21_Mamba_L

[2104] 184:20 p 6 in 342_May_28_21_Peralta T

[2105] 194:52 p 15 in 352_June_04_21_Troughton J

[2106] 195:3 p 7 in 353_June_07_21_Blum N

[2107] 198:43 p 6 in 357_Apr 14_21_Harfouche S

[2108] 199:49 p 12 in 358_May_11_21_ILC_Multi

[2109] 200:9 p 6 in 359_May 17_21_FAO_IFAD

prisons and hospitals. In addition, explore utilization of available/vacant land adjacent to schools for urban agriculture as well as other activities along the food value chain.[2110]

Regional Education - value what is local.[2111]

Through the education process we can change the conversation.[2112]

Ensuring accurate, consistent and easy to understand information about safe food available to all consumers by 2030. People are individuals living in individual communities – as a result we need more global, granular level detail around the perceptions and behaviours to determine who people trust, the corresponding communication methods and the channels required to overcome challenges around accessibility of information. There is no one-size fits all solution, but we should look at broader education about food and more transparent communications which are tailored to communities and which people can understand and trust. In many parts of the world, the consumer, who may be facing significant economic and environmental challenges will be under pressure around the food decisions they make so public stakeholders together with the private sector need to collaborate to develop better standardization and certification. This in turn will also increase trust.[2113]

People rarely trust one source, they trust several, so public information that depersonalises information and presents it in a clear way can play a big role in food safety. We need to ensure that everyone purchasing, preparing and consuming food can access this information regardless of their situation.[2114]

Both government and other stakeholder may promote the establishment of adequate fish sanctuaries and sustainable management, along with awareness campaigns.[2115]

Educate farmers about nutrition.[2116]

Dissemination of information of climate change.[2117]

Short supply chains help establish contact between producers and consumers, and increase understanding of different cultures.[2118]

There is a need to strengthen the awareness of the key role that family farmers play in overcoming poverty and malnutrition, in environmental protection, as a source of employment, and their enormous contribution to sustainable food systems.[2119]

[2110] 201:19 p 7 in 360_May_18_21_ICLEI Africa_Multi

[2111] 204:18 p 9 in 363_May_26_21_Mehta_Bautista

[2112] 204:24 p 10 in 363_May_26_21_Mehta_Bautista

[2113] 207:11 p 8 in 366_May_27_21_Cumbers S

[2114] 207:14 p 8 in 366_May_27_21_Cumbers S

[2115] 208:12 p 7 in 367_May_27_21_Kachulu_Thilsted

[2116] 209:5 p 7 in 368_May_31_21_Lao Farmer

[2117] 209:14 p 7 in 368_May_31_21_Lao Farmer

[2118] 211:17 p 10 in 370_June_01_21_WWF Sweden

[2119] 214:7 p 7 in 374_June_03_21_DG INTPA

Food resilience and INRM are embedded in the SDGs, but due to a lack of concrete definitions, guidelines, and handbooks to define INRM, conventional agricultural practices are still promoted as supporting SDG 2&3, despite its often negative impacts on SDGs 6, 10, 13, 15, and 16. It is recommended that the UN system produce a guidance policy document on INRM's efficacy on food systems.[2120]

Information drive promoting local products/food safety.[2121]

There is need to increase social awareness on food systems and some proposals for the creation of grievance and redress committees with compensation as well as, to seek equal treatment for farmers/fishers, agrarian reform (AT4).[2122]

Enterprises around ethnic cuisines also need to be encouraged, which can enhance income opportunities, boost the local economy, and advance equitable livelihoods. The ethnic food market can grow through product diversification and proper branding (for example, dog chews made from traditional hard cheese, and cardamom masala from the HKH region). SAARC Business Association of Home Based Workers (SABAH) Nepal has brought together ethnic communities, their food products and cuisines together, contemporized their presentation and promoted these cuisines through enterprises, which not only contributes to the conservation of traditional cuisines and food system knowledge, but also support the livelihoods of small, farm-based women communities. Tourism packages and homestays serving ethnic food can also be an option for livelihood diversification. Ethnic food based enterprises can also help place indigenous communities as important strategic partners in the food value chain, not just as producers of the ingredients. Government-led programmes should also prioritize mechanisms for engaging small farmers and small family-based farming in agribusiness and food-based value chains.[2123]

The importance of effective framing and messaging to shift decision-making, with a focus on a positive (value-based) decision-making narrative was highlighted. For example, repurposing subsidies can create value for nature, people and society. Indeed, internalizing in policy and regulatory frameworks the natural, health and social costs that are currently unaccounted for, will facilitate upscaling of sustainable and healthy food production and consumption. Consumers are considered as drivers in their demand for more sustainable and healthy food.[2124]

In relation to effective framing and messaging to shift decision-making the following actions were formulated: i) promote a focus on positive messages including long-term value in terms of the environmental and health benefits of food systems transformations, rather than focusing only on the negative impacts (identify and value/account for positive impacts); ii) communicate to stakeholders groups in a tailored and comprehensive way with solid scientific grounding; iii) improve the articulation of the business proposition on True Cost Accounting and value-based decision-making to stakeholder groups; iv) engage

[2120] 216:8 p 7 in 377_June_07_21_Arden_Caucci

[2121] 218:13 p 6 in 379_June_08_21_KAMMPIL

[2122] 218:19 p 7 in 379_June_08_21_KAMMPIL

[2123] 219:20 p 11 in 380_June_08_21_Shakya_Chettri

[2124] 220:3 p 6 in 381_June_08_21_UNEP_Multi

in a forward-looking approach, with a focus on future visions and opportunity pathways; v) the need for inspiring case studies; and vi) the need to translate numbers into concrete policy recommendations.[2125]

There is need to build the capacity for scientists to lobby for science for the development of a particular aspect of the respective country.[2126]

In this discussion group, consumers conveyed the difficulty of accessing information about water usage in food production. There was a widespread consensus that good, reliable, and unbiased information is hard to find. The top three solutions consumers could adopt are: Educating themselves more about water footprint. Revaluing water by becoming more aware of how precious a resource it is.[2127]

Expansion and development of food education programs and projects with the inclusion of indigenous/traditional food cultures and valorizing diversified diets consistent with Brazilian social and biological diversity.[2128]

Construction and dissemination of communication strategies related to healthy diets and sustainable food systems, valuing the narrative of real food and food sovereignty. Campaigns and communication strategies aimed at increasing general knowledge on (a) the right to food; (b) safe/nutritious and agro-ecological foods; (c) and the role of farmers, fishers, family extractors and traditional communities (indigenous, quilombo settlements, caiçaras, etc.) in Brazilian food security, highlighting the relevance of women.[2129]

Narratives – Present a narrative that highlights the power of family farming and agroecology in relation to commodities production. In Brazil, the hegemonic strength of monoculture agribusiness prevails, which purports to be salvation for food security yet poses a contradiction: the country as a major food producer but more than half of the population with some degree of food insecurity.[2130]

Marketing/advertising: Need to regulate advertising for ultra-processed foods, especially in schools, and to scale up the dissemination of the Brazilian food guide.[2131]

Recognizing healthful and unhealthy food: informed consumers and guaranteed nutrition education. Urgent and necessary actions in the next three years: Awareness: The National School Meals Program is an important strategy for promoting healthy eating by offering food and Food and Nutrition Education activities linked to the program that foster healthy eating habits. It is necessary to sensitize managers about the importance of school meals and to provide guidance on food hygiene, eating habits, the importance of respecting traditional food cultures, and buying food from family farmers/fishers/extractivists. The raising of awareness should be extended to the entire population via (a) food education

[2125] 220:11 p 11 in 381_June_08_21_UNEP_Multi

[2126] 223:14 p 8 in 384_June_09_21_Ekwamu A

[2127] 224:12 p 8 in 385_June_09_21_Lazzaris S

[2128] 228:16 p 6 in 222a_May_11_21_FTI_ZHI_English

[2129] 228:19 p 6 in 222a_May_11_21_FTI_ZHI_English

[2130] 228:24 p 8 in 222a_May_11_21_FTI_ZHI_English

[2131] 228:30 p 10 in 222a_May_11_21_FTI_ZHI_English

programs (both on healthy eating and on its territoriality) by providing information on food in a transparent and simple to understand way; (b) campaigns promoted by consumer protection agencies; and (c) actions to combat false information about what is (or is not) a healthful diet.[2132]

Create narratives and campaigns that clarify that agribusiness does not produce food for people. The commodity agribusiness campaign [roughly translated, "Agro is Us, Agro is Everything"] co-opted the food agenda to hide the interests of big companies and political speech. It is important to use all means of communication, including radio.[2133]

Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.[2134]

Radically increase public discourse on the importance of food systems and what to do so that the public works for the people and the planet.[2135]

At the same time, the importance of nutrition education and a balanced diet at all socioeconomic levels was emphasized in the conversation. It was considered appropriate to mention this topic since some foods in the population's diet have been "demonized." This is criticized as affecting the extent of these micronutrients in the population. A joint effort between health care workers and nutritionists is proposed to destroy the myths around the consumption of products such as sugar and flour in order to be able to choose food staples that can help eradicate malnutrition in the region.[2136]

It is necessary to communicate to the consumer the form and conditions of production so that the consumer knows the effort that the sector is making with regard to sustainability and animal welfare. To achieve this, a global education of consumers is necessary in the activities carried out by the food waste sector.[2137]

There is the need to train media on science-based communication.[2138]

Big industries/companies taking over areas and the coastal communities being exploited – Making sure the community has more control over the cultivation, harvest, and sale.[2139]

Lots of knowledge has been built up and introduced to farmers, but processors, retailers and consumers have to be educated as well.[2140]

[2132] 228:38 p 12 in 222a_May_11_21_FTI_ZHI_English

[2133] 228:60 p 18 in 222a_May_11_21_FTI_ZHI_English

[2134] 229:11 p 8 in 226a_May_17_21_Oteyami O_English

[2135] 235:2 p 6 in 276a_May_13_21_CCIE_English

[2136] 235:8 p 8 in 276a_May_13_21_CCIE_English

[2137] 237:7 p 8 in 284a_May_19_21_INTERPORC_English

[2138] 262:38 p 7 in 498_June_24_21_Danquah E

[2139] 264:93 p 13 in 500_June_26_21_Edible Issues

[2140] 273:22 p 6 in 509_June_30_21_FFA_Nestlé

…a major need to educate the stakeholders of the food chain on what Regenerative agriculture means, and why it needs to be valued and supported by them, and the larger public.[2141]

All stakeholders should crate consistency in measures and communication.[2142]

All sectors of the food system need to understand the definitions and goals of food systems, and they need to be owned by everyone. Outcomes will suffer if there is not a shared vision.[2143]

Build a common, uniform communication plan for all parties noted in section 2.3.1 for promoting public health, expressed in plain and simple language for all sectors (adjustment of discourse to relevant sector).[2144]

Build an education plan to promote healthy life style from kindergarten age until academia, in which all bodies noted in 2.3.1 shall participate, crossing boundaries and genders. Israel is a small country, and major impact can be made in it.[2145]

Secondly, because entrepreneurs have the ability to influence the food environment, policy should connect entrepreneurs to the upcoming food dietary guidelines in order to engage the private sector with healthy and nutritious food.[2146]

For example, hermetic storage bags which has been around for about a decade but there has been a low adaptation level by farmers. Probably the key solution will be to engage entrepreneurs who will reach the farmers to educate them and supply them with his packaging at affordable prices.[2147]

In inner areas, property is fragmented and soils unproductive; actor-to-actor coordination along the food chain helps achieve scale and upgrading to higher-value activities. The cases showed that, alongside traditional cooperatives, new contracts forms can respond to diverse needs (like the "network contract").[2148]

Develop and disseminate toolboxes to facilitate coordination among private enterprises. Awareness campaigns and exchange of practices to revamp collective action through new instruments that reconcile private incentives with long-term coordination.[2149]

One of the most effective things a country could do over the next 10 years would be to train teachers in their PGCE the importance of good, real, whole, nutritious food for children. In their training, teachers should be taught the physiological implications of poor diet and and the negative effect of obesity on IQ and cortex development as well as the link between

[2141] 273:45 p 10 in 509_June_30_21_FFA_Nestlé

[2142] 273:55 p 10 in 509_June_30_21_FFA_Nestlé

[2143] 280:10 p 6 in 516_July-01_21_Anastasiou K

[2144] 297:25 p 8 in 533_July_07_21_Gazit GS

[2145] 297:29 p 8 in 533_July_07_21_Gazit GS

[2146] 300:23 p 6 in 536_July_08_21_Musabyimana JC

[2147] 300:43 p 11 in 536_July_08_21_Musabyimana JC

[2148] 306:5 p 6 in 542_July_12_21_Prota_L

[2149] 306:7 p 6 in 542_July_12_21_Prota_L

food and behaviour/concentration in class. If children do not have access to their fundamental right to good food, - nutrient dense food and not just calories - they are also less likely to partake in academic learning so it is in the teachers interest to make sure children and youth are fed properly. If teachers were taught the importance of this in training, they would be less likely to accept unhealthy or cheap food in the schools they work in.[2150]

Promote local product development – agricultural extension and other rural entrepreneurship/advisory e.g. branding, name recognition and identification with geographic region.[2151]

Participants also pointed to the importance of recognizing the extractive nature of many food supply chains. A more restorative system would invest in women and the BIPOC communities that are on the front lines of many of the issues that sustainable food businesses are striving to solve. Participants agreed that we must bring in the people and communities that are closest in proximity to these issues. Moving forward, different voices including historically forgotten and underrepresented communities need to be in conversation with food business. These conversations should focus on local and culturally appropriate solutions that serve all eaters.[2152]

Government and industries shall join hands to provide better marketing facilities to dryland farmers and conduct large scale awareness and PR campaigns on the available marketing and warehousing facilities and subsidy schemes.[2153]

Build resilience to vulnerabilities, shocks and stress: The participants noted that the COVID-19 pandemic has had a significant impact upon our global food systems and/or that the COVID-19 pandemic has highlighted the extreme vulnerabilities within our global food supply chains. Therefore, more needs to be done by all relevant stakeholders to ensure that small farmers can access markets and production products during these extremely difficult times. Nevertheless, one practical solution to this issue it was noted, may be to ensure that small farmers have access to information across the supply chain. That would not only enable them to anticipate and plan for bottlenecks but also lulls in the market for certain produce.[2154]

In some contexts, informal education and innovative ways of raising awareness among farmers towards innovation can be more important and effective than formal education. Some examples of informal education: Extension services: decentralization policies and focus on infrastructure are undermining the governmental extensions services that lack resources in Sub-Saharan Africa. Other actors such as NGOs or non-academic research centers are playing an important role for fostering informal education. Promoting "modern farm models" as platforms where other farmers can learn how to implement technologies and where they can cooperate to share inputs to implement solutions. New

[2150] 308:37 p 10 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[2151] 310:17 p 7 in 546_July_13_21_INDEP

[2152] 316:25 p 9 in 553_July_15_21_Food Tank_Oatly

[2153] 321:25 p 16 in 558_July_16_21_RICH_ICRISAT

[2154] 323:36 p 13 in 560_July 19_21_Arbuthnott_Multi

ways of promoting capacity building and awareness are based on the co-construction of knowledge and dialogue and communication among different categories of stakeholders through a multi actor approach. An example of this kind of practices is the case of the "Theatre Forum" on climate change adaptation strategies (see https://futureclimateafrica.org/coproduction-manual/).[2155]

Expand preventative measures against malnutrition and programs creating awareness on food fortification and micro-nutrients.[2156]

Increased awareness raising for legislative officials to reinforce advocacy for action by ministries and agencies.[2157]

Regarding the durability and sustainability of the production systems, the principles of sustainable agriculture were presented as relevant for three levels of need: economic viability, prevention of damage to the environment, and socioeconomic equity. To arrive at those, on the one hand it is necessary to build awareness among local stakeholders regarding agricultural best practices (awareness-building largely using modern communications channels, adoption of shock communications methods if necessary) and on the other hand to implement the means necessary to promote these sustainable and resilient production methods while preserving the food security of households. To do this, the group insisted on the need and urgency to adopt measures of economic incentives and to promote appropriate new technologies in order to guarantee a stable offering of foodstuffs with adequate nutritional value to which the vulnerable groups will have access.[2158]

Skills, training and awareness-raising for the various key actors and professionals who act in school meals, but also with the general public, in sessions that promote an integrated and holistic understanding of the school meals program.[2159]

Establishment of dialogues with supermarkets in an effort to raise awareness about purchasing produce from family farms (unsuccessful).[2160]

Public policies must be promoted; the international market harms small farmers, the political struggle is difficult; recognition of the rights of farmers must be achieved, such as influencing local governments in the events to support and not oppose policies such as cutting the subsidy to agrochemicals, and support small farmers.[2161]

What actions should be disseminated beyond the Summit? Margarita: Take these events to a national level; people do not know about the Summit; many farmers' organizations contribute to increasing the political vision, disseminate it in the media. Family Farming NGOs in each country should promote reflection. Jerónimo, SPP Small Farmers Network:

[2155] 324:45 p 11 in 561_July_19_21_OCCAM

[2156] 330:29 p 7 in 568_July_21_21_Cooper-Liverpool M

[2157] 330:70 p 13 in 568_July_21_21_Cooper-Liverpool M

[2158] 338:5 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

[2159] 339:7 p 6 in 393a_June_01_21_Food of Tomorrow_Eng

[2160] 339:24 p 9 in 393a_June_01_21_Food of Tomorrow_Eng

[2161] 342:7 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

Promote methods of cultivation and consumption, unite the efforts of the organic and agroecological movement; there are common points. On a small scale, there is collective strength, horizontality, and dialogue.[2162]

Awareness, education, and communication for vulnerable

Enhancing data collection tools to capture the data of vulnerable groups, the inclusion of these vulnerable groups in policy planning and implementation processes, incentivizing groups by providing tailored education and support for them, are some of the strategies to build a more inclusive food system in the country.[2163]

Sixth, address the issue of affordability, including through specific demonstrated nutritional needs for vulnerable groups and support diet-related health programs.[2164]

Over half a million women die annually due to maternity complications. Therefore there is need to understand the linkages between women's empowerment, decision making power and maternal health care. Better information and messaging for vulnerable groups is required. Better investment, better education, more health workers and nutritional services are needed to cover these vulnerable populations. A system approach that involves schools and educational departments can help integrate maternal health education into curriculums.[2165]

Countries should invest in better education, more health workers, nutritional services and messaging for vulnerable groups. For example, Village Nutrition Volunteers - conduct community nutrition activities and nutrition education; help establish home or community vegetable gardens; formulate village nutrition action plan; prepare master list of wasted, stunted, under- and over-nourished children, pregnant and lactating mothers.[2166]

Defining vulnerable groups, including women, through vulnerability assessments and offering financial support and access to investment as well as information.[2167]

Awareness, education, and communication for women

Address challenges facing women farmers, such as lack of access to land, financing, markets, agricultural training and education, suitable working conditions, and equal treatment.[2168]

Sensitize the rural population to the integration of women in development.[2169]

[2162] 342:9 p 6 in 416a_June_16_21_Mone S_Spanish_Eng

[2163] 44:10 p 6 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[2164] 78:11 p 8 in 110_Apr_14_21_Carrara E_Multi

[2165] 120:14 p 7 in 127_May_13_21_IAFN_CWFS

[2166] 120:30 p 11 in 127_May_13_21_IAFN_CWFS

[2167] 132:37 p 10 in 193_Apr_19_21_Ringler_Kassim

[2168] 429:120 p 7 in 470_June_17_21_Burian_Multi

[2169] 520:8 p 8 in 107a_June_22_21_Trimarchi A_Eng

Ensure women have the same access as men to education.[2170]

Redesign Farm Schools to promote and support women - Invest in ethical micro-finance and training to support women.[2171]

Agricultural and food systems must be treated as profitable and viable businesses to become more attractive to larger numbers of African young people and women…[2172]

Young people are abandoning the rural areas. Agriculture in these areas is practiced mainly by women and young people; the state must put in place mechanisms to make agriculture attractive in these areas and promote a return to the land.[2173]

Education opportunities for women farmers include working on food supply chains (processing) and teaching agribusiness, managing savings etc. Youth friendly women's farmers' federation increases economies of scale to be able to access to markets and improve consistency of supply.[2174]

Mama programme - supports women to distribute their product through building an inclusive supply chain and access to market and training and finances.[2175]

Ensuring financial and nutritional education through cooperatives to move women on a path to agency and empowerment.[2176]

…helping entrepreneurs, providing knowledge and access to training and financing.[2177]

Food banks respond to population health needs by targeting the most vulnerable populations, especially in contexts without a social safety net. They address community health disparities through food and related services, serving as critical infrastructure for the healthcare, educational, economic, and social sectors. The Lagos Food Bank provides meals for students, and mothers and children living in underserved communities. It also empowers women through training on how to grow their own food and sell part of what they produce, which creates pathways for more self-reliance and community resilience.[2178]

Education. If we are going to generate change, we need to focus on education. It is the true pillar for change. We need to educate on resources and systems, and teach people the real value of food.[2179]

[2170] 429:149 p 10 in 470_June_17_21_Burian_Multi

[2171] 430:15 p 6 in 471_June_08_21_van Liere M

[2172] 510:33 p 13 in 079a_May_27_21_NGA_Soung_Eng

[2173] 524:4 p 6 in 119a_July_08_21_Moussavou B_Eng

[2174] 430:29 p 8 in 471_June_08_21_van Liere M

[2175] 430:36 p 10 in 471_June_08_21_van Liere M

[2176] 430:38 p 10 in 471_June_08_21_van Liere M

[2177] 430:39 p 10 in 471_June_08_21_van Liere M

[2178] 501:37 p 8 in 397_June_04_21_WHO_Multi

[2179] 504:19 p 6 in 400_June_09_21_Viera_Pollmeier

Awareness-building and knowledge transfers - Build awareness about the benefits of wild foods; hold activities that will facilitate knowledge and skills transfer.[2180]

Create more awareness on women's land right.[2181]

Improving communication of the benefits of innovations and the science that supports them, and reducing the distance between academia and politics, are essential factors for a better understanding of scientific data in the definition of public policies.[2182]

Introduce clear measures so that women have better access to financing, technology, information, and training.[2183]

Infuencing women is essential if progress is to be made in this area, as women are predominantly responsible for making decisions regarding feeding their family. In order to have the maximum impact this education needs to begin in the classroom. Initiatives which link consumers to their food, for example LEAF's Open Farm Sunday in the UK, also have a role to play in achieving this outcome.[2184]

Providing women more resources, information on agriculture and business, as well as sharing inspiring stories about women farmers and entrepreneurs.[2185]

Conduct knowledge exchange events, to help in exchange experiences and information with women farmers.[2186]

To ensure the future vision of food systems, a generational change of producers is needed by empowering and including youth and women; ensuring equal payment and raising awareness is essential.[2187]

Lastly, the growing global population is straining food systems. Population growth should be slowed down by educating women and girls and increasing awareness of family planning and contraception methods.[2188]

Whereas women tend to produce crops for local consumption, men are more interested in growing highly profitable vegetables. Women tend to make decisions on what kind of food a family eats (local or imported) and that's why it would be important to educate especially women on sustainable production methods and healthy nutrition.[2189]

[2180] 408:18 p 7 in 449_March_08_21_Wild Foods_Multi

[2181] 413:8 p 7 in 454_May_12_21_Dunor-Varney_Multi

[2182] 491:33 p 7 in 301_May_27_21_CropLife Latin America

[2183] 3:12 p 9 in 099_Mar_31_21_FAO_IFPRI

[2184] 6:14 p 9 in 166_Apr_14_21_Meat Business Women

[2185] 9:5 p 6 in 171_Mar_31_21_Atilano C

[2186] 9:19 p 8 in 171_Mar_31_21_Atilano C

[2187] 53:12 p 5 in 001_Nov_5_20_CGIAR

[2188] 79:26 p 8 in 118_Apr_21_21_Huvio T

[2189] 79:32 p 9 in 118_Apr_21_21_Huvio T

Education Programs Facilitate girls' access to go to and stay in school and promote continuing education and vocational training. Girls' education from an early age is particularly important in addition to women's education. Formalized mentorship and educational programs for girls tied to other social engagements such as sports and health. These have potential to build confidence and agency.[2190]

Motherhood and breastfeeding needs improved education, understandable, and re-valued.[2191]

Provide education and early support for women and mothers who are the first to introduce and educate the young about food.[2192]

Provide education and support to mothers and families about the benefits of breastfeeding.[2193]

Empowering and connecting women and increasing their participation in policy making to address their needs and challenges through digital technology.[2194]

There should be education and support programmes that are specifically developed for youth and women to enable them to participate in production of fruits and vegetables.[2195]

In order to develop capacity of women, custom-made education and support programmes must be developed to encourage them to participate, these include field days where motivation can be instigated from other women that are already in the industry. Promote equipment that does not require immense manpower.[2196]

Sensitization and mobilization programmes must be pursued to capture women and youth interest and eventually inspire them to take action.[2197]

Present securing agricultural land as a means to promote agricultural work among youth and women, showcasing it leads to sustainable way of life.[2198]

Most African women agri-preneurs, particularly in rural areas, have limited access to information and business networks. It was noted that the switch to virtual communication, e-opportunities and on-line platforms during the COVID-19 pandemic has increased women's marginalization. It was voiced that improving women's access to information and business networks is critical for moving women agri-preneurs away from production related activities to more profitable processing and value addition enterprises.[2199]

[2190] 120:38 p 14 in 127_May_13_21_IAFN_CWFS

[2191] 146:15 p 8 in 235_May_25_21_Gonzalez B_Multi

[2192] 148:10 p 6 in 240_May_27_21_Schwartz A

[2193] 148:11 p 7 in 240_May_27_21_Schwartz A

[2194] 157:49 p 9 in 278_May_18_21_Gregorio B

[2195] 173:48 p 12 in 331_May_24_21_LNFU

[2196] 173:50 p 12 in 331_May_24_21_LNFU

[2197] 173:112 p 18 in 331_May_24_21_LNFU

[2198] 199:50 p 12 in 358_May_11_21_ILC_Multi

[2199] 255:8 p 7 in 491_June_23_21_Dido_Otieno

Women agri-preneurs' low use of digital technologies holds them back in several areas, notably, accessing digital financial services, markets and information and prevents them from taking full advantage of social media and digital agribusiness platforms such as VALUE4HER to grow their agri-enterprise. It was emphasized that publicizing information on agriculture related tools and equipment particularly through information channels used by women producers, explore innovative ways to improve women's digital education and use of digital technologies and spaces by, for example, organizing women agri-preneurs into collectives headed by a tech-savvy leader.[2200]

Emphasise the role of small fish in human nutrition and livelihoods, particularly for women.[2201]

Provide capacity-strengthening support to organisations, social movements, networks, and for women's collective action, including legal and negotiation training skills.[2202]

Prepare teachers to give good school and career advice to girls and have strong role models. Project-based learning with established women entrepreneurs as mentors. This influences motivation but also equips young women with better networks and services if they choose to venture in agriculture.[2203]

Behaviour change and communication programs are critical in enabling the participation of women and youth in the value chain. Increasing job creation in the agricultural sector can minimize the economic and social impact of male out migration. Digital tools for market linkages, advisory services and weather data can help in creating accessible pathways for underserved sectors. Aggregating farmers through formal organisations such as farmer producer companies (FPCs) can help develop linkages between farmers and other value chain/industry actors, including academia, for knowledge exchange and capacity building. Such linkages can increase their bargaining power as value chain actors and also help producers develop demand-based products that meet consumer needs and preferences. Multi-stakeholder cooperation and participatory monitoring and evaluation contribute to making value chains more inclusive.[2204]

Scale-up advocacy on exclusive breastfeeding for babies and importance of nutrition for nursing mothers.[2205]

Nutritional information and education: in particular on the level of school children (promotion of school cafeterias) and women who play a key role in the nutrition of young children, but not only (all members of the household must be made aware of this issue); particular focus on consumers and their associations, potential stakeholders who influence the entire system through their food choices.[2206]

[2200] 255:10 p 7 in 491_June_23_21_Dido_Otieno

[2201] 263:17 p 6 in 499_June_25_21_GANSF

[2202] 263:46 p 9 in 499_June_25_21_GANSF

[2203] 272:17 p 7 in 508_June_30_21_GDPRD

[2204] 313:21 p 8 in 549_July_14_21_Meah N

[2205] 330:23 p 7 in 568_July_21_21_Cooper-Liverpool M

[2206] 338:10 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

Awareness, education, and communication for youth

Make links between city youth and rural youth. Youth need an enabling environment and there must be a strong education on sustainable food chains. Younger generations are the ones who will take on the new roles in society in the future.[2207]

Adaptation on market management and a shift on consumption behavior (through education) among young people are equally vital.[2208]

Sustainable food education needs to be more systematic and easily accessible on campus.[2209]

Agricultural and food systems must be treated as profitable and viable businesses to become more attractive to larger numbers of African young people and women…[2210]

Child nutrition and food education at home and at school… "easy to handle" for the staff, such as fried foods, hamburgers, pizzas, etc.[2211]

The conversation revolved around the question of how to promote the reuse of waste. The group proposed the generation of skills and knowledge through education. Two population segments were given greater importance: children and young university students. Children are important in order to generate long-term changes. While importance was given to academia and young people, in order to bring the new generations of professionals closer to circular economy.[2212]

Young people are abandoning the rural areas. Agriculture in these areas is practiced mainly by women and young people; the state must put in place mechanisms to make agriculture attractive in these areas and promote a return to the land.[2213]

Education in schools should be a priority, with communication strategies that value positive messages, as research shows that negative messages have little effectiveness in changing habits. Edu Communicative practices were recommended, as they are based on dialogue, respect for human rights, a critical reading of the media and must be co-constructed between different actors.[2214]

-Youth need to see agriculture as an interesting job;[2215]

[2207] 364:33 p 10 in 415_June_16_21_van Schoonhoven M

[2208] 368:2 p 6 in 412_June_15_21_CBCGDF_Multi

[2209] 508:2 p 7 in 069_May_16_21_SFEAN_Multi

[2210] 510:33 p 13 in 079a_May_27_21_NGA_Soung_Eng

[2211] 513:18 ¶ 357 – 362 in 090a_May_29_21_Theunissen D_Eng

[2212] 516:5 ¶ 326 in 098a_June_10_21_Caballeros C_Eng

[2213] 524:4 p 6 in 119a_July_08_21_Moussavou B_Eng

[2214] 389:64 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[2215] 412:3 p 6 in 453_May_10_21_Kerr_Divine

Awareness generation among schools children and mothers for improved food habits and better diet.[2216]

The need to debunk the idea that agriculture is not economically rewarding and unattractive to the youth but that it can be modernized, made more productive, and more economically rewarding.[2217]

Make farming more attractive to young people to create greater prosperity in the agriculture sector. Youth have ideas and awareness of new technology, and they can be a key solution in protecting farmer rights and making society regard farmers as an important area of expertise for prosperity.[2218]

Raise Students' awareness of the true cost of food Based on the existing nutrition and health perspective, expanding monitoring dimensions of the intelligent system to fully utilize its scientific, accurate and transparent information, can raise students' awareness of the true cost of food and the benefits of healthy eating from all aspects. Thus, they can be nudged to better eating habits.[2219]

We are committed, and ask Member States and associated parties to join us, in educating the younger generations about our connection to the Earth through our food systems, teach how to sustain the holistic nature of Indigenous Peoples' food practices and culture, and provide opportunities to learn and maintain the legacy of Indigenous Peoples' food systems, land tenure and natural resource management. They are our best allies and central to the future of food systems.[2220]

Educate young minds on the importance of preservation of ingredients and acknowledging the entire products, for example through traditional culinary methods.[2221]

Conduct massive campaign particularly for youth through social media and engage influencers.[2222]

Show young people opportunities in production and value addition through on-farm demonstrations.[2223]

Farm-to-school programs in Hawai'i are good models to integrate farming and education for children and adolescents.[2224]

Youth are losing their cultural identity because of the food system (marketing of fast food, "traditional food is for older persons", shift in nutritional preferences) so efforts are needed to reconnect youth to their culture through food - and provide economically

[2216] 418:17 p 6 in 459_June_01_21_Rashid Md J

[2217] 425:18 p 6 in 466_June_17_21_Ekwamu A

[2218] 429:221 p 15 in 470_June_17_21_Burian_Multi

[2219] 444:14 p 6 in 027_Feb_02_21_CBCGDF_UNFSS

[2220] 449:23 p 8 in 390_May_28_21_UNPFII_FAO

[2221] 504:17 p 6 in 400_June_09_21_Viera_Pollmeier

[2222] 10:3 p 7 in 181_Apr_8_21_Miranda

[2223] 16:18 p 8 in 251_Jan_25_21_World Vegetable Center

[2224] 19:6 p 6 in 115_Apr_24_21_Foronda_Multi

rewarding/ viable income to incentivize youth to be involved in the food system. Changing the narrative around the idea that food is not a commodity; it defines social interaction, brings people together culture, cultivates our relationship to the land. We need to speak about food from different perspectives including: "The food system as a social determinant of health" "Farming is rewarding" "Food sovereignty and decolonization of food systems" "Food access as a human right" "Food as a public good" "The land is the chief, we are the servants" "Local food is a bridge between culture and food supply chain".[2225]

Categorically, all stakeholders (research institutes, CSOs, government, private sector) are called to collaboratively design and adopt peer-to-peer national campaigns to educate and mentor youth as active agriprenuers -introducing agrictech (such as hydroponic farming, digital procurement, e- commerce, smart farming, weather & climate services, digital finance.[2226]

A more robust national and regional e-waste public relation campaign needs to be done, and focus on a collaborative approach. The regional e-waste capacity building training and awareness approach should start in regional primary schools, then expand into secondary schools and universities. This will ensure that there is generational appreciation for the proper handling, disposal and treatment of e-waste.[2227]

Education at all levels primary, secondary, and tertiary needs to focus on how important it is to value or biodiversity. There needs to be new subject on the curriculum which focuses on social studies and agriculture: Agro-civics. We can seek to engage stakeholders in the educational ministries and lobby effectively. The goal would be to adopt a multifaceted approach to enhancing an appreciation/value of our own biodiversity by creating a subject that complements traditional agricultural sciences and makes it more relevant to our regional needs, and the attainment of the UN Sustainable Development Goals.[2228]

The future generations need to be appreciative of the potential value of our local biodiversity.[2229]

We can shift to sustainable consumption patterns by creating a resilient framework for farmers to be properly educated from a tender age about the entire process of farming skills; reshaping the conversation about the purpose and the benefits of agriculture across the Caribbean; and by involving agriculture into schools to educate younger population from an earlier age.[2230]

Propose a World Nutrition Day. Increase consumer awareness and motivate and enable them to make good and healthy choices through social media, training and educational workshops, and providing offers on health products. Raise awareness among media workers of the importance of healthy food. Raise awareness among media workers of importance of healthy food and building on consumers' interests and perceptions of

[2225] 19:12 p 8 in 115_Apr_24_21_Foronda_Multi

[2226] 33:32 p 12 in 084_Mar_17_21_UnyimeAbasi B

[2227] 35:52 p 8 in 095_Mar_27_21_Chinapoo C_Multi

[2228] 35:70 p 10 in 095_Mar_27_21_Chinapoo C_Multi

[2229] 35:77 p 10 in 095_Mar_27_21_Chinapoo C_Multi

[2230] 35:84 p 11 in 095_Mar_27_21_Chinapoo C_Multi

nutritional risks to change their food behavior. Set up appropriate educational programs, courses and group activities targeting children and youth to changing consumer behavior, and use social media to achieve this goal.[2231]

The need to integrate young and local leadership, emphasizing the need for education for the younger generation and future decision-makers in landscapes which was not explicitly stated, for knowledge transfer of landscape wisdom.[2232]

Remove or reimagine grocery stores to connect consumers more directly to the farmer and their food; increase education on healthy eating by way of revitalized home economics in schools, school interactive education with farmers, and through legislation with encourages more Urban Agriculture (UA) and diversity of farm owners.[2233]

Creating a school program where the culture surrounding each of the different fruits and vegetables and how they are used in different islands. We understood how it could help create a future generation that could take advantage of the local vegetation by creating useful products. We want to create a system where some would be encouraged in the school feeding programs, but also the curriculum included teaching about the vegetation. Develop a procurement regime that gives preference to local and regional supply chain 10. Creating a body that would be able to work on behalf of all actors in a supply chain 1 supply chain at a time for example an inter island coconut supply chain body. Sharing of information and education along the supply chains is key.[2234]

To ensure the future vision of food systems, a generational change of producers is needed by empowering and including youth and women; ensuring equal payment and raising awareness is essential.[2235]

Actions to engage young people in science-based social movements include raising awareness by visualizing the potential future of food systems through education and exposure on social media platforms.[2236]

Including youth. Success in transforming to sustainable food systems will require the engagement of young people. Participants urged that education be oriented to young people in addition to on-site problem solving to advance sustainable agriculture.[2237]

Governments should invest in educating the youth on business, technology, and entrepreneurship from an early age.[2238]

[2231] 36:27 p 8 in 096_Mar_29_21_ESCWA

[2232] 37:10 p 6 in 097_Mar_30_21_EcoAgriculture Partners

[2233] 49:23 p 7 in 086_Mar_20_21_Rosatan B

[2234] 50:20 p 9 in 087_Mar_20_21_Chinapoo C_Multi

[2235] 53:12 p 5 in 001_Nov_5_20_CGIAR

[2236] 53:24 p 7 in 001_Nov_5_20_CGIAR

[2237] 54:39 p 9 in 002_Nov_19_20_CGIAR

[2238] 59:27 p 7 in 020_Jan_26_21_IFAN

Education for adults as well and not just for young people - move from mostly discussing quantity and price to a holistic vision that also includes quality. Education from an early age to consume healthy foods, especially fruits and vegetables.[2239]

Education on nutritious and native food needs to start at a young age and beyond. Accurate information needs to penetrate.[2240]

The role of schools can be pivotal in providing nutritious meals to children but also educating children on sustainable food production and systems.[2241]

Because children spend a lot of time at school, school meals are an essential part of strengthening children's nutrition. In addition, role of the school, for example through home economics and school gardens, can affect the food security of the whole household as children learn how to grow crops and understand the importance of a healthy and nutritious diet.[2242]

During the first part of the discussion, participants talked about how young people can contribute to a sustainable food system in innovative ways and what Food Banks can do to involve and communicate with young people. First of all, young people have a new mindset and attitude, they are increasingly aware of and care about issues such as sustainability, because they directly affect their future. A second key point was education. Educating young people about food and sustainability and involving them from an early age is key. For example, now often it's the kids that teach the parents new behaviours. Another buzzword for how to involve young people in food banking activities was „empowerment and participation ". They want to be engaged and be part of the processes and the organizations. Hybrid ways of involvement for example combining volunteering, training and workshops etc. could be a key factor for Food Banks. Another interesting thought on how to engage young people was through gamification, this could be school or university contests and projects, or hackathons, because many young people have an entrepreneurial approach. The participants talked about what added value young people can bring to the Food Banks and how they imagine the future of Food Banks. Digital skills for instance and the appreciation for more horizontal and less hierarchical ways of working will be a great asset for the future. Also establishing and strengthening partnerships with corporations, for example by hosting events in relation to food banking topics and engage young professionals.[2243]

Improve communication & education: Participants saw a role for better communication between farmers and the public, so that the public has a better appreciation for on-farm conditions. They urged more prevalent food/nutrition education to improve public health and combat unreliable information about food production. They also wanted young people

[2239] 64:93 p 13 in 041_Feb_17_21_Adler D

[2240] 65:20 p 9 in 050_Feb_23_21_World Vision Ireland

[2241] 79:3 p 6 in 118_Apr_21_21_Huvio T

[2242] 79:17 p 7 in 118_Apr_21_21_Huvio T

[2243] 81:10 p 10 in 145_May_6_21_Vandenschrik J_Multi

to gain better access to and understanding of where food comes from and how it is produced.[2244]

Schools can also enhance food systems education. Nutrition education is imperative when seeking to improve children's diets, while life skills and applied science and technology (e.g., STEM) should be incorporated as well. School gardens, farm tours and farmer visits can raise awareness of fresh and local foods among children and families. Participants saw a disconnect between these educational opportunities and current policy. The U.S. does not require nutrition education in schools and school meals are considered separate from the educational portion of the school day. These policy barriers, combined with lacking resource support, pose barriers to overcome.[2245]

Participants also discussed the need for more engagement with consumers and younger generations, noting their understanding of cow's milk production and the unique nutrient profile dairy foods provide (compared to non-dairy, plant-based alternatives). Targeted nutrition education efforts, focused on helping consumers understand date labels (e.g., differentiating between "use by" and "best if used by"), were referenced as ways to help reduce food waste. Like the child nutrition-focused groups, these breakout discussions also emphasized the importance of farm tours, including virtual farm tours, to build awareness and appreciation for on-farm practices and connect with young people to give them a voice in the future of sustainable food production.[2246]

Participants emphasized the importance of educating the public and younger generations on how their food is produced. They felt the public doesn't fully grasp the significant investments farmers put into their work and there is little awareness about the economic reality that farmers face. The U.S. dairy community has done a great deal in terms of environmental sustainability across the supply chain (from farm gate, processing facility, transportation, retail and consumer-level), but participants encouraged the sector to continue to share with consumers what is being done and why. In addition, the younger generation may not fully appreciate the extensive career opportunities available in agriculture. Participants suggested land grant colleges and extension services can help to reach youth and build awareness and excitement for these career paths.[2247]

Tailored education strategies In order to support the children of Aotearoa we need to ensure we have data on what and how this new generation is eating. Organizations that provide education to children around food would have better insight from new data on this generation and it would allow them to provide tailored education and measure the effectiveness.[2248]

[2244] 84:5 p 7 in 153_Apr_28_21_GCNF_Multi

[2245] 84:16 p 9 in 153_Apr_28_21_GCNF_Multi

[2246] 84:25 p 10 in 153_Apr_28_21_GCNF_Multi

[2247] 84:27 p 11 in 153_Apr_28_21_GCNF_Multi

[2248] 87:15 p 8 in 173_Mar_25_21_Mayne A

Better education/awareness to children who are in school now that will promote behaviour change from a younger age and can also include school food programs/meals that could impact both producers and consumers.[2249]

Communication with public, youth, schools using social media and other means. Better communication is also supported by more consistent terminology and metrics and by telling the livestock 'story' and the many vital ways it contributes to people's lives and livelihoods and ecosystems.[2250]

Making food education obligatory at elementary schools.[2251]

School nutrition (education and food supply) is a vital part of this.[2252]

Improve ag education, at a young age especially.[2253]

Youth are central to innovation and more programs are needs for students and to inspire youth globally to work in food systems.[2254]

School meals and school nutrition programs can be powerful for children to gain early knowledge on nutrition and health, knowledge that also trickles down to families.[2255]

Education Programs Facilitate girls' access to go to and stay in school and promote continuing education and vocational training. Girls' education from an early age is particularly important in addition to women's education. Formalized mentorship and educational programs for girls tied to other social engagements such as sports and health. These have potential to build confidence and agency.[2256]

Educational institutions play a big role in ensuring that the youth experience food production as a part of learning science and culture.[2257]

The education sector needs to be provided with financial support and capacity to educate the next generation in food production and food security as a matter of human survival. Courses need to be developed, teachers equipped and students provided with opportunities to explore how culture, science and values intersect in the ¦eld of food production.[2258]

Prioritize early age youth environmental education that highlight the role of organic agriculture in promoting Biodiversity Enhancement and Environment Sustainability

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[2249] 93:27 p 9 in 227_May_18_21_Tarawali S

[2250] 93:38 p 11 in 227_May_18_21_Tarawali S

[2251] 100:6 p 6 in 324_May_14_21_Guzanic J

[2252] 108:13 p 7 in 059_Feb_26_21_O'Doherty M

[2253] 110:6 p 7 in 067_Mar_05_21_O'Doherty M

[2254] 113:16 p 6 in 075_Mar_10_21_IFAN

[2255] 120:33 p 12 in 127_May_13_21_IAFN_CWFS

[2256] 120:38 p 14 in 127_May_13_21_IAFN_CWFS

[2257] 121:12 p 5 in 130_May_22_21_Foronda R_Gloria C

[2258] 121:38 p 9 in 130_May_22_21_Foronda R_Gloria C

(BEES), climate resiliency and with economic gains. The academe and organic agriculture enterprises should actively and continuously engage in information dissemination.[2259]

Food suppliers use localized brand strategies to spread a more environmentally friendly lifestyle, advocating young people to establish sustainable consumption habits, and obtain more recognition and support from consumers, thereby turning to more sustainable food consumption.[2260]

Teen and youth nutritional education is a must in order to have a second chance in improving their nutrition and future generations; if there is a process of developing strategic nutritional education, malnutrition will be reduced. Education has the power the impact personal and family decisions on food. We can follow previous learnings from food and nutritional security.[2261]

Through community kitchens all that cultural heritage can be translated, building community is a key aspect of collective change, to bring workshops for that knowledge to be replicated. Teach mothers to empower them, to recuperate the gastronomical heritage to pass on through next generations. Gastronomy education must also be done at a very early age. It's in our hands to transmit the information in the most adequate way and in clear formats.[2262]

Provide education and opportunities to young people so that they can farm their own land or land help by co-ops to encourage a new generation of healthy, community farms.[2263]

Women must be guaranteed equal pay and equal protections. Invest in education for children and rural communities about the importance of soil, crop diversification, and kitchen gardens.[2264]

Education – Education is critical to engage the SE FL community on improving food systems. Includes education of consumers about the environmental impact of diets and shelf-life, young people about careers in Food System and farmers about sustainability.[2265]

We need to integrate youth into the agri-food system by educating them using technology (social media, apps), having young people talk to other young people to engage them, increase communication on career opportunities in food systems, create a community education component on food systems and community growing in higher education.[2266]

They also said that advocacy, mentorship and funding opportunities for youth could assist with this shift.[2267]

[2259] 122:33 p 8 in 135_June_08_21_Calub_Gregorio

[2260] 145:12 p 7 in 233_May_22_21_CVS_Multi

[2261] 146:10 p 7 in 235_May_25_21_Gonzalez B_Multi

[2262] 146:19 p 9 in 235_May_25_21_Gonzalez B_Multi

[2263] 148:17 p 8 in 240_May_27_21_Schwartz A

[2264] 148:23 p 11 in 240_May_27_21_Schwartz A

[2265] 163:27 p 6 in 300_May_27_21_Alesso_Pommeret

[2266] 163:42 p 6 in 300_May_27_21_Alesso_Pommeret

[2267] 167:47 p 10 in 311_June_14_21_NCD Child

There should be education and support programmes that are specifically developed for youth and women to enable them to participate in production of fruits and vegetables.[2268]

In order to develop capacity of women, custom-made education and support programmes must be developed to encourage them to participate, these include field days where motivation can be instigated from other women that are already in the industry. Promote equipment that does not require immense manpower.[2269]

Sensitization and mobilization programmes must be pursued to capture women and youth interest and eventually inspire them to take action.[2270]

Young people needs to be empowered in terms of finance and loans to have access to their money.[2271]

To be resilient in the long-term, refugee youth need: training and access to information about nutrition, a means of food production, employment opportunities, and voice in decision-making about their future.[2272]

Make information accessible to youth about how they can access employment in food systems.[2273]

Agri-preneurship should be encouraged through the introduction of agricultural programmes for young people starting at primary school. Auxiliary measures such as the establishment of agricultural youth clubs (or associations such as the F.A.L.C.O.N Young Farmers launched by F.A.L.C.O.N Association at the University of Mauritius & at national level) from local, regional, national up to the global level & agricultural competitions should also be considered.[2274]

Efforts are made to change awareness with a public campaign approach, especially by the government, which is oriented to young people. Young people can become drivers of future changes in food patterns to "call for" food issues.[2275]

Mainstreaming of local food wisdom to the public, especially children through education by developing local content of formal and informal education curricula.[2276]

Make farming more popular among youth.[2277]

[2268] 173:48 p 12 in 331_May_24_21_LNFU

[2269] 173:50 p 12 in 331_May_24_21_LNFU

[2270] 173:112 p 18 in 331_May_24_21_LNFU

[2271] 176:8 p 6 in 334_May_25_21_Buzingo_J

[2272] 180:6 p 6 in 338_May_27_21_UNHCR

[2273] 180:25 p 9 in 338_May_27_21_UNHCR

[2274] 183:30 p 8 in 341_May_28_21_Sewraj_KS

[2275] 185:48 p 10 in 343_May_28_21_Abdullah_S

[2276] 185:49 p 10 in 343_May_28_21_Abdullah_S

[2277] 198:46 p 6 in 357_Apr 14_21_Harfouche S

Present securing agricultural land as a means to promote agricultural work among youth and women, showcasing it leads to sustainable way of life.[2278]

Understanding of the food system needs to take its basis in the school system. A whole school food approach is vital, and school gardens can help increase understanding of where food comes from. A specific suggestion came up that there should be a school program to get students to visit farms and primary production.[2279]

Marketing/advertising: Need to regulate advertising for ultra-processed foods, especially in schools, and to scale up the dissemination of the Brazilian food guide.[2280]

It is essential to connect with the especially young public to truthfully and transparently transmit information regarding the livestock-meat chain and consequently allow them to make decisions, with sufficient knowledge.[2281]

The new generation must be aware of the benefits of sustainable practices to the current and future generations, as they will be responsible for production and consumption in the coming future.[2282]

Awareness: educate consumers to choose certified products (that meet principles, criteria, and indicators); informed and science-based education, instead of biased information and/or cherry-picked messages, especially for youth; integrate in school syllabus issues on diets and sustainability, adapted to local contexts.[2283]

To address the lack of intersectional food systems education in the Canadian school systems, it is crucial to set a curriculum surrounding food literacy and opportunities in the food system. It is also important to provide students with experiences out on the land to build an appreciation for nature and the food system through school gardens or access to urban farms.[2284]

The amendment to the current school curriculum states that "Food literacy, including experiential or hands-on skills learned in gardens and kitchens, is critical for making healthy food choices that enable self-reliance and improve human health" in the Food Literacy for Students Act, 2020. The approval of the Act which is currently under-review will help us in applying educational change to youth in Ontario, Canada.[2285]

Schools can implement seed education programs or teach science and numeracy through food. It is important for students to get the opportunity to spend time out on the land, such as through school gardens, where they can build an appreciation for nature.[2286]

[2278] 199:50 p 12 in 358_May_11_21_ILC_Multi

[2279] 211:16 p 10 in 370_June_01_21_WWF Sweden

[2280] 228:30 p 10 in 222a_May_11_21_FTI_ZHI_English

[2281] 237:13 p 11 in 284a_May_19_21_INTERPORC_English

[2282] 261:79 p 11 in 497_June_24_21_Fontes_Multi

[2283] 301:9 p 6 in 537_July_08_21_ANP_WWF

[2284] 307:15 p 6 in 543_July_13_21_YRYFC

[2285] 307:38 p 9 in 543_July_13_21_YRYFC

[2286] 307:46 p 11 in 543_July_13_21_YRYFC

Urban farms and urban gardens can be a gateway for youth to learn more about food systems issues and to connect with farmers. These spaces can expose youth to different career prospects and build an appreciation for nature. These spaces are especially important in urban areas where youth may not have other opportunities.[2287]

Participants identified that eco-tourism can have numerous benefits such as exposing youth to nature, helping to build a convention with Indigenous communities in the area and strengthening the local economy. Eco-tourism is a form of tourism involving responsible travel to natural areas. Participants also identified that eco-tourism does pose some challenges as it can result in damage to the ecosystem. For example, some of the Canadian and American national parks are treated like a theme park instead of with the respect and understanding that it is a living ecosystem.[2288]

It is important to listen to the voice of children, empower them with the knowledge to recognise healthy and nutritious food, how they identify with it culturally and understand how the food they eat affects them. Children intuitively know what is good for them when we connect them to nature.[2289]

Supply chains should be shortened wherever possible - the closer children are to food growing or growing it themselves either in a school or community garden the more likely they are to be interested in it and appreciate it.[2290]

Bring back school cooking lessons - food literacy should be prioritised as part of the curriculum. There are many wonderful schemes and charities working with schools but they are usually one-off events. We need food education to be embedded in schools to help shift the publics preferences and behaviours: eg in the UK, Food For Life initiatives should be supported in schools by the government.[2291]

Behaviour change and communication programs are critical in enabling the participation of women and youth in the value chain. Increasing job creation in the agricultural sector can minimize the economic and social impact of male out migration. Digital tools for market linkages, advisory services and weather data can help in creating accessible pathways for underserved sectors. Aggregating farmers through formal organisations such as farmer producer companies (FPCs) can help develop linkages between farmers and other value chain/industry actors, including academia, for knowledge exchange and capacity building. Such linkages can increase their bargaining power as value chain actors and also help producers develop demand-based products that meet consumer needs and preferences. Multi-stakeholder cooperation and participatory monitoring and evaluation contribute to making value chains more inclusive.[2292]

Some ideas on changing consumption include: 1. Bringing agriculture closer to schools through small farming plots in schools. 2. Basic knowledge of food culture to be taught at

[2287] 307:48 p 11 in 543_July_13_21_YRYFC

[2288] 307:49 p 11 in 543_July_13_21_YRYFC

[2289] 308:8 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[2290] 308:9 p 6 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[2291] 308:21 p 8 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

[2292] 313:21 p 8 in 549_July_14_21_Meah N

home by parents. 3. Local government and housing ministry to create awareness on food through encouraging urban farming. 4. Bringing food preparation lessons for children in schools. 5. Increasing the consumption and knowledge of underutilised crops in Southeast Asia.[2293]

Some ideas on using technologies to truly benefit farmers and increase productivity as follow: 1. Training younger generation at school and university levels on design, software, marketing etc that build capacity for the agriculture sector. 2. Technology start-up competition focused on the food system. 3.Increase transparency on the food system, including on genetically modified feeds etc. 4. Modernising aquaculture and agriculture.[2294]

The participants also noted the dire need for State Governments to refocus their attentions on educating consumers from a young age about our global food systems and the many barriers to small farmers' effective participation. Therefore, more needs to be done by State Governments and educational institutions to inform their populations about the source of the food that we see on our shelves.[2295]

It is necessary to provide the means within a context of reduction of its human and financial resources. Consumers and key stakeholders must be able to make and impose enlightened choices. To do this, effort must be made on the subject of information and education on nutrition, especially with the youngest and most sensitive audiences. In parallel, information and awareness-building must take place regarding the new "outside the home" modes of nutrition which have been growing significantly because of the evolution of lifestyles, in which collective food service occupies an important place (awareness-building on the level of school cafeterias, university food services).[2296]

Nutritional information and education: in particular on the level of school children (promotion of school cafeterias) and women who play a key role in the nutrition of young children, but not only (all members of the household must be made aware of this issue); particular focus on consumers and their associations, potential stakeholders who influence the entire system through their food choices.[2297]

Incorporate the presentation of AFCI throughout the educational system as a system of production and development beneficial to humanity, through the sustainable management of natural resources and rural integration into the economy. Strategic and long-term, to generate a new food culture and preventive medicine. Promote Sierra Productiva's experience with Educational Institutions, with a focus on "productive, entrepreneurial and innovative education", with the methods of "learning by doing" and "less classroom, more outdoors". Internships to learn about innovative experiences and the importance of healthy agroecological food.[2298]

[2293] 319:11 p 8 in 556_July_15_21_Von Goh_GenTan

[2294] 319:12 p 9 in 556_July_15_21_Von Goh_GenTan

[2295] 323:25 p 9 in 560_July 19_21_Arbuthnott_Multi

[2296] 338:3 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

[2297] 338:10 p 7 in 392a_June_01_21_Sidibe_Remy_Eng

[2298] 341:9 p 10 in 408a_June_11_21_COPROFAM_CLOC_Eng

Food education needs to be implemented from educational facilities. Standardize nutritional education, at the basic, industrial and social level. Learning to eat healthy is only achieved with education, schools should have in their school curriculum the teaching of healthy eating from primary and basic levels; they should teach about healthy, unprocessed foods, organic foods, without pesticides, without additives, preservatives and with high nutritional value. This education must be applied with a language that the population can understand. The implementation of culinary education for better cooking practices is part of this education that is to be instilled; it is important to provide cooking techniques and methods that allow healthy food preparation for the entire population.[2299]

Capacity building

Entrepreneurial Skills. Co-create innovation/solutions that respond to community needs. Hands on skills. Critical thinking, Problem solving and Communication skills. People (Soft) skills. Entrepreneurship for the youth, young women and mothers to be involved in the food system. Entrepreneurial skills within different stakeholder groups connecting different universities.[2300]

Curriculum must be relevant to the needs of the society. Agricultural Sciences is important to sustain and improve the food system. Researchers and students should be strongly encouraged to embrace practical, on-farm skills. Skills in interdisciplinary work and transdisciplinary (working with all stakeholders), graduates should be able to have meaningful conversations with all. Both soft and hard skills that allow management of people, materials and processes in the agricultural value chain. In other words, build skills in sustainability science, which means being solution-oriented / multi-actor and inter-disciplinary focused research as well as teaching. Build skills on how to integrate teaching, research and service to community better close the loop to enhance sustainable food systems; skill at public policy analysis skills is also very important.[2301]

Participants noted that agriculture and food businesses vary widely - this is not a sector where one size fits all, so recruitment, training, and retention can be challenging. The challenges, particularly for economic viability, lifestyle (urban v. rural) and consumer perception (whether agriculture is seen as a desirable activity), also impact attracting and educating the next generation of talent.[2302]

Stronger graduate programmes, for both university and school leavers, that give a rounded experience of various business functions, are a key part of this, as are clear pathways for internal progression.[2303]

Capacity building for food SMEs /retailers in technology and gastronomy.[2304]

[2299] 349:8 p 7 in 423a_June_28_21_PROLIDER_Eng

[2300] 1:31 p 12 in 072_Mar_09_21_Sibanda L

[2301] 1:34 p 12 in 072_Mar_09_21_Sibanda L

[2302] 4:25 p 11 in 104_Apr_8_21_Animal Agriculture Alliance

[2303] 6:19 p 11 in 166_Apr_14_21_Meat Business Women

[2304] 10:4 p 7 in 181_Apr_8_21_Miranda

It was a highlighted and that's there is a need for systematic capacity building which the participating organizations could offer.[2305]

From the practical perspective, WEF models are becoming more complex, expanding its narrative, and require whole institutions to code and run them. This induces high requirements to a technical background of the personnel, working with WEF models, and also a technical background of the policy-related personnel, who will be analyzing the results. Group indicated that most of the staff based in the provinces, districts and local on-farm irrigation systems requires to go through the trainings. There is a need in investing in stakeholders and building relevant knowledge and understanding of the importance of the WEF framework. The stakeholder community working under the WEF framework needs to have a clear sense of ownership of the process ("understand and accept it") and be actively involved throughout its implementation in order to reach necessary results.[2306]

"Increasing nutrition training for those who are advocates in the health and education sectors (e.g. doctors and teachers)".[2307]

There were calls for agricultural colleges and advisers to provide more and better training and advice on sustainable and healthy production systems.[2308]

Agricultural colleges should make conservation and agroecology compulsory elements in all their agricultural courses.[2309]

Supporting skills and entrepreneurship of fishermen and aquaculture operators Human resource development needs to be carried out thoroughly, directed and integrated in various fields, especially when the main activity fishery, is a high-risk business which needs to promote the diversification of income, generational change, and gender inclusion. Improving and providing proper capacity building pathways for SSF operators aimed at increasing added value of seafood products and promoting diversification of economic activities, multi-functionality, direct sale, entrepreneurship.[2310]

Investing in local capacity building and consumer education would also facilitate decentralization.[2311]

Empowerment of Stakeholders – Any transition has to be community-driven to be sustainable over time. Thus, communities should be empowered to take ownership of this transition. This could be facilitated through capacity building and collectivizing schemes for specific stakeholders such as farmers, women, youth and consumers (such as women

[2305] 17:22 p 9 in 164_Apr_15_21_Anarbekov_Akramov

[2306] 17:26 p 10 in 164_Apr_15_21_Anarbekov_Akramov

[2307] 18:22 p 11 in 114_Apr_19_21_Maurer H_Roskruge N

[2308] 20:2 p 6 in 116_Apr_21_21_Hein JR

[2309] 20:9 p 7 in 116_Apr_21_21_Hein JR

[2310] 23:58 p 8 in 205_Apr_27_21_CIHEAM_Multi

[2311] 26:38 p 11 in 023_Jan_29_21_Bharat K S

Self-Help Groups (SHGs), Farmer Producer Organisations (FPOs) and consumer co-operatives).[2312]

The need for higher education in earth and ecological law was emphasized by most of the participants.[2313]

Capacity building for CSOs on using use solar power.[2314]

Build capacity to improve use of green technologies that are affordable, use water saving technology to help farmers and promote use of nonconventional water resources.[2315]

Additionally, training these actors to adopt regenerative and circular practices as economic, social and environmental preparedness to future shocks and vulnerabilities.[2316]

Capacity building should also include ways to optimize the use of animal and other waste on the farm to create organic fertilizer and where applicable, energy There is a need to develop platforms and support systems that help connect farmers with markets.[2317]

There must be a focus on the importance of training our future generations. Better training leads to better processes and better work. In today's ever-changing challenges, the importance of training has never been greater. On the farm training is an indispensable way to keep our organization competitive Highlighting the benefits of Plant-based food, which tend to have a lower planetary impact than animal-based foods.[2318]

Building capacities to adapt to climate change encourages use of renewable energy for food production and processing and using modern and appropriate technologies throughout the food systems value chain.[2319]

Initiate technical, administrative, and marketing units for food factories, that can prepare food industry managers and provide quality control. Provide resources, consultations, and education to farmers and livestock keepers on how to maintain healthy and proper production. Further enhance training and specializations related to agriculture.[2320]

Need for a more structured capacity building and strengthening of the IDP from both English speaking regions in tailoring, food processing, agribusiness and establishing farmer field schools (FFS) in the various regions for youth.[2321]

[2312] 27:20 p 6 in 044_Feb_18_21_Bharat K S

[2313] 29:12 p 7 in 066_Mar_5_21_Nkenglefac T

[2314] 31:7 p 6 in 077_Mar_09_21_ESCWA_FAO

[2315] 31:15 p 7 in 077_Mar_09_21_ESCWA_FAO

[2316] 33:29 p 11 in 084_Mar_17_21_UnyimeAbasi B

[2317] 35:32 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[2318] 35:79 p 11 in 095_Mar_27_21_Chinapoo C_Multi

[2319] 36:14 p 6 in 096_Mar_29_21_ESCWA

[2320] 36:21 p 7 in 096_Mar_29_21_ESCWA

[2321] 41:3 p 6 in 177_Apr_18_21_Yenwo B

Need for a more structured capacity building and strengthening of the IDP from both English speaking regions in tailoring, food processing, agribusiness and establishing farmer field schools (FFS) in the various regions for youth.[2322]

Participants reflected on the proposal and validated in particular the idea of establishing a sizeable pool of highly patient capital, while recommending considering non-grant options. They further recommended giving adequate attention to strengthening the capacity of recipient financial intermediaries (funds, banks, non-bank financial institutions) to invest in start-ups and in women-led businesses. For the technical assistance component of the facility (which also targets financial intermediaries and investors), participants recommended including training modules that intermediaries can then use to facilitate capacity building for women entrepreneurs, including in some areas – like financial literacy – where some types of financial intermediaries may be well placed to contribute.[2323]

Training of families in the rural areas to sustain their supply and access to protein-rich foods by breeding captured bush meat or wild games.[2324]

Expansion of the capacity of aggregators to increase their outgrowers and ingrowers clusters. Expansion of activities undertaken by donor agencies from just capacity building to supporting advocacy and education for adoption of improved seed varieties for key food crops like rice, corn, cocoa, sorghum, beans, yams and, fruit trees, amongst others.[2325]

A "One-Stop-Shop" bringing together Agri-SMEs, investors, and diverse business development service providers, with global reach but anchored into in-country activities, offering a menu of services including: Peer-to-peer SME learning and networking. Partnerships among BDS and other supporting organizations to connect their respective initiatives and avoid silos. Curating a database of entrepreneurs and sharing the same approach to mapping their functions and supporting needs (building on ISF/SAFIN taxonomy. Facilitating dialogue with investors. Building financial literacy and skills. Training. Guidelines and toolkits.[2326]

Training, Development and Capacity Building. Connecting and aligning the need to reduce emissions, mitigate and need to address water, energy and waste. Connecting sustainable technology to support accelerating sustainable agriculture.[2327]

Strengthen capacity to provide actionable and real-time information and advisory services to farmers.[2328]

[2322] 41:5 p 7 in 177_Apr_18_21_Yenwo B

[2323] 42:11 p 8 in 178_Apr_8_21_AGRA_Multi

[2324] 44:13 p 7 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[2325] 44:30 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[2326] 46:7 p 7 in 049_Feb_23_21_SAFIN_Multi

[2327] 52:25 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[2328] 54:16 p 5 in 002_Nov_19_20_CGIAR

Capacity development is key, especially for farmers groups and MSMEs, providing support to operators in meeting required economic, social and environmental standards.[2329]

However, to obtain better results and ensure the sustainability of the assets generated by this dialogue of experts in multiple specific sectors, better organization and capacity building of national, regional, and local communities through training and monitoring in the various CSA food system intervention areas and action tracks checked (1, 2, 3, 4, and 5) is necessary and urgent for the DRC.[2330]

Capacity Building and Making Agriculture Attractive for University students.[2331]

Many agriculture students and graduates are not equipped enough with the requisite skills that can make them deal with growing challenges in the food sector. They are either trained during their studies in archaic methods or fed with inadequate information to be useful for anything tangible in practice. These kinds of capacity building can be achieved by inculcating more hands-on and industrial fieldwork sabbaticals for students. According to information gathered from Mrs. Waliyat Oloyede, who is lecturer at the Faculty of Agriculture, University of Ilorin, there is already an initiative in place where students carry out agricultural activities on school owned lands. It is perhaps, a reason students do not find agriculture as interesting because they see it as academic exercise rather than as an asset for long term food security within the nation. On another end, we need to showcase agriculture in the light of profitability when done correctly. The current narrative suggests that farming is only meant for low-income peasant farmers.[2332]

Hopefully, we will contribute to develop a new generation of practitioners and advocates - our faculty, students, parents, alumni, outreach community leaders - to engage in meaningful dialogue for the future of food and food systems that would contribute to the United Nations Sustainable Development Goals. If we do not apply our minds and hearts now, we might face unintended consequences that can worsen vulnerabilities - be they environmental, psycho-social or spiritual.[2333]

Producers: Train them about post-harvest handling and promote acceptance of food conservation techniques and technology.[2334]

Train producers on the use of social networks and e-commerce technology.[2335]

Advice and extension should be provided to everyone on safe and nutritious food. Training of trainers, for example through universities or organizations, can play a key role in sharing knowledge and best practices.[2336]

[2329] 66:63 p 12 in 052_Feb_25_21_EUFIC

[2330] 70:3 ¶ 20 in 010a_Jan_7_21_ONG Femme et Enfant_ENG

[2331] 73:5 p 6 in 204_Apr_27_21_YASIF_UYSG

[2332] 73:15 p 11 in 204_Apr_27_21_YASIF_UYSG

[2333] 74:7 p 6 in 189a_April_16_21_Ateneo de Manila

[2334] 75:24 ¶ 98 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[2335] 75:31 ¶ 116 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[2336] 79:18 p 7 in 118_Apr_21_21_Huvio T

In this context, technology can be a great boost also from a logistical point of view and even tough FEBA is doing a great work on digital transformation and data collection, FEBA members need a lot of resources and capacity building for innovation and technology.[2337]

The importance of increasing access to infrastructure technology was emphasized, as well as creating capabilities to have good preparation on technological issues.[2338]

In order to do this, those with power and financial capital should invest in farmers and educational curricula should be decolonized.[2339]

However, local communities need to mobilize and lobby their policymakers to educate them on the realities of these food policies on the ground and in the healthcare system. This includes black/brown and indigenous communities. Progress can be assessed through advocacy training sessions and number of meetings made with policymakers.[2340]

Incorporate One Health approach into solutions, which may include guidelines for field agents, capacity building, creation of local or regional "One Health" associations, using an evaluation system adopted by everyone with common, multiple criteria.[2341]

Agricultural assemblies to link local producers with government structures, with aim of boosting local production. Develop community training programs.[2342]

Promote capacity building as a coping mechanism for indigenous communities and women in mountain areas.[2343]

Promote capacity development to contrast distorted, unequitable value chains, bringing education and training on production, technologies, processing, commercialization and certification to remote areas.[2344]

Some areas of focus for capacity building and strengthening could include: Environmentally friendly, climate smart agriculture, nutrition sensitive approaches (through institutions such as schools, hospitals, and prisons), shock responsive social protection, focus on short and efficient supply chains and local production. Targeted professional development efforts including succession plan into hiring and capacity building. (This would help with attrition and losing already existing capacities, and mentor new HR capacities.)[2345]

Strengthen value addition and agro-processing dealers so as to minimize food loss and waste. This is through capacity building by national and local government, private

[2337] 81:15 p 12 in 145_May_6_21_Vandenschrik J_Multi

[2338] 89:4 ¶ 58 in 186a_Apr_15_21_Caballeros_eng

[2339] 91:15 p 6 in 217_May_6_21_Schwartz A

[2340] 92:11 p 9 in 225_May_13_21_Schwartz A

[2341] 93:50 p 12 in 227_May_18_21_Tarawali S

[2342] 96:10 p 7 in 255_Apr_27_21_ICLEI Africa_Multi

[2343] 98:14 p 6 in 282_May_18_21_Romeo R

[2344] 98:25 p 9 in 282_May_18_21_Romeo R

[2345] 101:23 p 9 in 325_May_19_21_ICLEI Africa_Multi

consumers as well as. Women and children who are major handlers of food. Capacity building is crucial especially on issues of nutrition and food safety.[2346]

Capacity development: Capacity of technical officers needs to be improved. The County government should give priority to bringing technical people on board to the county.[2347]

He further stressed that the academe, like Ateneo schools and Musuan, have roles to take in assessing what the community is willing to do, develop their capacity and deepen their trust because in order for systems to develop, trust is important, he said.[2348]

Take multiple actions simultaneously to maintain social stability and promote local development so that the treatment of heavy metal contamination will be sustainable, emphasizing the importance of talent training in impoverished areas.[2349]

Build appropriate capacity (infrastructure, equipment, and expertise) at local level.[2350]

Building appropriate capacities in terms of infrastructure, equipment, and human (experts).[2351]

Participants recommended that in order to build capacities appropriate for AR4D, there is the need to strengthen the capacities of farmers and SMEs to profitably adopt technologies, strengthen the capacities of African institutions to generate new knowledge and technologies and adapt those generated from elsewhere, and the strengthen the institutional and physical infrastructure for scaling up innovations in the food system.[2352]

It will be important to develop stakeholder capacity to innovate in the area of smart, green growth and to match resources for skills development with local need to support remote areas having low employment opportunities.[2353]

Training and development agencies can support capacity development through knowledge exchange, training and upskilling/reskilling. The development of 'community ecosystems' were seen as an important step, as well as the promotion of innovation and good practice through case studies.[2354]

In order to enact change, targeted education programmes for producers and processors will be needed, as well as improved labelling/certification, benchmarking of animal welfare on farms and incentives for higher standards.[2355]

[2346] 101:34 p 10 in 325_May_19_21_ICLEI Africa_Multi

[2347] 102:26 p 8 in 326_May_5_21_ICLEI Africa_Multi

[2348] 103:62 p 36 in 007a_Dec_18_20_NAAGD

[2349] 105:16 ¶ 16 in 176a_Mar_25_21 AGFEP

[2350] 111:13 p 5 in 070_Mar_09_21_Akinbamijo,O

[2351] 111:36 p 7 in 070_Mar_09_21_Akinbamijo,O

[2352] 111:42 p 7 in 070_Mar_09_21_Akinbamijo,O

[2353] 112:36 p 9 in 074_May_18_21_O'Mara_Teagasc

[2354] 112:44 p 9 in 074_May_18_21_O'Mara_Teagasc

[2355] 112:67 p 12 in 074_May_18_21_O'Mara_Teagasc

Such innovations must be adapted to the local user's language, but end users must also have some capacity development to understand the technologies available.[2356]

…technical capacity and a package of clearly defined products.[2357]

Partnerships should be structured around the expertise of each actor, with PDBs focusing on bankable clients, and with donors and TA providers focusing on building capacities and addressing local market failures.[2358]

As a conclusion on how agroecology can contribute to addressing major climate and food challenges in Nigeria, what emerged was building the knowledge of farmers, indigenous peoples, and pastoralists, this could be done by government through extension workers or other food organization.[2359]

Therefore, the needs to be more demonstrations to show people the technology works that would ensure more buy-in and less sceptism amongst policy makers.[2360]

Investors to reward corporate investing in capacity building and technical assistance of farmers.[2361]

Between a variety of stakeholders, there is a sheer magnitude of capacity gaps, both financial and non-financial. It is essential to build up capacity at the institutional level to ensure investment possibilities and opportunities are identified and lead to the kind of transformative impact that is needed.[2362]

More training and education on the cultivation process for these producers is a primary need.[2363]

At the consumer level, procuring locally sourced seaweed is still a problem facing many restaurants. This logistics challenge has raised the price of seaweed for consumers in the Global North, since it must be imported. There is a need for sustainably sourced seaweed in countries that are not traditional producers. This calls for stronger cross-country, collaborative efforts that raise the capacity of nascent seaweed producers through knowledge transfer and investment.[2364]

Training and education have to be part of all identified solutions and embedded in other areas. Too often, solutions and financing are delivered without training and skills building. There is need for training platforms on multiple topics including for technical/home management and income generating projects without gender barriers/attribution. New approaches are needed to ensure education programs address the needs and priorities of

[2356] 113:25 p 8 in 075_Mar_10_21_IFAN

[2357] 115:10 p 7 in 085_Mar_17_21_IFAD_FSFS

[2358] 115:22 p 10 in 085_Mar_17_21_IFAD_FSFS

[2359] 116:9 p 7 in 093_Mar_25_21_Adeboye_T

[2360] 117:15 p 8 in 109_Apr_13_21_Jacobs-Mata I

[2361] 118:8 p 6 in 117_Apr_22_21_Dinesh D_Multi

[2362] 118:41 p 10 in 117_Apr_22_21_Dinesh D_Multi

[2363] 119:56 p 15 in 121_Apr_28_21_Doumeizel V

[2364] 119:58 p 15 in 121_Apr_28_21_Doumeizel V

both men and women across value chains. Governments need to dedicate budgets to enable women's access to education and rights.[2365]

Trainings also need to bring men on board to expose them to the challenges that women face and promote a culture of understanding and break down barriers.[2366]

Mobilize youth groups to spearhead action and to improve the visibility of healthy, safe and nutritious organic products via capacity building (i.e., training, discussion series, farm visits, information campaigns) and via social media to motivate demand and shift of consumers to sustainable consumption patterns.[2367]

Strengthen people's organizations through leadership training and financial literacy for livelihoods and disaster preparedness.[2368]

Dialogue participants emphasized improving policy coherence among key ministries through better inter-sectoral coordination and capacity building and raising awareness among researchers, policymakers, government officials, and farmers about the benefits of WEF nexus modelling approaches to optimise agriculture production in the Indus Basin.[2369]

Communities need to participate in relevant capacity training being organized by various donors or government organizations to learn new ways of protecting their livelihood from extreme events.[2370]

For example, building the capacity of local academic and research institutes to work with WEF models, so that they can understand and implement them, will add to the sustainability of these efforts. To successfully achieve this capacity enhancement, ongoing stakeholder and policy dialogues on the usefulness of WEF models as applied to critical issues in the country are needed.[2371]

Create Indigenous innovation tracks in higher education institutes: University of Hawai'i - West Oahu has an Indigenous Studies track that includes Sustainable Communities Food Systems course - where students, many who are Native Hawaiian students, are learning foundational practices and values, working with Indigenous Science and transforming their educational experience; there is an entire degree focused on Indigenous led restoration work. These tracks of study are opening up opportunities for Indigenous and non-indigenous students alike to build capacity, be supported in their advancement and give rightful validation to their knowledge base and innovation.[2372]

[2365] 120:17 p 7 in 127_May_13_21_IAFN_CWFS

[2366] 120:51 p 18 in 127_May_13_21_IAFN_CWFS

[2367] 122:30 p 8 in 135_June_08_21_Calub_Gregorio

[2368] 122:40 p 8 in 135_June_08_21_Calub_Gregorio

[2369] 127:4 p 7 in 159_Apr_21_21_Hafeez M

[2370] 127:26 p 10 in 159_Apr_21_21_Hafeez M

[2371] 127:49 p 14 in 159_Apr_21_21_Hafeez M

[2372] 130:11 p 9 in 187_Apr_15_21_Livingston_Way

Capacity building for ministerial committees is an essential aspect that was highlighted by discussants from various backgrounds.[2373]

Collaboration with the Ministry of Water Resources and Irrigation and the Ministry of Agriculture on joint dialogues, building technical capacity and negotiation skills for engineers in these agencies. Improved communication and negotiation skills are considered critical for improved water and food security.[2374]

Building and strengthening the capacity of governmental and non-governmental organisations on water governance in the MENA region, including Egypt.[2375]

Digital tools, civil society involvement, new policies on infrastructure and capacity development could be impactful in Egypt in the next few years.[2376]

Similarly, capacity building is needed for the private sector to address the specific needs of women and youth in terms of technologies and solutions that fit their needs and other productive resources to increase sustainable agribusiness development.[2377]

Recognize that gender mainstreaming is about the empowerment of women and the building of individuals, organizational, and institutional capacities to mainstream gender.[2378]

More focus on capacity building and enhancing technical expertise for stakeholders and CSOs to engage in concrete actions.[2379]

As a means of ensuring adequate technology and innovative knowledge transfer, youth insisted that investment in Train-of-Trainers (ToT) on modern techniques (especially for agriculturalist experts and interns) is urgently needed as primitive agriculture techniques cannot provide timely and needed outputs to meet the demands of an increasing population.[2380]

Promote Farmer Field Schools (FFS) as a strategy to build and empower communities for experimental learning, agriculture research agenda setting, data collection and analysis by farmers, decision-making and participation related to crop growing conditions in local communities.[2381]

Time and resources: Finally, participants stressed that multi-stakeholder collaboration requires sufficient time and resources. Time to build trust, withstand internal and external changes, align different stakeholders, build their capacity, and organize processes where they can give input, feel connected and committed, and feel confident and empowered to

[2373] 132:31 p 9 in 193_Apr_19_21_Ringler_Kassim

[2374] 132:32 p 9 in 193_Apr_19_21_Ringler_Kassim

[2375] 132:51 p 10 in 193_Apr_19_21_Ringler_Kassim

[2376] 132:58 p 12 in 193_Apr_19_21_Ringler_Kassim

[2377] 137:4 p 6 in 212_May_04_21_Akinbamijo Y

[2378] 137:37 p 10 in 212_May_04_21_Akinbamijo Y

[2379] 138:5 p 7 in 214_May _05_21_50by40

[2380] 139:17 p 10 in 216_May_06_21_Ben_Aniabi

[2381] 140:22 p 8 in 223_May_12_21_Mushita A

engage in collaborative work. A specific plea was made to move from a siloed funding approach, which still prevails, so that MSPs can address health and planetary challenges together.[2382]

Chefs - training the next generation of chefs that not only includes cooking but also regarding the impact on the environment and carbon footprint. The effects of our food choices on the planet.[2383]

Revisiting agriculture curriculums to teach agriculture as a business, encouraging students to become agro-entrepreneurs.[2384]

Policies impact the role of accessibility to food and they need to be in line with healthy standards. Policies need to promote affordable healthy diets and authorities should have more food governance capacity-building to be able to think and plan healthy regular supply of food for the next 10 years in their country.[2385]

Because local governments can contribute to stable food supply and the reduction of food loss, there is a need to build more capacity-building to local municipalities, by helping them to scope the food system through assessments, in cities where is a lack of functionalities due to absence of storage, distribution and production capacities.[2386]

Building capacity & raise awareness among IPs and their leaders about their rights in relation to their land and territories.[2387]

Fund capacity building efforts and support innovations developed by SSFs seeking to build resilience and transition to nature-positive production systems.[2388]

Strengthen SSFs' role as protagonists through policies/initiatives/capacity building efforts to give them more agency and power.[2389]

Reintroducing basic cooking skills.[2390]

Adopting age-friendly curriculum towards lifelong learning, openness, and massification of education that will result to wider access to knowledge and research results, given the demographics of our current learners.[2391]

Recognizing micro-credentials, nano-degrees, multiple learning pathways, alternative mode of earning credits (e.g., allowing registration for modules, getting credits and accumulating it in university credit banks, or giving credits for work experience) will

[2382] 141:11 p 8 in 229_May_18_21_NFP_Rabobank_Multi

[2383] 142:10 p 7 in 230_May_19_21_Allen K

[2384] 150:36 p 9 in 253_Apr_29_21_AFDB_Multi

[2385] 151:17 p 8 in 261_May_03_21_Carrara_Le More

[2386] 151:30 p 9 in 261_May_03_21_Carrara_Le More

[2387] 152:47 p 9 in 262_May_04_21_ILC_Multi

[2388] 155:11 p 6 in 272_May_12_21_Battista W

[2389] 155:14 p 6 in 272_May_12_21_Battista W

[2390] 156:53 p 11 in 275_May_13_21_Dornom H

[2391] 157:32 p 8 in 278_May_18_21_Gregorio B

enable those who do not ¦t the traditional learners' profile to earn a degree even in 8-10 years. Transforming the curriculum where 20-30% of the study program will be conducted outside the classroom will cultivate global competence. Incorporating culture in the curriculum will develop a sense of responsibility among the students. Food as an expression of culture should be the central focus of agricultural programs instead of food as business.[2392]

Train agriculture students to be business owners who would return to their villages or to the countryside after graduation, rather than becoming employees in the cities.[2393]

Build capacity of existing local organizations and create strong laws that support their rights and abilities to engage.[2394]

Food standards for all, appropriate equipment, training, technical support for SMEs, access to finance, land, creation of cooperatives.[2395]

Stimulate the market. Training for the improvement of production techniques by supporting especially the small farms which supply most of our urban markets in Central Africa (and particularly in the DRC).[2396]

…capacity building, need for coaching, training (online !!)…[2397]

…ease of access to funds, training, and basic services…[2398]

However, participants also recognized the utility of life-long learning, and suggested that education/courses be provided beyond the classroom, within the community, or health care facilities.[2399]

Participants recommended several actions for schools: investments in gardens, actions for improved school attendance, the addition of climate change topics to the curriculum, and the development of safe and engaging youth platforms (I.e. youth clubs and social media).[2400]

Improving primary school curriculum to integrate NCD information with nutrition and agriculture topics, was also said to be critical to teaching about NCDs and improving the overall health literacy of the community. At the university-level, it was recognized that male students purchase more fast foods than their female counterparts (as most young men

[2392] 157:33 p 8 in 278_May_18_21_Gregorio B

[2393] 157:41 p 8 in 278_May_18_21_Gregorio B

[2394] 161:24 p 6 in 296_May_25_21_Battista W

[2395] 164:1 p 7 in 304_June_02_21_FAO_Multi

[2396] 164:10 p 8 in 304_June_02_21_FAO_Multi

[2397] 164:33 p 10 in 304_June_02_21_FAO_Multi

[2398] 166:10 p 7 in 355_June_14_21_FAO

[2399] 167:13 p 6 in 311_June_14_21_NCD Child

[2400] 167:25 p 7 in 311_June_14_21_NCD Child

do not cook in the African context), underscoring the importance of teaching young boys about nutritious foods, and eliminating the stigma around cooking.[2401]

The organization intends to create a network of researchers to share data and information aiming at solving problems in the food system with the support of scientists and industry and training new specialists.[2402]

Training and extension materials are often unavailable in all languages nor "translated" to make complex concepts like climate change understandable. Farmers learn best from other farmers.[2403]

There is a requirement for all personnel to keep up-skilling and we need to brand a career in agriculture as one where continuous professional development is the norm.[2404]

Undergraduate training in the agri-food sector should still have a focus on production as well as an added focus on sustainability.[2405]

Actors across the AKIS need to be upskilled in the area of digital including farmers, advisors and other key actors. Farm advisors in particular should be highly digitally literate in order to support the transition to digital and act as proponents of digital. Users should be segmented based on their digital literacy.[2406]

Trainings on participation in markets, technical skills and knowledge.[2407]

To have an education system that grooms children into agriculture from a tender age, this will instill and encourage youth to be valuable to these enterprises as some still view poultry industry as inappropriate for them.[2408]

One key here, in addition to considering direct and long-term benefit, is capacity building.[2409]

Innovative programs that promote women and youth leadership, behaviour change towards environmental stewardship, and training in job skills should be prioritized.[2410]

Conception to Consumption: Build capacity (farmers need to see themselves as part of the global supply chain), train farmers, improve genetics, make inputs readily available, bring market to the farmers and focus on traceability and technology transfer.[2411]

[2401] 167:50 p 10 in 311_June_14_21_NCD Child

[2402] 168:12 p 7 in 322_June_03_21_Apicella_Machado

[2403] 169:32 p 10 in 327_May_18_21_CropLife

[2404] 170:24 p 9 in 328_May_19_21_Lalor_Teagasc

[2405] 170:40 p 10 in 328_May_19_21_Lalor_Teagasc

[2406] 170:54 p 12 in 328_May_19_21_Lalor_Teagasc

[2407] 173:88 p 15 in 331_May_24_21_LNFU

[2408] 173:124 p 19 in 331_May_24_21_LNFU

[2409] 174:21 p 6 in 332_May_24_21_FAO_UNDP

[2410] 174:40 p 8 in 332_May_24_21_FAO_UNDP

[2411] 175:21 p 8 in 333_May_25_21_GMA_Multi

Young people need agriculture trainings and education to know modern ways of agriculture.[2412]

Build capacity of local leaders on various actors of the food systems value chain.[2413]

Leaders must be attentive and build capacity so the populace can be competent and independent.[2414]

Government leaders should ensure capacity building and knowledge dissemination; community actors can engage in building capacity.[2415]

Provide formal training to refugees on nutrition.[2416]

Build capacity through trainings on how to work on digital platforms, share their stories digitally.[2417]

Invest in human capital (e.g. training of workers on economic risk management and administration).[2418]

The role of educational institutions was also emphasized. The workshop agreed that precision agriculture must be included in the curriculum.[2419]

Promote agriculture in Schools and improve the curriculum- and strengthen Career Guidance; They understood that as long as there is not targeted career guidance for pupils taking agriculture subjects in schools the prospects of generating future farmers in bleak.[2420]

Use natural manure: the Extension Service as part of their capacity building must promote the use of Organic Fertilizers and farmers made aware of their importance in sustainable agriculture.[2421]

Developing soil regeneration programmes (F.A.L.C.O.N Association provides both theoretical & practical courses on soil biodiversity management) and that can only happen though controlled and minimal use of fertilizers and other agro-chemicals that add to greenhouse gas emission such as nitrous oxides and methane.[2422]

[2412] 176:7 p 6 in 334_May_25_21_Buzingo_J

[2413] 177:60 p 12 in 335_May_26_21_Laar_Multi

[2414] 177:69 p 13 in 335_May_26_21_Laar_Multi

[2415] 177:70 p 13 in 335_May_26_21_Laar_Multi

[2416] 180:11 p 7 in 338_May_27_21_UNHCR

[2417] 180:17 p 8 in 338_May_27_21_UNHCR

[2418] 180:27 p 9 in 338_May_27_21_UNHCR

[2419] 181:13 p 6 in 339_May_27_21_Sayoc_Multi

[2420] 182:21 p 7 in 340_May_27_21_Mamba_L

[2421] 182:78 p 13 in 340_May_27_21_Mamba_L

[2422] 183:69 p 12 in 341_May_28_21_Sewraj_KS

Setting up of training courses in universities or in MITD to train local graduates or officers in climate risk management.[2423]

Outcomes identified within the discussion of practical steps to help strengthen the resilience of smallholders include increased training and risk management for small producers.[2424]

Community based agriculture; in increasing the capacity of food producers, organizing is an absolute thing that must be trained, the existing community is no longer trapped in the interest of getting assistance from the government, more broadly with the existing community, food producers can share various kinds ranging from capital, knowledge, to looking for markets their harvest.[2425]

Sustainable agricultural practices; Sustainable agricultural practice training should be given intensively to food producers through field schools.[2426]

Capacity building at the farm level to produce quality, hygienic and healthy products. So that this product can be accepted by consumers and compete in the urban market.[2427]

School clubs should be established to students in order to transmit ideas first hand during early years of school.[2428]

Emphasised the need to change the training approach to produce the required quality of agricultural professionals and make agriculture attractive to students as a profession. Agriculture training should foster transformative learning through elements such as entrepreneurship, ethics and care for nature.[2429]

Opportunities should be extended to economically disadvantaged students to acquire technical and scientific skills in agriculture. This will widen participation to transform food systems and uplift the welfare of families.[2430]

Government support is needed to facilitate access to agricultural services in remote areas. This will require institutional capacity building to empower farmers to take the lead and learn better from each other for example through farmer field schools.[2431]

Advancing Nutrition Education: A healthy food environment and nutrition education can foster and support better food choices and practices among/for children. A child's food environment starts from home, school, and the school environment, there is therefore an

[2423] 183:110 p 16 in 341_May_28_21_Sewraj_KS

[2424] 184:35 p 8 in 342_May_28_21_Peralta T

[2425] 185:34 p 8 in 343_May_28_21_Abdullah_S

[2426] 185:37 p 8 in 343_May_28_21_Abdullah_S

[2427] 185:42 p 9 in 343_May_28_21_Abdullah_S

[2428] 187:6 p 6 in 345_May_31_21_Buzingo J

[2429] 191:14 p 6 in 349_June_02_21_Ekwamu A

[2430] 191:15 p 6 in 349_June_02_21_Ekwamu A

[2431] 191:17 p 6 in 349_June_02_21_Ekwamu A

urgent need for an appropriate nutrition education both at home for and by parents and the school environment.[2432]

Children's eating habits orientation can be changed by using school curricula to provide nutrition education in schools.[2433]

Australian Agricultural Centre Virtual Campus - Hands on learning by doing.[2434]

The participants noted that once these basic issues are addressed, it is key to provide education and entrepreneurship training and resources.[2435]

Local communities and local decision-makers are capacitated to apply sustainable management and restoration of productive landscapes.[2436]

Build capacity of IPs to stand and protect their land rights. Mobilise resource to this end.[2437]

Education - extension services need to be improved and expanded with the greater Accra Metropolitan Area through Farmer- field schools (FFS). Education is needed in order to improve shelf life of agricultural produce. Also market extension officers should be deployed as food markets are very important in the Accra Metropolis. These officers teach food actors about food hygiene, food safety and food processing. This can be expanded and government support is important for this.[2438]

Links with educational institutions to promote awareness and build capacity on the opportunities along the food system value chain (primary, secondary schools and universities). Awareness programs should also be incorporated in institutions such as prisons and hospitals. In addition, explore utilization of available/vacant land adjacent to schools for urban agriculture as well as other activities along the food value chain.[2439]

Increase opportunities for vocational training in agri-food production to equip workers to optimise the use of available technologies.[2440]

Only a fraction of smallholder farmers has requisite entrepreneurial ability, productive assets and skills potential for value addition. Skilling such populations, and in general, improving the labour productivity is critical for African agriculture to play a greater role in meeting local to global food demand, in a competitive and cost-effective and competitive manner. A more holistic human capital development is required to build the agricultural workforce, from production, to research and innovations, as well as entrepreneurship.

[2432] 193:53 p 11 in 351_June_03_21_CIF_Multi

[2433] 193:54 p 11 in 351_June_03_21_CIF_Multi

[2434] 194:43 p 12 in 352_June_04_21_Troughton J

[2435] 195:3 p 7 in 353_June_07_21_Blum N

[2436] 196:39 p 7 in 354_June_07_21_NAMAC

[2437] 199:31 p 9 in 358_May_11_21_ILC_Multi

[2438] 201:13 p 7 in 360_May_18_21_ICLEI Africa_Multi

[2439] 201:19 p 7 in 360_May_18_21_ICLEI Africa_Multi

[2440] 205:18 p 9 in 364_May_26_21_DPIHD

African universities are pivotal in designing and implementing human capital development programmes.[2441]

Africa must not outsource its food security (export jobs) but build capacity to bolster its global food production and export markets.[2442]

Invest strongly in the education value chain, from universities to vocational colleges, to leveraging on secondary and primary education to upgrade the skill levels of young people entering the labour force.[2443]

Livelihood options, especially during emergencies and fish ban periods, are limited to many poor households. There is need to create permanent livelihood options to complement the poor fisher families' income generation. Capacity building of the resource constrained fishers and alternative livelihood options are required to ensure alternative means of income generation.[2444]

Stakeholders should focus more on knowledge and capacity building to contextualise actions and find out appropriate solutions tailored to the specific context.[2445]

Access to capacity building.[2446]

Capacity support to communities, including extension and inputs services are crucial. Protecting ethnic cuisines helps in maintaining local food production systems and agrobiodiversity, along with long term management of ecosystem services.[2447]

Provide relevant extension services and experts related to post harvest management, processing and marketing, and trainings on indigenous resource management and social enterprise development for Ips.[2448]

Support the strengthening of indigenous food systems by supporting community initiatives and linking them to various experts for capacity building towards social enterprise development, support/organize meaningful food festivals in schools/colleges, urban centers and in communities where they operate including creating champions for indigenous food and food systems. Indigenous community social enterprise can influence the reversion of migration for income purposes, especially among the youth; women and youth collectives and initiatives should also be encouraged to facilitate knowledge transfer noting also the roles and capacities of the youth to influence transformation towards gender equality.[2449]

The future transformation of food systems in Africa requires innovativeness in research and education approaches that are rooted in local contexts. Universities in Africa need to

[2441] 206:3 p 6 in 365_May_27_21_Ekwamu A

[2442] 206:5 p 6 in 365_May_27_21_Ekwamu A

[2443] 206:7 p 7 in 365_May_27_21_Ekwamu A

[2444] 208:23 p 9 in 367_May_27_21_Kachulu_Thilsted

[2445] 215:12 p 7 in 376_June_04_21_IFAD_Multi

[2446] 218:3 p 6 in 379_June_08_21_KAMMPIL

[2447] 219:25 p 12 in 380_June_08_21_Shakya_Chettri

[2448] 221:17 p 9 in 382_June_08_21_AIPP_Multi

[2449] 221:23 p 11 in 382_June_08_21_AIPP_Multi

adopt and create knowledge to strengthen and transform the food systems through strengthening links and improving productivity, processing, storage, transport, food quality and business that link them with consumers. Universities need to anticipate the skills set and knowledge demanded by the rapidly changing food systems and provide this information and skills in ways that trickle through the entire economy. Universities then need to translate the knowledge created into innovations that then transform and develop potentials that drive their own and Africa's food system. There is need to reassess and redesign the African Universities and assist them to build their capacity to develop and deliver Africa's food system transformation.[2450]

Human capital development for sub-Saharan Africa is important in enabling Africa realize its full agricultural potential to boost its food system.[2451]

Skills, training, and awareness actions for the various key actors and professionals who work in food systems; also with managers and the general population in actions that foster an integrated and holistic understanding of food and food cultures.[2452]

Education and training: Updated training in foods and food preparation, encompassing its social role and holistic perspective as well as resurrecting the importance of the home cook and not just famous chefs. Given the current scenario, it is urgent to train food system professionals to be able to act in the fight against hunger, using content that provides guidance on the importance of food and its impacts on the health of people and the planet. The joint work between teachers and monitors for food and nutrition training among school professionals is also important.[2453]

Education: Promote more systemic and practical thinking in primary, secondary, and tertiary education regarding the One Health concept, trade, and their connections with food systems to better understand how they affect our lives.[2454]

Multiple sectors should work together - through a public private partnership - to improve food safety capacity building.[2455]

On a smaller scale, participants acknowledged the need to build capacity for the implementation of technology locally, in a way that is considerate and adapted to the resources available. Technology has to be affordable, attend to local needs and the focus of development and implementation of innovation must remain on creating value for producers if we're going to see innovation adopted in practice.[2456]

FST starts locally, involving all stakeholders, who must be enabled to take part in this process. Effective capacity building is needed, linking researchers and innovators to the beneficiaries (farmers/fishers/foresters, investors, etc), fostering the development of skills

[2450] 223:2 p 6 in 384_June_09_21_Ekwamu A

[2451] 223:4 p 6 in 384_June_09_21_Ekwamu A

[2452] 228:15 p 6 in 222a_May_11_21_FTI_ZHI_English

[2453] 228:39 p 12 in 222a_May_11_21_FTI_ZHI_English

[2454] 236:10 p 8 in 277a_May_14_21_IICA_English

[2455] 239:1 p 6 in 313_June_15_21_Narrod_Multi

[2456] 240:7 p 6 in 319_June_30_21_Fredriksson O

and inclusive entrepreneurship, especially for women and youth. This needs a strong policy pull from governments and an enabling environment where all parties cooperate equally under a shared vision embracing everyone's requirements (e.g. policy labs). Capacity building is key to overcome the risk of smallholders seeing sustainability only as a bureaucratic burden.[2457]

Finance and investments are necessary to build stakeholders' capacities to advance sustainability in their practices, fully understanding its potential and not considering it only as an administrative burden.[2458]

Knowledge and capacities on food systems sustainability need to be enhanced, especially in rural contexts, including through training and education.[2459]

Make life cycle analysis (LCA) software and tools more widely available, and train companies in how to use them.[2460]

People know how to grow food and add to the F&V options: The opportunity to train more people into agriculture.[2461]

Access to cookery skills and nutrition classes for every resident Model whole-school food scheme in Eastbourne school and roll-out, including nutrition review, TastEd/similar in curriculum, food growing spaces, cooking skills, after-school clubs. Support network for private home growing, including skills workshops, seed swaps, knowledge sharing, land share etc - links to workshops and 'master gardener' network above.[2462]

Education: Environmental and social responsibility should be taught to children at basic education programs and knowledge about existing sustainable techniques and practices should be disseminated to farmers.[2463]

Sustainability must be on the Government Basic Education Program to ensure the next generation's awareness about environmental responsibility.[2464]

Education is key. Environmental responsibility must be part of the Public Education Program.[2465]

Commitment to strengthening the capacities within research institutions.[2466]

There is need to train more research scientist.[2467]

[2457] 244:9 p 6 in 480_June_21_21_CIHEAM_Multi

[2458] 244:32 p 10 in 480_June_21_21_CIHEAM_Multi

[2459] 244:39 p 11 in 480_June_21_21_CIHEAM_Multi

[2460] 256:30 p 11 in 492_June_23_21_Liu JA

[2461] 257:16 p 11 in 493_June_23_21_Kevany_Van

[2462] 260:14 p 10 in 496_June_23_21_Tradewell C

[2463] 261:27 p 6 in 497_June_24_21_Fontes_Multi

[2464] 261:74 p 11 in 497_June_24_21_Fontes_Multi

[2465] 261:78 p 11 in 497_June_24_21_Fontes_Multi

[2466] 262:9 p 6 in 498_June_24_21_Danquah E

[2467] 262:41 p 7 in 498_June_24_21_Danquah E

Strengthen policies and strategies and build capacities of resource management institutions.[2468]

Toolkits and training for farmers to diversify into seaweed production.[2469]

The provision of farming materials, equipment or tools, fishing gear and capacity building need to be more regular and more proactive.[2470]

For fisheries, more capacity building is needed in the area of cooking edible varieties of seaweed so abundant in Kiribati, value adding of fish products including transshipped fish in order to reduce the high imports of canned fish.[2471]

To be included in the capacity building is the making of compost so home organic waste can be meaningfully utilized to clean home areas and to grow more healthy foods.[2472]

Stakeholders within the Pacific Food Production systems require training, knowledge, and capacity building by local experts, academics, and government sectors to bring about sustainable food production systems for a resilient Pacific.[2473]

Building resilience of local communities is achieved by building the capacity, knowledge, and experience of community people in agriculture.[2474]

Invest in better data, policy implementation capacities, and technical and vocational training of Africa's growing youth population.[2475]

Entrepreneurial skills are also important to build strong partnerships in the system (e.g. potential clients to sell your harvest).[2476]

Skills to access and find relevant information related to their work in the agricultural sector are also needed.[2477]

Including agriculture in secondary school curriculum would be effective so by the time of entering university young people have agricultural knowledge.[2478]

Making agriculture attractive to the youth: is key to ensure the sustainability of the agricultural sector and strengthening the capacities of the smallholder producers and

[2468] 263:35 p 8 in 499_June_25_21_GANSF

[2469] 264:23 p 8 in 500_June_26_21_Edible Issues

[2470] 265:15 p 6 in 501_June_28_21_Kairo K

[2471] 265:19 p 6 in 501_June_28_21_Kairo K

[2472] 265:24 p 6 in 501_June_28_21_Kairo K

[2473] 268:6 p 6 in 504_June_30_21_Susumu_Leiva

[2474] 268:12 p 7 in 504_June_30_21_Susumu_Leiva

[2475] 271:11 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[2476] 272:11 p 7 in 508_June_30_21_GDPRD

[2477] 272:12 p 7 in 508_June_30_21_GDPRD

[2478] 272:15 p 7 in 508_June_30_21_GDPRD

SMEs is a key element to generate effective demand for science, technology, and innovation.[2479]

It should involve national governments, commit to developing national/regional capacity in the long term so that local stakeholders capacities are built to actively contribute to analysis and building of food systems resilience.[2480]

Local training and capacity building for sustainable generation, use and application of the evidence for learning and informing programming.[2481]

To influence the knowledge of local actors to combine evidence with local knowledge to inform sustainable pathways for food systems resilience interventions, not only learning technical skills but also how to implement it well.[2482]

…to do capacity building of agricultural personnel.[2483]

In terms of solutions, it was proposed that there is need to invest in regenerative agriculture concerning organic farming to cushion farmers in relation to unhealthy food production, there is need for proper dissemination of research data and statistics, it is important to involve young farmers in feasibility studies and the need for reliable and accurate information regarding weather patterns among others.[2484]

How can governments and international organizations invest in NARS capacity building while also leveraging the capacity of the international research community, private sector, and CGIAR system?[2485]

More people need training and there needs to be succession planning for leaders within procurement to pass on process for success and share tacit knowledge.[2486]

Graduate training at factories will go a long way to help them gain knowledge to produce nutritious foods.[2487]

Entrepreneurs are extremely creative and market savvy but in emerging economies with the enabling system is so sub-optimal, entrepreneurs have to create the conditions that will enable their venture to operate successfully, and these enablers will often include capacity building with other players along the value chain that affects their business whether their vendors, customer or retailers. They have to collaborate with the social sector such as NGOs, the government to make sure their venture functions smoothly. Unlike

[2479] 276:11 p 7 in 512_July_01_21_Malawi President_Ekwamu

[2480] 278:14 p 7 in 514_July_01_21_Bolling_Multi

[2481] 278:36 p 9 in 514_July_01_21_Bolling_Multi

[2482] 278:37 p 9 in 514_July_01_21_Bolling_Multi

[2483] 279:12 p 8 in 515_July_01_21_EastAfricanFarmers

[2484] 279:16 p 9 in 515_July_01_21_EastAfricanFarmers

[2485] 298:24 p 10 in 534_July_07_21_WBADB_ADI_Multi

[2486] 299:76 p 12 in 535_July_08_UNESCO Chair on Food

[2487] 300:31 p 8 in 536_July_08_21_Musabyimana JC

entrepreneurs in high-income countries, the 3Cs are the foundations to be successful in LMIC's.[2488]

Provision by governments of credit and guarantee funds to support the development of small agricultural enterprises among women and young people, combined to capacity building would create favorable conditions for agricultural development. Access to credit is essential to support the development of agricultural businesses by vulnerable populations. The agricultural sector has enormous potential in terms of job creation and wealth, and governments must support the transition of small producers into the formal economy.[2489]

Training & extension should focus on the coexistence of conventional and agroecology knowledge.[2490]

Action proposed: a) Strengthen the capacities of local administrations to undertake territorial policies in their foodshed. "Unions of communes" are a positive territorialization process that could be extended. b) Develop local administrations' capabilities to design projects and interventions. c) Create dissemination tools to explain financing opportunities and facilitate planning. d) Engage with local communities through participatory approaches rooted in the policy process.[2491]

Create toolkits to facilitate knowledge transfer and peer-to-peer learning.[2492]

The inspectorate capacities within the central and local level institutions should be increased in order to have more quality check and control of food items. Moreover, there should be a better coordination between the Ministry of Agriculture, Forestry and Rural Development and municipal agricultural directorates.[2493]

Regional cooperation is also important for policy development, knowledge exchange and capacity building. It is now evident that climate change reduces productivity—and the lack of access to appropriate mechanized tools, machinery and other resources hinders the participation of women and youth.[2494]

Convergence and organization of key stakeholders at multiple levels were proposed as solutions. These include institutional mechanisms, such as merging government development schemes with agricultural plans, and expanding disaster risk, reduction and recovery plans to cover smallholder farmers. Organizing and clustering farmers is needed to improve their access to inputs, capacity building, and formal financial services. Mechanization and its associated increased productivity were also seen as pathways for

[2488] 300:39 p 10 in 536_July_08_21_Musabyimana JC

[2489] 302:22 p 9 in 538_July_09_21_IDS_Multi

[2490] 305:8 p 8 in 541_July_12_21_AEHT

[2491] 306:12 p 6 in 542_July_12_21_Prota_L

[2492] 306:18 p 7 in 542_July_12_21_Prota_L

[2493] 310:23 p 7 in 546_July_13_21_INDEP

[2494] 313:8 p 6 in 549_July_14_21_Meah N

increased participation of women and youth. Crop insurance and other safety nets can help smallholder farmers bounce back from climatic shocks.[2495]

Implement harvesting machinery quality standards reducing waste, as well as operational norms for harvesting operations, planting and agronomic norms with attention to promote land merging and appropriate grain varieties for field management standardization and efficiency. Strengthen professional qualification management for agricultural machinery operators, develop specialized and socialized service organizations and carry out regular technical exchanges and trainings, as well as provide weather warning notices, operation market conditions and other early warning information to farmers.[2496]

Farmer-to-farmer digital technologies represented by Digital Green. Through digitalization and data farmers strengthen their position and gain voice to engage in constructive ways to change pre-existing power imbalances, such as top-down agricultural extension approaches. Farmers understand the value of their own data and have control/agency over it. Farmers use the cumulative information to make informed decisions and become empowered. This is possible through: Targeting of elder, women, poor and landless farmers to work with them in equal pairing to build resilience and increase their empowerment. Engage in atypical capacity building, farmer-to-farmer knowledge sharing. Develop effective tools to help farmers to become empowered. Ensure enabling elements such as supportive policies. Advance a mindset of democratization of knowledge production with capacity for global scaling.[2497]

The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: Promote an evaluation culture, in order to enhance the learning value of evaluation, in balance with accountability objectives, and for evaluation to become everyone's business, including donors, commissioners, decision-makers, civil society and others involved in food systems. Embrace the complexity of food systems transformation and other global challenges – such as climate change and its impact, which require integrating systems thinking and dealing with uncertainties. Promote the role of evaluators as engaged participants: evaluators should position themselves in a more dialogic and partnership role in order to facilitate support decision-making, and engage in open communication to help form solutions and stimulate transformative change. Innovate methods and approaches making a case for non-traditional and creative ones. These may include developmental, participatory and other approaches, which are more suited to help understand the complexity around food systems, while ensuring that the focus on quality is preserved. Continue to develop capacities of evaluators so that they are equipped with the necessary skills and confidence in making the right choices on methods and approaches.[2498]

In addition, while applying new tools and methods more suitable to addressing systems transformation and complexities, it will be important not to lose track of quality. All of this

[2495] 313:17 p 7 in 549_July_14_21_Meah N

[2496] 315:19 p 8 in 551_July_15_21_FAO_ESCAP_Multi

[2497] 317:12 p 7 in 554_July_15_21_Lopez DE

[2498] 320:6 p 6 in 557_July_15_21_EvalForward_FSRD

calls for having capacity development for all actors to understand and for evaluators to be confident in proposing methods and approaches.[2499]

Finally, we cannot ignore some areas of Sub Saharan Africa where conflicts and political instability worsen food insecurity and contribute to high rates of malnutrition. In these areas capacity building is important but conflict and the fragility and disruption of the social networks lead to difficult implementation of sustainable and long-term interventions.[2500]

ICTs (as implemented in the EWA-BELT Horizon2020 Project), especially mobile technology, could improve and overcome the constraints related to training and extending services. Technologies are available, but they do not reach those interested. A great effort must be demanded for these technologies to reach those that are most interested and in need. ICTs are helpful in teaching farmers on reproduction and preservation of seeds, also in order to increase entitlement of practices and seeds.[2501]

Plant-based food and alternative protein - while the market for these products is still relatively small in Thailand, in many export destination countries, the markets are more mature. Leveraging this international market potential can help promote domestic market as well. Plant-based proteins should be more actively promoted, and support on both the supply side (e.g. R&D funding, training) and demand side (communications campaign) are necessary.[2502]

If food is NOT SAFE, it is NOT FOOD. Food safety is a global public good and fundamental for all societies. Foodborne diseases (FBDs), caused by ingesting contaminated food, is a significant source of morbidity and mortality around the world. As food supply networks become more globalized, food safety practices impact more than those producing and processing the products. The food industries are vulnerable, as are affected populations, to unsafe food. Food safety capacity building efforts can increase safe food and improve global societal welfare only if they work. To know if such capacity building efforts are working, the impact of these efforts needs to be documented and examined. Assessing such impact can help justify and galvanize future efforts or shift the focus to new or improved methods.[2503]

ESG investors may be taking an "exclusionary approach" to agriculture driven by a basic lack of knowledge and understanding of the ag sector. We need to create a "Master Class" for financial professionals to educate them about the ag sector and help them make more informed investment decisions that benefit their clients and the ag sector itself.[2504]

It is necessary to provide the means within a context of reduction of its human and financial resources. Consumers and key stakeholders must be able to make and impose enlightened choices. To do this, effort must be made on the subject of information and

[2499] 320:15 p 9 in 557_July_15_21_EvalForward_FSRD

[2500] 324:21 p 7 in 561_July_19_21_OCCAM

[2501] 324:37 p 10 in 561_July_19_21_OCCAM

[2502] 329:7 p 9 in 566_July_21_21_Dej-Udom N

[2503] 333:1 p 1 in 313a_June_15_21_Narrod_Multi

[2504] 335:5 p 2 in 484a_June_24_21_WBCSD_USFRA

education on nutrition, especially with the youngest and most sensitive audiences. In parallel, information and awareness-building must take place regarding the new "outside the home" modes of nutrition which have been growing significantly because of the evolution of lifestyles, in which collective food service occupies an important place (awareness-building on the level of school cafeterias, university food services).[2505]

Need to increase the number of staff dedicated to the program, especially nutritionists and technical managers.[2506]

It is important that the technical teams of professionals be expanded, strengthened and trained for this work, and also that a new organization for the educational aspects of food and nutrition – dedicated to students and professionals – be implemented as an emergency measure.[2507]

Training of rural extension system operators on the practices necessary to change from the current production systems to the proposed ones, and thus have a favorable impact on climate change factors. Importance of co-innovation due to its contribution within the territory, but which must necessarily be accompanied by development policies that help to lift the limitations that are being found in the systems for their redesign and progress towards more sustainable systems. Think about innovation in other dimensions beyond productive practices, generating more proximity and involvement of other actors: Create an extension department in agroecology for example in FAGRO or in other careers such as nutrition, psychology, CCSS, innovation in machinery, industrial design, e-commerce, etc.[2508]

Training of rural extension system operators on the practices necessary to change from the current production systems to the proposed ones, and thus have a favorable impact on climate change factors. Increased training of agroecological systems operators and better management of genetics and certification processes.[2509]

Provide support for coastal communities to take measures for resilience, adaptation and developing new techniques in order to cope with the rise in sea levels and saline intrusion. In addition, initiate the development of voluntary technical guidelines to facilitate rapid adoption of best practices that will help fishermen, fish farmers and coastal communities adapt to the warming of the ocean.[2510]

Establish under the adverse conditions entailed by climate change the productive capacity of our main aquifers, communicate and educate producers based on these results and promote participatory and scientifically-based measures that allow sustainable production.[2511]

[2505] 338:3 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

[2506] 339:4 p 6 in 393a_June_01_21_Food of Tomorrow_Eng

[2507] 339:51 p 13 in 393a_June_01_21_Food of Tomorrow_Eng

[2508] 340:28 p 12 in 406a_June_10_21_COPROFAM_CLOC_Eng

[2509] 341:17 p 12 in 408a_June_11_21_COPROFAM_CLOC_Eng

[2510] 346:8 p 7 in 420a_June_19_21_CLOC_Eng

[2511] 348:1 p 6 in 422a_June_28_21_PROLIDER_Eng

Many public institutions have gathered information, however, there is still no common repository or initiatives promoting inter-ministerial programs and projects. The welfare vision solves the acute issue, but not the chronic problem; an inter-institutional repository would allow for informed and joint decision-making in order to address the issue of access to healthy food in a more permanent way. The approach must shift from a welfare focus to one of capacity building.[2512]

Mechanisms and capacity building are required, especially in coastal and border areas, in order to guarantee livelihoods that will in turn allow access to a healthy diet.[2513]

Training is important in the same way, in order to build better knowledge of the activity itself, including tool use.[2514]

Ways to generate positive changes in food donation: there was agreement among the participants regarding the role that incentives could play in terms of promoting food donation, as well as aspects related to raising awareness and capacity building.[2515]

Capacity building could infiltrate the technical aspects of product handling and safety (for both receivers and end users, since products are sometimes rescued at the time of production but are then wasted in the last phases of this alternative supply chain); better planning, conservation and distribution of food, as well as increased knowledge for consumers and productive participants regarding the entities that could distribute the products, the requirements, and the concerns and mechanics of donation.[2516]

There is a need for financial incentives, clear education paths, and structured 129 approaches to providing resources to entice young farmers into agricultural 130 careers if northern agriculture is to be successful.[2517]

Change thinking

To help change towards the creation of an alternative, sustainable and healthier food system, we need to embrace transparency, open thinking, to claim loudly and boldly what is wanted to be achieved and how it is to be achieved.[2518]

Environmental policy needs a change in attitude to the land resources, particularly concerning the mining industry: Provide equal right to the land, follow up principles of SDGs.[2519]

It was observed that there are diverging views on wild food. For some, there is a certain stigma attached to wild foods because people who depend on these sources are viewed as 'backward' or 'primitive'. More attention and value is given to the dominant and more

[2512] 351:4 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

[2513] 351:7 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

[2514] 351:35 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

[2515] 352:5 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

[2516] 352:7 p 6 in 567a_July_21_21_FLWRN_FBN_Eng

[2517] 353:26 p 3 in 505a_June_29_21_Borchard_UNC

[2518] 363:10 p 6 in 414_June_16_21_Le More_d'Antino

[2519] 394:51 p 11 in 436_June_16_21_GIYC_Multi

'socially acceptable' food sources such as rice, wheat, etc. On the other hand, there is the view that people with strong indigenous food systems like rotational farming and wild food gardens are far better off and are more affluent in terms of food security and resilience. IPLCs should take pride in their rich food heritage and change the narrative.[2520]

To achieve a sustainable food system, there needs to be a narrative shift, so that everyone along the supply chain feels a responsibility to make better choices, there needs to be a social contract. The current economic system isn't doing this as it focuses solely on profit.[2521]

Overall food producers and manufacturers are advised to focus more on ensuring national health, and not only on making profits.[2522]

Shift the mindset of meal-offering from pursuing variety and quantity to improving the nutritional quality.[2523]

Furthermore, sustainable production and business management training could only be effective when there is an interest to learn among trainees. Hence, we believe that changing mindsets through values formation programmes may be a necessary first step for some producers.[2524]

Group 1: Time Banking & Alternative Economies This group started with an overview of the Eco Just Food Network's Food Corps program, which connects folks from urban communities to rural farmers in need of help. This led to a discussion of the program's use of a time bank, as well as of how that time bank connects to the St. James Town Community Co-op's time bank. The reciprocity of this relationship, as well as reciprocity as one of the foundational concepts of time banking was also discussed. The group also talked about how living inside a capitalist system shapes our attitude towards work such that we need these alternative economic systems to make it easier for us to recognize and reward the labour that keeps our communities and our food system going.[2525]

We must transform how the food system is perceived, from a technological, productive, economic sector to a sector that also implies culture. One way to do so is to make visible and clarify the importance of the peasant agriculture as a cultural heritage of Chile, as well as the forms of production and food of smallholder farming systems and indigenous peoples.[2526]

[2520] 408:34 p 17 in 449_March_08_21_Wild Foods_Multi

[2521] 409:22 p 7 in 450_Mar_11_21_IFAD_Multi

[2522] 418:32 p 8 in 459_June_01_21_Rashid Md J

[2523] 444:9 p 6 in 027_Feb_02_21_CBCGDF_UNFSS

[2524] 460:107 p 15 in 131_May_25_21_IISLA Ventures

[2525] 464:25 p 13 in 185_Apr_14_21_Local Farm_Multi

[2526] 474:29 p 6 in 246_June_09_21_Boza_Kanter

In addition, the Vice-Chancellors committed to reimagining the role of our universities for transdisciplinary knowledge co-creation and in particular the role of science and innovation in defining the food systems that Africa wants.[2527]

Disruption caused by COVID-19 presents the opportunity to rethink working practices which may previously have acted as a barrier to gender equality.[2528]

Agriculture is considered only as 'crop' farming, hence other important components of livestock, forest, fisheries, commons are missed out – which also plays an important role in diet.[2529]

There is a disconnect between producers and consumers in evaluating the cost of food and value of food. In much of North America, there is a marketing focus on low price rather than high nutrition. Farmers would like to see "food security" discussed in terms of "nutrition security."[2530]

Differences in soil, terrain, land-use and other factors can vary considerably even within the same area, meaning there is no one-size-fits-all strategy. Programs and policies must be flexible enough to allow creativity and experimentation to achieve desired results at the hyper-local level. Knowledge-sharing based on these types of solutions can be the most effective way to promote widespread change. This applies to farmer-to-farmer education as well as formalized classes through Extension or associations. It also can be valuable to learn from farmers in different geographic and commodity backgrounds. A grain farmer might learn something useful from an almond farmer.[2531]

When farmers look at continual improvement, they don't see steady, uninterrupted progress any more than Thomas Edison waltzed through all of his inventions. "I didn't fail 1,000 times," he said. "The light bulb was an invention with 1,000 steps." Great success is built on learning from things that initially went wrong. Farmers are looking to enhance their own land and production by learning from mistakes and trying new experiments.[2532]

It was admitted that existing structures, they undergo challenges related to the fact that currently developed plans for the management for the incorporating WEF nexus are merrily of national level and focused on national interest. Regional programs like the program for the basin of the Aral Sea is still rather sectoral and has only limited nexus elements. Also, the problem of the original programs is that they are developed mainly by water and ecology expert without referring to knowledge from other sectors like energy and agriculture. To overcome these challenges there is a need for ranging more regional awareness at the level of decision makers about the need of WEF nexus approaches. Also,

[2527] 1:2 p 6 in 072_Mar_09_21_Sibanda L

[2528] 6:3 p 6 in 166_Apr_14_21_Meat Business Women

[2529] 7:17 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

[2530] 8:1 p 6 in 169_Apr_6_21_Shea E

[2531] 8:19 p 9 in 169_Apr_6_21_Shea E

[2532] 8:37 p 13 in 169_Apr_6_21_Shea E

there's the need for more knowledge to support the limited available human resources to implement such an approach to develop long term plans.[2533]

Nature-positive Production - The shift to agro ecological approaches and nature-positive production systems (such as regenerative or conservation agriculture) needs to be taken up on a priority basis. This transition needs to go hand in hand with a change in the narrative around farming in the Global South. Agriculture is often associated with poverty, and adopting nature-based approaches could help change this to one of pride and joy.[2534]

The idea that farming is a business that has to provide financial as well as ecological returns should be mainstreamed.[2535]

We have to transform our culture of exploitation and promoting the Rights of Nature can drive forth the cultural realization that humans are part of nature and the environment and cannot be view separately.[2536]

As we move towards satisfying food production and human nutrition, there is a great opportunity to also influence changes of mindsets, policies and investments globally.[2537]

There is need to develop a culture that emphasizes quality, sustainability, resilience and ongoing learning and improvement.[2538]

Engaging in circular economy activities such as the recycling of biomass (composting) and livestock waste (biofuels) can add great value to our environment, once done right. Simply adding compost or humus can have a positive impact on soil health, fertility, water retention and can even combat some effects of climate change.[2539]

Propose a World Nutrition Day. Increase consumer awareness and motivate and enable them to make good and healthy choices through social media, training and educational workshops, and providing offers on health products. Raise awareness among media workers of the importance of healthy food. Raise awareness among media workers of importance of healthy food and building on consumers' interests and perceptions of nutritional risks to change their food behavior. Set up appropriate educational programs, courses and group activities targeting children and youth to changing consumer behavior, and use social media to achieve this goal.[2540]

Participants highlighted the presence of physical and cognitive invisible walls, somehow separating the rural and the urban world, and the need to tear these walls down to allow

[2533] 17:20 p 9 in 164_Apr_15_21_Anarbekov_Akramov

[2534] 27:18 p 6 in 044_Feb_18_21_Bharat K S

[2535] 27:46 p 10 in 044_Feb_18_21_Bharat K S

[2536] 29:18 p 7 in 066_Mar_5_21_Nkenglefac T

[2537] 35:23 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[2538] 35:36 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[2539] 35:46 p 7 in 095_Mar_27_21_Chinapoo C_Multi

[2540] 36:27 p 8 in 096_Mar_29_21_ESCWA

for a space of social proximity in which producers, transformers and consumers are constantly connected with feedback flowing easily in both directions.[2541]

This implies new traditions, a new concept of sustainability and affordability (in its broad definition) and social proximity. The day that we will be collectively able to bring diversity as a fundamental aspect of belonging will imply the creation of a new narrative in the shape of a clepsydra. Diversity will be the unifying factor and the narrative won't imply a homogenization of diversity but will rather embrace it as a source of richness. This will imply the establishment of trust through an empowering culture. In this narrative, we want new traditions that allow the creation a new sense of belonging. How can we get there? By embedding the issue of personalized diets and food in its broad definition encompassing social and health dimensions.[2542]

Help change perceptions and habits of consumers through take out food re-envisioned, where food can be enjoyed on a plate rather than in a wrapper.[2543]

Need to change the mindset and environment in which people eat in schools and institutions, in favor of a slower, more community based meal format.[2544]

We not using what we have (natural resources). Make use of our natural resources. Use solar energy and reserve energy for other things. There is a need to invest in and support greater deployment of energy and water efficiency technology. Global funds and grants should target and support investments that address the nexus. The circular economy models and principles and opportunities will be critical in navigating and addressing issues across the nexus.[2545]

We need to market and change our indigenous populations' perception on locally grown food.[2546]

Challenge: Promote longer term thinking.[2547]

Participants acknowledged the need for a change of narrative, with a stronger focus on embracing diversity, bringing about a culture of empowerment, and rethinking our habitats while reconsidering the value of food with the lenses of a true cost approach.[2548]

We have to change the notion today that food is a commodity and only that free market will solve it.[2549]

[2541] 39:12 p 8 in 175_Mar_16_21_Donati L

[2542] 45:7 p 6 in 043_Feb_17_21_Donati L_Multi

[2543] 49:31 p 10 in 086_Mar_20_21_Rosatan B

[2544] 49:34 p 11 in 086_Mar_20_21_Rosatan B

[2545] 50:4 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[2546] 50:27 p 11 in 087_Mar_20_21_Chinapoo C_Multi

[2547] 54:26 p 6 in 002_Nov_19_20_CGIAR

[2548] 60:5 p 6 in 021_Jan_27_21_Donati L

[2549] 64:48 p 9 in 041_Feb_17_21_Adler D

Creating change in the social norms as was with other health issues.[2550]

At the same time, a mindset shift is required from the one in which we must produce more food to feed the world, to the one in where we must produce foods that are more nutritious and more sustainable, waste much less, and shift towards a plant-rich diet.[2551]

Mindset change is key for changing the food system, acknowledging its complexity.[2552]

Add a Track 6 on transforming corporate food systems. Corporate food systems are the elephant in the room. Our silence actually affirms their role and their ability to advance. In the South, it is very difficult to get the needed accountability. Radical partnerships looking after food-water-energy nexus are needed. The indigenous peoples know the best water sources in the mountains; they can be empowered to sustain those.[2553]

Apply marketing strategies to change perceptions and make local products desirable.[2554]

In fact, many of the innovations or promotions of healthy diets proposed requires an extra investment from different stakeholders, including producers, without any guarantee of having this effort rewarded. They not only have an economic interest in continuing with current practices but also these new implementations take time to be understood and accepted by them all.[2555]

Participants also discussed on the need to invest on Food Banks also to position themselves in a new light to receive the support of policies and governments, as innovative partners that contribute to solve a huge challenge such as food waste. … The working table listed 3 recommendations for FEBA: 1. Need of a continuous work at policy level with the EU and International institutions and also at national level underlining Food Banks' importance in the food system transformation and the role they had during the crisis to have also a stronger voice with the private sectors and the food producers. 2. Need to work collectively to engage businesses and develop partnerships. FEBA is an umbrella organisation and can open doors that probably an individual organisation cannot. Therefore, it is crucial to keep on with the dialogue between the FEBA network. 3. Establish a FEBA Partnerships Working Group to support connection between Food Banks and all the external actors involved in this processes and share best practices on new models of food redistribution and the capacity building that Food Banks need.[2556]

The food supply chain is broken and needs to be changed: following the transition from a linear to a circular economy, it is now needed to use this momentum as an opportunity to re-design and move to a food system model with future resilience. On the other side the problem of food insecurity in Europe is growing with millions of people in precarious situations and in need. Moreover, there is a climate emergency and many analyses

[2550] 64:78 p 12 in 041_Feb_17_21_Adler D

[2551] 66:42 p 10 in 052_Feb_25_21_EUFIC

[2552] 66:78 p 14 in 052_Feb_25_21_EUFIC

[2553] 74:30 p 31 in 189a_April_16_21_Ateneo de Manila

[2554] 75:38 ¶ 125 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[2555] 78:16 p 8 in 110_Apr_14_21_Carrara E_Multi

[2556] 81:16 p 12 in 145_May_6_21_Vandenschrik J_Multi

declared that governments around the world will not meet the Paris Agreement's targets without tackling food loss and waste. ... What are the key aspects that need to be transformed within the food system? ... Regarding the food loss and waste, it is fundamental to look at the framework of public and private actors and the role played by governments, businesses and civil society organisations. These actors should have a better understanding and a more mature approach to think about accountability and processes across that systems. The first game changer is about the private-public partnerships and the links between governments and businesses that work in the food supply chain to adopt all the measures necessary to get the targets. In this relation, the European Union is working to build a solid framework to facilitate the cooperation and coordination between the stakeholders, the public authorities and the civil society organisations such as the Food Banks. Another crucial issue to look at to transform the food system is the level of food waste at household consumption and the consumers' education and the involvement of grass-roots organisations as Food Banks in this movement for change. Another important point is work to close the loop of food waste and to put in place the miracle of circular economy where Food Banks play a crucial role to redistribute food for human consumption.[2557]

Discussions are commonly dominated by agriculture. There is an urgent need for the recognition of aquatic foods as a game-changing solution in the food systems agenda.[2558]

Open mindsets to new solutions.[2559]

The speaker believes that change is possible if a person will rethink and change one's food consumption patterns and personal lifestyle. She suggested various ways on how to address excessive food waste at the personal/household level: a. Reduce the amount of food that can spoil. b. Buy only what you can use or store. c. Replace processed food with fresh produce because there is a lot of energy and waste in food processing.[2560]

She stressed that each one has a role to play in working for a more sustainable food system such as policy, scientific research, and production among others but, at a personal or individual level, we can also make behavioral changes that will advocate for a more sustainable lifestyle through our own contributions in our households and institutions.[2561]

Food systems change will only happen when enough people see how they can benefit from and contribute to that systemic change.[2562]

Embracing complexity and building collaborations across stakeholders.[2563]

[2557] 81:19 p 13 in 145_May_6_21_Vandenschrik J_Multi

[2558] 82:17 p 8 in 150_Apr_30_21_GANSFOIWFSN

[2559] 99:42 p 13 in 285_May_20_21_TFFF_Multi

[2560] 103:20 p 20 in 007a_Dec_18_20_NAAGD

[2561] 103:57 p 35 in 007a_Dec_18_20_NAAGD

[2562] 107:4 p 6 in 047_Feb_19_21_O'Doherty M

[2563] 107:9 p 7 in 047_Feb_19_21_O'Doherty M

The investments of governments in healthcare is difficult to change, but momentum is needed in order to shift the focus to "health for care" instead of "healthcare", as food is really impacting the health of the population.[2564]

Another important aspect that was identified to be key to conserving nature in the WEF nexus is behaviour change. Behaviour change is needed on two fronts, i.e. both the behaviour of producers and that of consumers should be considered, scrutinised, and changed to enhance the protection of nature in WEF systems.[2565]

Changing the narrative around the notion of health and the relationship of food systems to population health is of critical importance. We define "health" as not just what is physical, but it includes the mental, social and spiritual dimensions of being. "Eating for health" therefore, is about food that meets the nutritional needs of the body, but also reinforces the "connectedness" of our sustenance to the land, the sea and the seasons. "We are what we eat" - articulates a holistic view of culture and identity in relation to a holistic view of food.[2566]

While we could focus on developing sustainable, low cost technology to remove contaminants from the waste stream; perhaps we should stop focusing on adding new processes and innovation to selectively capture an ever-increasing list of contaminants. Instead, focus should be on upstream causes of this contamination, ask why they are present in the waste stream and how we can rectify this. The focus should be placed on the risks of NOT making change (business as usual), rather than focusing solely on the risks of doing something ('least worst'). This allows a more balanced decision going forward.[2567]

Actions that focus on changing the existing thinking which is leading to unhealthy food systems, and food choices.[2568]

False food concepts and ideas should be torn down and change mindsets, since there is a "food ignorance" that give way on bad consumption habits, related to non-communicable diseases.[2569]

Work With Faith Based Organizations To Change Behavior - Use ritual and practice to deal with impacts of climate change to people's mental health, climate anxiety. Use teachings and moral education to galvanize change in behavior to be more environmentally friendly, aligning ethical and values based approaches with a just transition towards healthier and more sustainable local food systems.[2570]

[2564] 113:20 p 6 in 075_Mar_10_21_IFAN

[2565] 117:59 p 15 in 109_Apr_13_21_Jacobs-Mata I

[2566] 121:7 p 5 in 130_May_22_21_Foronda R_Gloria C

[2567] 124:24 p 9 in 142_May_11_21_Carter L_Dennis S

[2568] 138:21 p 9 in 214_May _05_21_50by40

[2569] 146:14 p 8 in 235_May_25_21_Gonzalez B_Multi

[2570] 149:8 p 6 in 243_June_03_21_Schwartz A

The districts recognize the need to rebuild and strengthen food systems driven by radical thinking, smart partnerships, backed by strong political will and courage to advance the food systems transformation need of the districts.[2571]

Industry leaders admitting the need to change.[2572]

Moving away from silo thinking to multi-dimension development thinking facilitate multi-perspectives and transdisciplinary approaches towards reducing food loss and waste among suppliers and consumers.[2573]

Advocate for the changes needed, demanding from local official's tax incentives needed to prioritize local farmer's purchase.[2574]

Changes in ethics and economics of environmental sustainability. Rights-oriented food system.[2575]

Recognise pastoralism as a way of life and custom. With recognition of pastoralism, government should demarcate land for pastoralists.[2576]

Following this discussion, Romana Koech of the AVSI Foundation in Kenya, Betty Rose Aguti and Musamba Mubanga from Caritas Uganda and Zambia respectively, brought the real-life testimonies of women in these countries, who are nurturing the development of their communities through their work in food production. These stories showcased how the "three Cs" aggravating present-day global hunger - Conflict, COVID, Climate Change - can be overcome with other, more positive "Cs": Care for life, Culture of life, Community of life.[2577]

The discussion was opened by Daniela Ropelato, Director of the Doctoral School of the Sophia University Institute, who asserted the "culture of care" (Laudato Si', 231) as the necessary paradigm for holistic and collective action. Engaging political processes relating to food systems through the lens of care, would allow for the appreciation of the complementarity between men and women in political processes and forge necessary alliances in decision-making. Afterwards, Lola Castro, Regional Director for Southern Africa, World Food Programme (WFP), urged audiences to move beyond the interpretation of women as victims of an unsustainable, unjust and fragile food system, and recognize them as "agents of change" and leaders in the reformulation of systems. She reiterated the need to formally recognize their contributions across all stages of food systems, and enhance their participation in political processes destined to shape them. She stressed the importance of increasing the involvement of women in early prevention and

[2571] 154:4 p 6 in 265_May_07_21_CSONA

[2572] 156:38 p 8 in 275_May_13_21_Dornom H

[2573] 157:44 p 9 in 278_May_18_21_Gregorio B

[2574] 163:72 p 10 in 300_May_27_21_Alesso_Pommeret

[2575] 198:28 p 6 in 357_Apr 14_21_Harfouche S

[2576] 199:22 p 8 in 358_May_11_21_ILC_Multi

[2577] 200:6 p 6 in 359_May 17_21_FAO_IFAD

response strategies to food crises, and increasing their representation in leadership positions.[2578]

We can shift our narratives on food through education about our histories and by revaluing ingredients in a way that reflects the actual price of food.[2579]

*Regenerative is being co-opted by multinational corporations --- (agroecological? there is a social movement aspect to agroecology- where **food sovereignty is central**) comes down to the question of where power lies within the food system. Indigenous food practices aren't adopted by society as a whole, because of incorporation of the food system - Over subsidized farming in the Global North has caused the loss of crop-based resources in the Global South. Modern agriculture has had a drastic impact on local economies and threatened age-old agricultural practices and family farming which, for the most part, is characterized by a symbiotic relationship between people and planet.*[2580]

For a transition towards more sustainable food systems, it is essential to adopt a horizontal approach, going beyond the sectoral one, for integrated food policies that are able to be implemented in line with the peculiarities of each context.[2581]

Addressing food system resilience and transformation recommends that policymakers appreciate the need for upfront long-term investment and capacity development (e.g., groundwater management, reforestation) despite the time lag between investment and payoff. A stable and sound governance system is needed to provide an enabling environment conducive to long-term innovation funding earmarked for environmental and social sustainability in food systems.[2582]

Food systems refer to the entwined relationships between humans and natural biophysical resources in systems. It is important, therefore, to have trained professionals who can: 1. Listen and understand other disciplines; 2. Discuss clearly with stakeholders, and 3. Present findings and participate effectively in policymaking. The lack of transferable skills in current professionals in the space (i.e., listening, discussing, and presenting) constitutes a capacity gap.[2583]

For all other stakeholders including governments and the private, donors and financial sectors to refrain from commodifying everything from land, natural resources, knowledge, labor, culture, values, etc. and discriminating indigenous food systems as backward and problematic. These contribute tremendously to the erosion of indigenous food systems, specifically, and ultimately, IPs' identities and rights. Moreover, changing mindsets entails commitments to collaborative actions from all stakeholders to address the divergences above.[2584]

[2578] 200:7 p 6 in 359_May 17_21_FAO_IFAD

[2579] 204:27 p 10 in 363_May_26_21_Mehta_Bautista

[2580] 204:34 p 11 in 363_May_26_21_Mehta_Bautista

[2581] 215:10 p 6 in 376_June_04_21_IFAD_Multi

[2582] 216:10 p 7 in 377_June_07_21_Arden_Caucci

[2583] 216:12 p 10 in 377_June_07_21_Arden_Caucci

[2584] 221:20 p 11 in 382_June_08_21_AIPP_Multi

Placing the family farmer centerstage: Need for greater recognition of the importance of the farmer (who should be more visible in the formulation of policies and in the revision of the master plan of their city), and of urban agriculture as a practice that ensures autonomy in the choice of food from communities and promoting such practices with public purchase strategies, access to raw materials, and development policies. Encouraging the hand-crafted processing of community food presents itself as a great opportunity for diversification and income generation.[2585]

Latin America is an area of the world with great potential, but a deep transformation is needed to address some of the main challenges. Zamorano University trains professional who work all over Latin America on the issues raised in the 4 action tracks discussed. However, the next generations must think also about wider issues in food systems (such as climate change) to make agriculture and food systems more sustainable.[2586]

The urgent need of a change of paradigm for rethinking food systems in the Mediterranean was underlined, considering that the current one is mainly based on maximising productivity at the expenses of environment/health/social dimensions. A concern was raised about the fact that the need of an urgent and profound rethinking of our cultures on food systems was still not sufficiently recognized within the Summit debate.[2587]

Taking action to shift how we think about food and food systems It became clear from the dialogue, the sharing between panelists and with participants, that efforts to bring issues such as conscious and sacredness into more discussions of the food system are important.[2588]

"It's only through a shift in our consciousness and coming back to the awareness of one family that we are able to say that we cannot continue, we have to make a change and we are the ones who can do it." "Personal change is what generates systemic change."[2589]

Change begins from inside and it is the shift in inner consciousness that will reform the external food systems." "It is important to understand that whether we are from a particular faith or not we are all concerned with the social issues we face today and we need to connect these concerns with the food system and act responsibly."[2590]

Individuals working in emergency food systems need to be able to be creative and address the systemic issues that contribute to food insecurity. When serving food insecure people, the structure and programs in place should prioritize dignity. When individuals visit food pantries or receive food donations, they need to have agency, choice, and be respected first and foremost. This requires communities to understand and dismantle the assumptions we hold about poverty and food insecurity. For instance, childhood food insecurity is an adverse experience that can contribute to trauma, having lifelong effects. Food emergency

[2585] 228:31 p 10 in 222a_May_11_21_FTI_ZHI_English

[2586] 238:1 p 6 in 306a_June_05_21_Zamarano Uni_English

[2587] 244:21 p 9 in 480_June_21_21_CIHEAM_Multi

[2588] 247:3 p 6 in 483_June_24_21_Mandal_Goodman

[2589] 247:4 p 7 in 483_June_24_21_Mandal_Goodman

[2590] 247:6 p 7 in 483_June_24_21_Mandal_Goodman

systems must recognize the importance of how we address and ensure that young people receiving food know that they can look to their future with pride.[2591]

The group felt that there needed to be a cultural shift in peoples attitudes to help drive a reduction in food waste. Current attitudes prominent in some regions (for example, norms of surplus in retail outlets and rigid expectations help by consumers of how food should look) need to be changed to ensure that there is less waste post-farm, at the point of retail and in the home, whilst there needs to be a greater shift in changing a conceived norm that a certain amount of food waste is acceptable.[2592]

Food Systems champions were invited to give their perspectives on how to catalyze food systems transformation in order to meet regional food and nutrition security goals in a post-COVID-19 context. The first champion, Dr. Shakuntala Thilsted of WorldFish, drew lessons from her experience in shifting mindsets on nutrition and aquaculture and how this can be applied to revisioning rice as a part of sustainable healthy diets. Diversity is a crucial element of change: in terms of solutions needed for diversifying diets, but also in perspectives engaged.[2593]

Participants acknowledged the importance of changing mindsets from "feeding to nourishing" to prioritize nutritive value over yield, and from "short-term to long-term" to emphasize more sustainable pathways to achieving nutrition and public health goals. This entails social and behavior change, which would require the participation of communication- and culture-focused stakeholders such as extension workers and social scientists, as well as "non-traditional" stakeholders such as designers and members of the creative sector, in food systems transformation.[2594]

Look beyond the product level, considering how innovations sit within and affect the bigger picture of what's needed. This includes: Creating genuinely equitable business models, whether from the ground up or by transforming what we already have (eg looking beyond the usual funders/investors to new partners with an interest in similar outcomes); and, especially important, ensuring food workers earn enough to afford good food. Changing eating behaviours for the better, and at scale, based on a solid understanding of where people are starting from. Driving and supporting mindset and cultural shifts, including within specific target groups - recognising and working with the fact that this could take time.[2595]

The fundamental issue here is that we are trying to build a new system from our current way of thinking. So first we need to change our thinking. A first step is to recognise that we need to think in terms of living systems principles. Principles rather than prescriptive processes.[2596]

[2591] 252:1 p 6 in 488_June_22_21_Harrison_CC

[2592] 253:9 p 7 in 489_June_22_21_Rare China Centre_Multi

[2593] 254:3 p 6 in 490_June_22_21_Yasmi Y

[2594] 254:16 p 8 in 490_June_22_21_Yasmi Y

[2595] 259:13 p 8 in 495_June_23_21_Forum for the Future

[2596] 273:94 p 13 in 509_June_30_21_FFA_Nestlé

Currently much analysis focuses on what is the current situation, what are current needs, how many people do we talk about and what does that mean for food provisioning. Understanding of how food systems have changed and how this resulted in food insecurity is limited. Differences between resilience in regions could be taken better into account, as well as cross-border aspects of food systems – for people living in these areas they are one and the same system. Some accountability in the aid system should shift from addressing needs, towards addressing resilience of food systems.[2597]

It is urgent to stop short term economic thinking and explore alternative financial incentives (slow money, municipal bonds geared to green infrastructure investments, ecosystem services payments etc.), seek inclusion and territoriality. Policies should support bonding and bridging through social networks.[2598]

Learning exchanges to deepen mutual understanding of Agriculture, Food and Environment stakeholders: Need more systematic efforts to deepen mutual understanding among landscape stakeholders including challenge of values, e.g., knowing where, who, and how food is produced so consumers can make informed choices. Connect people to food system processes through dialogue, collaborative mapping for shared understanding and shift narratives. Consumer choice can push private sector.[2599]

Participants identified how the understanding of sustainability has been altered to seeing surface-level changes, such as using paper straws or bamboo cutlery, as methods to maintain sustainability; In reality, it is the system as a whole that needs to change.[2600]

Participants also suggested the importance of "Treating others the way you want to be treated" in that we have a responsibility to take care of the environment and take only what we need. These values were also reflected in the conversation of fair financial compensation for individuals working across the food system.[2601]

Education, both in school curriculums and outside of school, should focus on how we can transform the food system and alternatives to current practices.[2602]

UNFSS should acknowledge that the potential of agroecology as the basis for sustainability is now widely recognized alongside the role that small scale farmers play in food security and indigenous knowledge systems.[2603]

There was also the suggestion that current approaches to evidence reflect a limited philosophy, and that the interrelationships between dietary patterns, human nutrition and planetary health need to be reconceptualised, with evolutionary theory and ecology playing a much more central role. This echoed the introductory talks that highlighted the importance of new mental models that learn from Indigenous wisdom. Our second keynote

[2597] 278:21 p 8 in 514_July_01_21_Bolling_Multi

[2598] 299:47 p 9 in 535_July_08_UNESCO Chair on Food

[2599] 299:50 p 10 in 535_July_08_UNESCO Chair on Food

[2600] 307:41 p 10 in 543_July_13_21_YRYFC

[2601] 307:45 p 10 in 543_July_13_21_YRYFC

[2602] 307:62 p 14 in 543_July_13_21_YRYFC

[2603] 309:13 p 6 in 545_July_13_21_Mbenya R

speaker, Prof Boyd Swinburn, outlined the nascent Mana Kai policy in Aotearoa New Zealand that draws on Māori concepts around the social and environmental aspects of food, and how these are interrelated. The third keynote speaker, Dr Sandro Demaio, also pointed to Aboriginal Australians as being the original founders of the concept of planetary health.[2604]

The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: Promote an evaluation culture, in order to enhance the learning value of evaluation, in balance with accountability objectives, and for evaluation to become everyone's business, including donors, commissioners, decision-makers, civil society and others involved in food systems. Embrace the complexity of food systems transformation and other global challenges – such as climate change and its impact, which require integrating systems thinking and dealing with uncertainties. Promote the role of evaluators as engaged participants: evaluators should position themselves in a more dialogic and partnership role in order to facilitate support decision-making, and engage in open communication to help form solutions and stimulate transformative change. Innovate methods and approaches making a case for non-traditional and creative ones. These may include developmental, participatory and other approaches, which are more suited to help understand the complexity around food systems, while ensuring that the focus on quality is preserved. Continue to develop capacities of evaluators so that they are equipped with the necessary skills and confidence in making the right choices on methods and approaches. Ensure more inclusive and equitable evaluations: cross fertilize research and evaluation with local and indigenous food systems and practices and involve different stakeholders in the process- leave no one behind.[2605]

It is an indisputable fact that farmers need increased access to markets, innovation, trading and finance in order to survive the next 20 years. However, this can only be achieved by every member of our global society taking ownership of our shared food systems and/or moving away from what is currently found under the prevailing 'get big or get out' mentality that seems to be dominating our global food systems and the manner in which we theorise them.[2606]

Pursue an integrated approach to advocacy, including linkages between WASH, women's empowerment and nutrition.[2607]

Re-imagine the role of transportation systems in the focus on the availability of nutritious foods in remote, rural areas.[2608]

Perception change of cooking and household chores as a woman's duty vs providing nutritious meals in partnership with spouse for the improved health of the whole family.[2609]

[2604] 312:27 p 11 in 548_July_14_21_Genoni A

[2605] 320:6 p 6 in 557_July_15_21_EvalForward_FSRD

[2606] 323:34 p 12 in 560_July 19_21_Arbuthnott_Multi

[2607] 330:28 p 7 in 568_July_21_21_Cooper-Liverpool M

[2608] 330:37 p 9 in 568_July_21_21_Cooper-Liverpool M

[2609] 330:51 p 11 in 568_July_21_21_Cooper-Liverpool M

A paradigm shift is required at the level of the ministry in charge of agriculture: it must become a ministry of sustainable agricultural production.[2610]

Adoption of economic incentive measures: this paradigm shift will require technical and financial support which is not currently present. This is an evolution which cannot occur except in the long term and with close support. The financial resources must be planned as a result, which requires a revision of the subsidies currently granted to re-calibrate them to the new approaches to be promoted.[2611]

Diverse solutions

Are today's "food heroes", hippie vegans and vegetarians overdoing it? Need for a greater social analysis of these stereotypes for the change towards more sustainable guidelines.[2612]

Develop scalable solutions that can be applied across borders.[2613]

Use of advocacy with legislative authorities to revise customs regulations unfavorable to the import of innovative tools (taxes, procedures, time limits, etc.).[2614]

Actors vision for diversified food systems When asked to envision sustainable and resilient agricultural and food systems that should exist in Malawi, all groups indicated that there should be diverse food systems that not only focus on exotic foods but promote production and consumption of indigenous crop and animal products. Some of the indigenous foods mentioned by the different actors include green grams, chick peas, velvet beans, lima beans, bambara nuts. baobab, tamarind, indian plum, prickly cucumber and wild animals (e.g., insects, caterpillars and mice). The findings on the diverse foods and agricultural enterprises mentioned at the national level is consistent with the findings from the community and district level dialogues. Actors at the community and district level also mentioned different foods that are cultivated, whilst some foods are from the wild. Some foods are also accessed from the markets. Surprisingly, when asked about what foods should be promoted in their areas, the actors at community level mostly mentioned the foods that are usually promoted by the programmers and public and non-state agricultural extension organisations.[2615]

There is opportunity for Indigenous and non-Indigenous peoples and programs to collaborate on these shared goals. First we need a change in mentality to see Indigenous Peoples' food systems as vital to the solutions, which can help inspire the change to sustainable consumption.[2616]

[2610] 338:19 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[2611] 338:20 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[2612] 513:12 ¶ 263 in 090a_May_29_21_Theunissen D_Eng

[2613] 414:40 p 8 in 455_May_14_21_Ekwamu_A

[2614] 520:31 p 10 in 107a_June_22_21_Trimarchi A_Eng

[2615] 448:10 p 6 in 388_May_03_21_Kambewa_D

[2616] 449:12 p 6 in 390_May_28_21_UNPFII_FAO

Promote eco-regenerative solutions, management of resources and commons by rural women workers.[2617]

Promoting Technology in agriculture would demonstrate that it is possible to make a profit by saving time and cost and makes it more attractive to the youth.[2618]

What are solutions and challenges to localize value chains and rebalance agency for more resilient and equitable livelihoods? Building awareness and overcoming limitations in capacity and technology.[2619]

Foster the adoption of new technologies by smallholder farmers by showing that they address/solve the risk of losing crops that are so precious.[2620]

Training, with focus on co-creation which is key for digital uptake and must be serious about lowering production costs/improving income.[2621]

Area towards making progress, but we focused a lot on education and the power of collaboration and how we can. Increase awareness of what's possible for growing food year round, and these technologies.[2622]

Technical assistance programs should be strengthened with the participation of academia, governments and large producers with knowledge to share with the small ones. They should include more effective communication about the benefits of new technologies so that farmers can understand, adopt and use them appropriately.[2623]

Going beyond, it is important to help bridge the digital divide and look at it in terms of arresting the lack of digital literacy in general and making stakeholders aware of the resources available.[2624]

Participants agreed that the FSS should focus on making diets more sustainable and more nutrient-dense, not focus only on a narrow set of policies, practices, and products that target specific foods and/or are not inclusive of diverse needs and choices. For example, fruits and vegetables provide great nutritional value, but meat, poultry, dairy and eggs are very nutrient-dense and should not be discouraged. Produce is also most likely to be wasted.[2625]

Participants felt that multiple types of production systems are and must be part of more sustainable food systems - for example, organic and conventional agriculture should not be

[2617] 455:23 p 6 in 063_Mar_04_21_Nanavaty_Multi

[2618] 424:31 p 9 in 465_June_16_21_Congressional Hunger

[2619] 428:32 p 7 in 469_June_17_21_de Silva R

[2620] 429:201 p 13 in 470_June_17_21_Burian_Multi

[2621] 429:267 p 19 in 470_June_17_21_Burian_Multi

[2622] 432:14 p 7 in 473_June_18_21_Sheridan S

[2623] 491:18 p 6 in 301_May_27_21_CropLife Latin America

[2624] 494:16 p 6 in 308_June_09_21_FAO_Pinduoduo_Multi

[2625] 4:17 p 9 in 104_Apr_8_21_Animal Agriculture Alliance

viewed as mutually exclusive. Both are necessary to meet consumers' needs and achieve our common goals. FSS solutions must recognize this truth and be revised to incorporate the best aspects of multiple systems of production.[2626]

The sustainability, efficiency and adaptability of practices will vary across geographies and farming conditions.[2627]

Differences in soil, terrain, land-use and other factors can vary considerably even within the same area, meaning there is no one-size-fits-all strategy. Programs and policies must be flexible enough to allow creativity and experimentation to achieve desired results at the hyper-local level. Knowledge-sharing based on these types of solutions can be the most effective way to promote widespread change. This applies to farmer-to-farmer education as well as formalized classes through Extension or associations. It also can be valuable to learn from farmers in different geographic and commodity backgrounds. A grain farmer might learn something useful from an almond farmer.[2628]

It is of utmost importance to carve out tailor-made solutions not just based on research alone but according to farmers needs and provide market access and linkages, mobilizing resources and harnessing partnerships for greater leverage, innovation, and impact on nature, people, livelihoods and our ecosystems.[2629]

"There is no one solution and approaches to the issues need to be multifaceted".[2630]

Two closely linked approaches, of diversification and decentralization, emerged from the discussion. Diversity involved acknowledging the diversity of agro-ecologies in India and the world, and recognizing that diverse, localized approaches needed to be taken. Transitioning away from the monoculture, rice-wheat model of the Green Revolution would require crop diversification according to the local environment. This would not only ensure carbon sequestration but also lead to increased diversity of foods consumed. There was a consensus among the participants that production and consumption systems needed to be decentralized. This was further emphasized by the pandemic, where local supply chains became important.[2631]

The participants also recognised the importance of creating solutions that are sensitive to local contexts and ecologies.[2632]

Different regions experience different realities, both in terms of the agroecological and also the socioeconomic conditions where they operate.[2633]

The need to consider context specificity and to design context-responsive solutions was emphasized throughout the event, suggesting that any solutions that are high-level and

[2626] 4:27 p 11 in 104_Apr_8_21_Animal Agriculture Alliance

[2627] 8:2 p 6 in 169_Apr_6_21_Shea E

[2628] 8:19 p 9 in 169_Apr_6_21_Shea E

[2629] 12:8 p 7 in 192_Apr_19_21_Okafor_A

[2630] 18:24 p 12 in 114_Apr_19_21_Maurer H_Roskruge N

[2631] 26:36 p 11 in 023_Jan_29_21_Bharat K S

[2632] 27:41 p 9 in 044_Feb_18_21_Bharat K S

[2633] 28:11 p 7 in 064_Mar_4_21_Farming First

global in scope may be difficult to make locally significant and/or will require a lot of work to be implemented in ways that respond to different local needs and opportunities.[2634]

This implies new traditions, a new concept of sustainability and affordability (in its broad definition) and social proximity. The day that we will be collectively able to bring diversity as a fundamental aspect of belonging will imply the creation of a new narrative in the shape of a clepsydra. Diversity will be the unifying factor and the narrative won't imply a homogenization of diversity but will rather embrace it as a source of richness. This will imply the establishment of trust through an empowering culture. In this narrative, we want new traditions that allow the creation a new sense of belonging. How can we get there? By embedding the issue of personalized diets and food in its broad definition encompassing social and health dimensions.[2635]

Game changing solutions are needed which should reach all stakeholders and deliver multifaceted benefits for society including healthier diets and reducing inequalities at demographic level and in value chains.[2636]

Different solutions are required for the diversity of the food systems in Latin America with its wide range of products and producers. These solutions already exist for different contexts; however, they need to be scaled up through investments and policies.[2637]

Indonesia is such a large country, there are so many options to choose from in terms of processes and products, and potential resources to support the Summit's Objectives. Different regions prefer different processes to be pursued.[2638]

Involve youth and women in the design and targeting of all food security and nutrition action plans. this should include the provision of education about the links between nutrition and good health for individuals, groups and their families and food systems.[2639]

In particular, the webinar stressed the need to support locally tailored solutions which are based on the understanding of local context, supported and promoted by actors which have organized themselves, while taking into account the needs of vulnerable groups or groups with special needs such a women and youth.[2640]

But how Food Banks would like to be seen in the future? Food Banks are not the producers or the users – Food Banks are the dotted line that connect the needs. This connection of need is something really powerful to communicate. … There is a new role for Food Banks as very important actors in the food system that can work towards a more sustainable future where it is important to build a common understanding. It is a very complex environment where build awareness is a key. The lack of understanding, where complexity is the enemy, can be damaging and limiting the future growth. Food Banks need to reframe

[2634] 42:7 p 6 in 178_Apr_8_21_AGRA_Multi

[2635] 45:7 p 6 in 043_Feb_17_21_Donati L_Multi

[2636] 53:9 p 5 in 001_Nov_5_20_CGIAR

[2637] 53:14 p 5 in 001_Nov_5_20_CGIAR

[2638] 57:6 p 6 in 008_Dec_19_20_Niode AK

[2639] 68:25 p 9 in 057_Feb_26_21_YES

[2640] 79:13 p 6 in 118_Apr_21_21_Huvio T

the narrative to improve understanding and build broad-based support. Time is right to reframe and reshape Food Banks' position and it is time to go![2641]

No one-size-fits-all solution: Participants balked at the notion that there is any one silver-bullet to 'improving the food system'. The food system is too complex to have broad global policy recommendations. Regional differences must be taken into account when recommending environmental best-practices. There is the recognition that best-practices may even differ from farm to farm, let alone from country to country.[2642]

Harnessing diversity and nuancing communication Participants recognized that the global discussion about livestock usually lacks the nuance that reflects the diversity of the sector and thus the solutions required to ensure its contributions to future food systems. It was emphasized that a polarized debate that has extremes of 'livestock all bad' or 'livestock all good' is unhelpful and does not reflect the diversity of livestock roles across the world, or the need for multiple, different changes and solutions throughout the sector towards better food systems in future.[2643]

Embracing change: action within the livestock sector. The diverse livestock sector actors who joined the dialogue all acknowledge that, as with all sectors, change towards better future food systems must be embraced. What that change looks like is incredibly diverse because of the diversity of ways that animals and their products are raised, managed and consumed as well as their multiple roles.[2644]

Develop solutions that take the specific, local context (including trade-offs) into account, and acknowledge the diversity in mountain regions.[2645]

Technologies; transparent frameworks; multi-stakeholder approaches; co-creation; an open-mind; funding (public and private); decentralized autonomous organisations; open-source solutions; public procurement processes; multinational agreements impact framed, education; openness to change.[2646]

Different communities need different things.[2647]

Record protocols and be more transparent about sustainability efforts and outcomes within agriculture; sharing best practice but recognising that different situations need different approaches.[2648]

Firstly, there must be support for the diversity of emerging sustainable livelihood strategies, including maximising productivity/ efficiency from a single enterprise,

[2641] 81:9 p 9 in 145_May_6_21_Vandenschrik J_Multi

[2642] 90:4 p 6 in 206_Apr_27_21_CCANCC

[2643] 93:3 p 6 in 227_May_18_21_Tarawali S

[2644] 93:7 p 6 in 227_May_18_21_Tarawali S

[2645] 98:33 p 10 in 282_May_18_21_Romeo R

[2646] 99:37 p 11 in 285_May_20_21_TFFF_Multi

[2647] 108:9 p 7 in 059_Feb_26_21_O'Doherty M

[2648] 110:8 p 7 in 067_Mar_05_21_O'Doherty M

portfolios of farm enterprises (including the environmental enterprise) and a blend of farm/non-farm activities.[2649]

If ruminant production is to be prioritised in order to reduce feed/food competition, the greatest tension identified was in relation to how to support a fair transition to a livestock sector based on a single industry – alternative opportunities would have to be provided to farmers.[2650]

One size does not fit all. There is a need to respect local needs, capacity, particularly in developing geographies.[2651]

Nature based solutions, with the application of manure from animal husbandry and natural carbon sequestrations should be the new norm for all crops' agriculture.[2652]

Integrating a diversity of disciplines on the WEF nexus would enrich models in developing appropriate scenarios that affect specific users.[2653]

Secondly, the package of solutions to farmers may be too difficult to adopt. Solutions do not come as silver bullets, but as a package. There is a need to assess if these solutions are not too difficult for the famer to adapt to local environments, by using applied research and testing together with agricultural innovation and putting knowledge in hands of farmers.[2654]

Integrated energy plans: There is a need for the integration of diverse set up of energy generation resources with storage component to accommodate the productivity load of pumping units. Thus an integrated energy strategy may include energy production at different sources and requirements by different sectors, and finally the supply and gap analysis. We need new ideas like floating solar panels on water surfaces which can reduce water evaporation.[2655]

There is a need to explore other solutions such as the promotion of recreational activities and eco-friendly tourism on the properties of irrigation systems.[2656]

This will include exploring local Food Systems solutions that are well-resourced, people-centered, ecologically sustainable and socially just. This also include a rights-based approach emphasizes that those most affected by food insecurity should not only be able to participate meaningfully, but that governments must be accountable for these rights.[2657]

[2649] 112:45 p 9 in 074_May_18_21_O'Mara_Teagasc

[2650] 112:92 p 14 in 074_May_18_21_O'Mara_Teagasc

[2651] 113:45 p 13 in 075_Mar_10_21_IFAN

[2652] 114:4 p 5 in 076_Mar_11_21_Tan R

[2653] 117:55 p 14 in 109_Apr_13_21_Jacobs-Mata I

[2654] 118:48 p 11 in 117_Apr_22_21_Dinesh D_Multi

[2655] 127:15 p 9 in 159_Apr_21_21_Hafeez M

[2656] 127:84 p 18 in 159_Apr_21_21_Hafeez M

[2657] 133:24 p 9 in 196_Apr_20_21_Attah-Krah K

Again, there was interest in all speakers in this group towards adaption current practices to other contexts.[2658]

Complementary to international trade, participants expressed interest in building stronger domestic markets – examples cited were value added on the Prairies and national fresh food and vegetables. Diversified market opportunities ensure resiliency by providing opportunities for farmers, reducing over-reliance on one country, supplier, crop, and product type, and ensuring more stable food supply.[2659]

The suggested steps were food diversification with a particular focus on drought resistance varieties, adoption of Agri technologies that increase productivity with less impact on climate, support and promotion of Agri extension workers to reach farmers with new skills and models, the role of agro-dealers in local markets, reduction of tax for Agri inputs, promotion of livestock farming in drought-affected regions and the use of farmers cooperatives if commercial farming in not exploited.[2660]

Recognize the responsibility of the developed world to diversify fish consumption beyond the few species primarily eaten by wealthy consumers, to reduce food waste, and to support sustainably sourced seafood.[2661]

Introducing driverless small trucks that can operate 24/7.[2662]

Support diversification both within and outside of the sector E.G., growing/catching diversified species; diversification of livelihood options.[2663]

Local farmers need to 1) diversify their production based on local demand, and 2) create their own composting facility on site to process local food scraps.[2664]

Have local farmers diversify their production based on local demand.[2665]

Municipal governments can help by developing linkages between farmers and local restaurants, food banks and supermarkets so they better understand local demand and diversify their production accordingly.[2666]

Participants believed that greater diversity on farms would translate into greater nutritional diversity.[2667]

[2658] 136:12 p 9 in 211_Apr_30_21_Chisholm N_Multi

[2659] 153:12 p 7 in 263_May_06_21_CCGA

[2660] 154:5 p 6 in 265_May_07_21_CSONA

[2661] 155:25 p 6 in 272_May_12_21_Battista W

[2662] 156:34 p 8 in 275_May_13_21_Dornom H

[2663] 161:40 p 8 in 296_May_25_21_Battista W

[2664] 163:39 p 6 in 300_May_27_21_Alesso_Pommeret

[2665] 163:98 p 13 in 300_May_27_21_Alesso_Pommeret

[2666] 163:109 p 13 in 300_May_27_21_Alesso_Pommeret

[2667] 167:23 p 7 in 311_June_14_21_NCD Child

Greater diversity & inclusion in the sector is required, better movement of talent across the AKIS and we need to continue our efforts to create clear career pathways for all the professional levels.[2668]

The sector needs more diversity of thinking and practice in order to continue to attract a diverse talent pool.[2669]

The need to grow diversification of production should go beyond canning and drying must be overemphasized.[2670]

In an effort to accumulate more value on milk, processing must be diversified. This has proved to meet all customer needs and preferences whilst generating more revenue.[2671]

Food development adapted to the characteristics of local resources; To maintain abundant food diversity and optimize the use of existing resources, food development must consider various aspects and be based on multi-disciplinary scientific studies.[2672]

Provide solutions for the hungry, the farmers, food safety, those optimising the food chain.[2673]

Raise awareness about issues relating to pastoralists recognising them as legitimate land users. Develop community by-laws to protect rights of pastoralists. Build capacity among pastoralists to stand for their land rights.[2674]

Promote agricultural diversity and indigenous crops as part of solutions to global food crisis. IPs and local communities should be allowed to use their traditional seeds and crops.[2675]

…decision making based on systemic approaches and cooperation…[2676]

For a transition towards more sustainable food systems, it is essential to adopt a horizontal approach, going beyond the sectoral one, for integrated food policies that are able to be implemented in line with the peculiarities of each context.[2677]

Stakeholders should focus more on knowledge and capacity building to contextualise actions and find out appropriate solutions tailored to the specific context.[2678]

Consider regional specificities and the struggles of movements of Brazil's traditional peoples in food and nutrition security actions, linking them to the construction and

[2668] 170:23 p 9 in 328_May_19_21_Lalor_Teagasc

[2669] 170:31 p 9 in 328_May_19_21_Lalor_Teagasc

[2670] 173:39 p 12 in 331_May_24_21_LNFU

[2671] 173:109 p 18 in 331_May_24_21_LNFU

[2672] 185:38 p 8 in 343_May_28_21_Abdullah_S

[2673] 194:22 p 9 in 352_June_04_21_Troughton J

[2674] 199:24 p 8 in 358_May_11_21_ILC_Multi

[2675] 199:27 p 9 in 358_May_11_21_ILC_Multi

[2676] 215:3 p 6 in 376_June_04_21_IFAD_Multi

[2677] 215:10 p 6 in 376_June_04_21_IFAD_Multi

[2678] 215:12 p 7 in 376_June_04_21_IFAD_Multi

preservation of legal and conceptual frameworks that reinforce their cultural roots, in addition to recognizing the relationship between food and traditional preventive medicine and historical rituals.[2679]

…improving the nutritive value of staple crops like rice, and diversifying farm systems in order to diversify the food on consumers' plates.[2680]

Expand investment and support sustainable development and diversification of small-scale producers.[2681]

Diversification of aquaculture landscapes, of cultivated species, of seaweed based applications and solutions. Here there was the suggestion to use Integrated Multitrophic Aquaculture (IMTA) to grow seaweed along with other species such as muscles and oysters.[2682]

Conflicts between the optimal temporal and spatial scales of synergies from products and diversification when applying the landscape approach due to dominance of small-scale and fragmented production (ecological and adaptation benefits are longer term).[2683]

Endeavor to work with various stakeholders including private sector.[2684]

The CG system has contributed and continues to contribute substantially to innovations in developing countries. However, these centers alone do not have the resources to reach millions of smallholder farmers with their specific and highly varied needs. Adaptive national level R&D&E is a crucial source of technical innovation of the food system.[2685]

Furthermore, youth should learn about critical issues in the food system and should be encouraged to take action. One participant shared an example of youths at their university who had organized a climate strike where youth gathered and led a large group of their peers to walk out of class in support of climate justice. Youth need to see examples of successful change so that they are not discouraged about standing up for issues they believe in.[2686]

Furthermore, participants highlighted how the combination of economic, social and environmental principles are key to addressing both inclusivity and affordability issues around the topic of access to healthy, nutritious and safe food in Kosovo.[2687]

In order for Kosovo's food system to be more inclusive, sustainable and healthy, further efforts are needed to 1) create the right mix of incentives for businesses and producers to shift their behaviours and patterns, 2) review the institutional, legislative and regulatory

[2679] 228:67 p 20 in 222a_May_11_21_FTI_ZHI_English

[2680] 254:14 p 8 in 490_June_22_21_Yasmi Y

[2681] 263:43 p 9 in 499_June_25_21_GANSF

[2682] 264:27 p 8 in 500_June_26_21_Edible Issues

[2683] 277:26 p 7 in 513_July_01_21_Weise S

[2684] 278:62 p 12 in 514_July_01_21_Bolling_Multi

[2685] 298:23 p 8 in 534_July_07_21_WBADB_ADI_Multi

[2686] 307:47 p 11 in 543_July_13_21_YRYFC

[2687] 310:9 p 6 in 546_July_13_21_INDEP

framework to better integrate environmental protection and climate concepts, 3) reduce risks (access, affordability, income) for those most marginalized within the system, and 4) support income-earning opportunities across food value chains. Additionally, there must be special attention paid to enhancing gender equality in Kosovo's food system, including the need to provide more opportunities for women in agricultural value chains, such as access to land, jobs, finance and decision-making.[2688]

It is not a single solution that can resolve the issue of food waste, but many different solutions and stakeholders. Businesses cannot only reduce food waste by taking it as their main business case and purpose, but also if they raise efficiency in general. (For example, if a restaurant decides to omit cherry tomatoes as a garnish as 60% of the consumers did not eat it.) Different business models reduce food waste at different levels of the supply chain. Successful businesses are existing on all these levels, and they do not just provide value for food waste reduction but also general value for their consumers – be it an upscale menu in a restaurant (from ugly vegetables, with innards) or bread sold at a discount. Zero Waste Austria already developed a manual with best practices for waste reduction in hotels, and this idea could also be further developed for food waste reduction. This helps every business to reduce food waste.[2689]

One example was in the discussion on access to nutritious food. In Bangladesh, the FGD identified the development of biofortified staple crops as a priority, whereas in Odisha, the FGD advocated for the scaling of nutrient-rich and resilient traditional crops. The FGD in Nepal, on the other hand, focused on local food production as a means of improving nutrition while addressing rural reinvigoration.[2690]

While it was also noted as a challenge, the theme of interdependence was seen by participants as an opportunity. Participants continually pointed to the power of collaboration and coalition. This means not seeing other businesses as competitors, but rather partners in solving the complex issues of the global food system. Each sustainable food business's own success is positively correlated to the success of its competitors. Democratizing access to the tools necessary for radical food systems change will benefit all. The Dialogue emphasized an all-hands-on-deck approach to tackling the changes that are urgently needed.[2691]

Throughout the discussion, participants shared their own solutions to the food system's challenges while noting that there isn't just one solution needed. Participants agreed that many of the necessary solutions do already exist, but investors are needed. There is an opportunity to bring more investors that value the planet as highly as profit into this space.[2692]

In general, Dialogue participants found it both important and 'refreshing' to step out of their professional or academic silos or areas of expertise and become exposed to initiatives

[2688] 310:10 p 6 in 546_July_13_21_INDEP

[2689] 311:6 p 6 in 547_July_14_21_Heilinger K

[2690] 313:33 p 11 in 549_July_14_21_Meah N

[2691] 316:18 p 8 in 553_July_15_21_Food Tank_Oatly

[2692] 316:21 p 8 in 553_July_15_21_Food Tank_Oatly

and ideas from across the globe that are not only inspiring but can also be scaled and replicated in other geographies or in similar contexts.[2693]

Overall, and although many challenges were identified (see next section) participants highlighted the importance of embracing multiple solutions and diverse approaches to address the manifold problems in our current food systems.[2694]

It is important to advocate for strengthening the evaluation culture and to balance accountability and learning, aiming for evaluation to become everyone's business. Evaluators come from different educational and professional backgrounds, and addressing systems, complexity, and uncertainty may require a mindset shift, as we are not evaluating a linear process. Linked to this is the choice of appropriate methods, making a case for non-traditional and creative approaches to be encouraged: this may be difficult sometimes for evaluators to select and promote, though we need to move away from the notion of a gold standard to appreciating participatory, developmental, adaptive approaches.[2695]

The Dialogue concluded with a call for integrated solutions and "radical cooperation" as key to harnessing limited GEF resources to support food systems transformation. This should be an important aspect for consideration by the Food System Summit Action Tracks as well as the cross-cutting levers.[2696]

Involve men at household and community level to understand the importance of nutrition, of the woman's role in providing nutritious food for children and family, and the value of nutrition for health outcomes.[2697]

"Sustainable protein" does not have a one-size-fits all solution. We need a balanced and nuanced approach that factors and considers regional differences, different markets, and consumer preferences. The issue is not "animal protein versus plant protein." The world needs more sustainably produced protein to feed a growing population while also improving livestock's environmental footprint and encouraging people to adopt dietary patterns that better reflect the Dietary Guidelines for Americans.[2698]

Greater flexibility in the Program's regulation; the per capita amount and nutritional recommendations, for example, do not match the diverse realities of the country.[2699]

The National School Meals Program is a transversal policy. It is an effective and complete strategy for Food and Nutritional Security, solidly instituted and institutionalized, which many years ago ceased to be just deliveries of food as a means to guarantee the human right to adequate food. But it is also a program with a political element, which faces several obstacles to its implementation.[2700]

[2693] 317:4 p 6 in 554_July_15_21_Lopez DE

[2694] 317:8 p 6 in 554_July_15_21_Lopez DE

[2695] 320:14 p 9 in 557_July_15_21_EvalForward_FSRD

[2696] 327:9 p 6 in 564_July_20_21_Bakarr_MI

[2697] 330:52 p 11 in 568_July_21_21_Cooper-Liverpool M

[2698] 335:6 p 2 in 484a_June_24_21_WBCSD_USFRA

[2699] 339:61 p 15 in 393a_June_01_21_Food of Tomorrow_Eng

[2700] 339:73 p 17 in 393a_June_01_21_Food of Tomorrow_Eng

Although the participants belonged to different geographical realities, there was a common link represented by their participation in the execution of the school meals program. Opinions were often presented in a complementary way, with an independent position and territorial representation of each participant, which brought a varied view of an action that had the same objective. Although there was agreement on the most important issues, we should highlight the different emphasis placed by people from different areas of activity. Thus, for example, nutritionists spoke about having more freedom to set menus, while representatives from civil society spoke of preparing menus based on purchases from family farms. Such apparent divergencies were, however, focused on a common purpose, i.e. guaranteeing students' nutritional security. Some referred to the importance of increasing regulation, while others mentioned the need to make regulation more flexible. Here too, however, the divergence concerned the way that regulation promotes the territorial approach to executing public policy, rather than a demand for less regulation. Something that permeated all debates was the recognition of the importance and relevance of the National School Meals Program in Brazil as an important mechanism to guarantee the human right to adequate food, and food and nutritional security for millions of students. It should therefore be viewed more attentively by both society and by managers and technicians, to ensure the proper execution of the program at the different levels of government.[2701]

Technology must be implemented, not as the main problem, but it is needed to resolve multifactorial problems in the long term.[2702]

The fusion of criteria, in response to the questions posed, resulted in the detection of a series of problems and solutions that should be taken into consideration for the purposes we seek.[2703]

Farmer capacity

Smallholder farmers play a crucial role in the growth of rural economy, not only in Jharkhand, but many part of the world by their multifunctional role of diverse food production, seed conservation and nature positive production pattern. Hence, it is very important to build their capacities on climate resilient farming systems and practices through practical demonstrations and accompaniments.[2704]

We need a clear plan of what additional skills beef farmers need to face the new challenges, e.g. measuring biodiversity, business skills, marketing and communications.[2705]

There has been a significant investment by the government to get "kit" onto farms, but without additional skills and support about the questions that are need asking, the investment is never going to be fully realised.[2706]

[2701] 339:84 p 19 in 393a_June_01_21_Food of Tomorrow_Eng

[2702] 348:13 p 7 in 422a_June_28_21_PROLIDER_Eng

[2703] 349:1 p 6 in 423a_June_28_21_PROLIDER_Eng

[2704] 7:3 p 6 in 167_Apr_13_21_Welthungerhilfe_Multi

[2705] 11:7 p 7 in 184_Apr_14_21_Genever_Multi

[2706] 11:9 p 8 in 184_Apr_14_21_Genever_Multi

To build indigenous people's skills with sustainable technology and digital tools that will integrate trainings, research and service to community to close the gender gap and enhance sustainable food systems.[2707]

Research institutions, Universities, civil society organizations and private sectors should be made to provide capacity building training and agricultural technologies solutions to these indigenous people in the socially and economically disadvantaged communities. We shouldn't leave it for the government alone.[2708]

Create awareness of the benefits of using quality seed among farmers. Train farmers in quality traditional vegetable seed production/processing/marketing.[2709]

Stakeholders should focus more on knowledge/capacity building among farmers who may not see immediate benefits of implementing low carbon technologies.[2710]

It was also necessary to empower communities and facilitate development that spreads from farmer to farmer. Women's SHGs and farmers could be considered as the unit of knowledge transfer. Universities could be enlisted to provide financial and capacity building training to these communities.[2711]

Organize workshops on the benefits of organic farming and limiting use of chemicals.[2712]

In meeting the aim of Boosting Nature-Positive Food Production, respective Government agencies have responsibilities of providing farmers with biofortified crop seeds and adequate training to boost production of farm outputs as well as incentivizing regenerative food production.[2713]

The Dialogue called for concerted efforts by the Government and other stakeholders to catalyze agro-zones, reactivate localized investments and upgrade smallholder farmers (especially women, youth, the disabled) to become investable through adequate training and support, advisory services and access to research opportunities.[2714]

Small holder farmers need to seek to build their skill set and find ways to embrace mixed farming rather than monoculture. Also, embrace aquaponics and green housing. There is a need to support the capacity building, training, education and awareness of small holders in learning and later applying new knowledge and approaches.[2715]

Improve skilled professional and provide the necessary infrastructure. Enhance the role of research and encourage scientific agricultural studies to solve problems of agricultural production, especially applied research. Improve regional cooperation in scientific

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[2707] 12:3 p 7 in 192_Apr_19_21_Okafor_A

[2708] 12:5 p 7 in 192_Apr_19_21_Okafor_A

[2709] 16:15 p 8 in 251_Jan_25_21_World Vegetable Center

[2710] 17:7 p 7 in 164_Apr_15_21_Anarbekov_Akramov

[2711] 27:45 p 10 in 044_Feb_18_21_Bharat K S

[2712] 30:6 p 6 in 071_Mar_11_21_ESCWA_FAO

[2713] 33:21 p 9 in 084_Mar_17_21_UnyimeAbasi B

[2714] 33:25 p 10 in 084_Mar_17_21_UnyimeAbasi B

[2715] 35:75 p 10 in 095_Mar_27_21_Chinapoo C_Multi

research, Arab partnerships, and exchange of capabilities according to the comparative advantage of agricultural production. Promote genetic improvement programs for quantitative and qualitative production.[2716]

It underlined the importance of bridging the financing gap for these small and medium-scale entrepreneurs and the fact that this requires working both on the "demand side" of finance - particularly through effective platforms and initiatives to support access to information and skills development (including financial skills development) for young (aspiring) entrepreneurs, and on the "supply side", through better use of de-risking capital, shared metrics to assess investibility of new or existing enterprises, and better coordination among lenders and investors.[2717]

A "One-Stop-Shop" bringing together Agri-SMEs, investors, and diverse business development service providers, with global reach but anchored into in-country activities, offering a menu of services including: Peer-to-peer SME learning and networking. Partnerships among BDS and other supporting organizations to connect their respective initiatives and avoid silos. Curating a database of entrepreneurs and sharing the same approach to mapping their functions and supporting needs (building on ISF/SAFIN taxonomy. Facilitating dialogue with investors. Building financial literacy and skills. Training. Guidelines and toolkits.[2718]

For Farmers: invest in beginning professional farmer training programs, free, transparent education for all farmers on agroecological practices that support the environment, especially in the face of climate change and severe weather patterns. For Food service workers: invest in education and empowerment, so that this entry-level profession can become a career path, acknowledging the trickle down effect to other industries. Include "food as medicine" education, climate education, and the value of sourcing close to home to support the local food economy. Empowerment can lead to social change through climate-friendly menus, menu marketing, and better production habits that reduce waste, aiming at a closed loop system.[2719]

There is a need to build small holder farmers capacity to engage in contract farming. There is need to support farmers and processors to develop a culture of quality assurance, record keeping and traceability standards. There is need to develop capacity among actors in chain to see the value chain as a system and improve the interactions within.[2720]

Several panelists noted that skill development, including digital skills related to drones and satellite data, as well as access to finance, are important enablers for transforming farmers into competitive entrepreneurs. This would ensure better economic empowerment of women and attract more younger workers.[2721]

[2716] 36:33 p 9 in 096_Mar_29_21_ESCWA

[2717] 46:6 p 6 in 049_Feb_23_21_SAFIN_Multi

[2718] 46:7 p 7 in 049_Feb_23_21_SAFIN_Multi

[2719] 49:16 p 6 in 086_Mar_20_21_Rosatan B

[2720] 50:18 p 9 in 087_Mar_20_21_Chinapoo C_Multi

[2721] 56:21 p 8 in 006_Dec_16_20_UNDESA

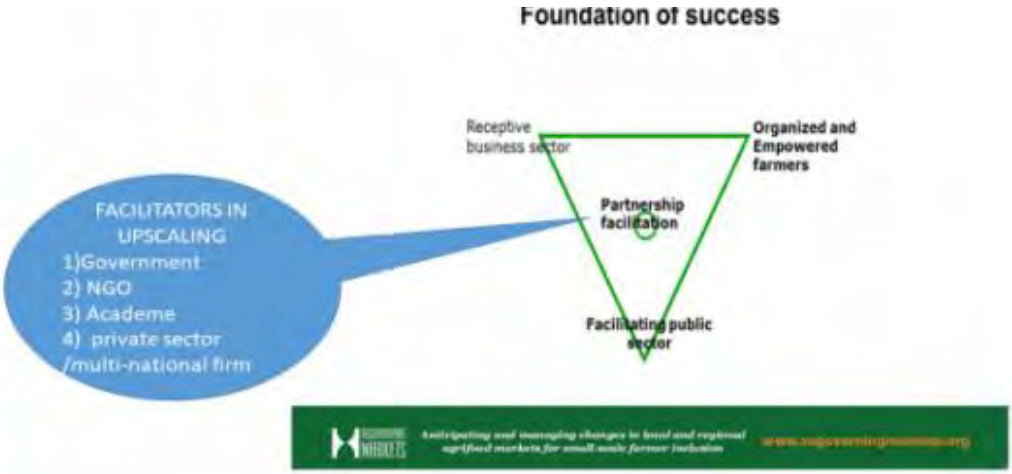
Training on sustainable practices be given to farmers to make the Food System in Nigeria better; There should be capacity building for Agricultural Extension services.[2722]

Educate farmers and food producers on efficient management of natural resources/production systems and on setting prices to improve their negotiating power in the food chain.[2723]

Capacity development is key, especially for farmers groups and MSMEs, providing support to operators in meeting required economic, social and environmental standards.[2724]

Farmers also need technical training in planting to improve production, as well as pipe systems to control water and produce during the off-season.[2725]

Content[2726]



Fr. Walpole, SJ shared that in his involvement with cooperatives, he observed that empowerment of farmer cooperatives should involve skills, capacity-building and development in cooperative management. He shared that in Guatemala, as well as in other countries that are involved in the production of coffee, the cooperatives are very successful. However in the Philippines, success has been inconsistent due to the lack of capability.[2727]

The role of capacity building among farmers is also put forward as the region counts with a lot of small-medium size producers.[2728]

[2722] 61:10 p 6 in 030_Feb_4_21_CAFS_CSAYN

[2723] 66:34 p 9 in 052_Feb_25_21_EUFIC

[2724] 66:63 p 12 in 052_Feb_25_21_EUFIC

[2725] 71:22 ¶ 31 in 033a_Feb_6_21_Serge BDS_ENG

[2726] 74:26 p 25, 518 × 210 in 189a_April_16_21_Ateneo de Manila

[2727] 74:33 pp 35 – 36 in 189a_April_16_21_Ateneo de Manila

[2728] 77:8 p 7 in 108_Apr_13_21_Carrara E_Multi

Smallholder farmer - capacity building of urban farmers for food production in a sustainable manner. Dissemination of relevant technologies through our extension workers.[2729]

Development partners were urged to play more active roles in providing training and services including trainings on how nature-based solutions can be incorporated in agriculture. There is the need to establish a farmers resource center where farmers can learn and be shown how to farm crops in the right way. The center should be in a position to educate and help farmers with soil management, crop production, and crop protection challenges. It should also be a demonstration area for urban agriculture and should have a list of alternative crops that can grow in the area. The center should also be able to network farmers so that they can learn from each other through networking.[2730]

Agricultural Extension: There is need to recruit, retain, train and empower extension officers in order to build the capacity of farmers and improve their productivity.[2731]

Fr. Walpole, SJ shared that in his involvement with cooperatives, he observed that empowerment of farmer cooperatives should involve skills, capacity-building.[2732]

One of the main findings of the Dialogue is the need to provide agriculture support and training for small and medium-size farmers. This support should include facilitating training sessions on how to increase yields and soil tests. Many farmers and livestock producers shared skills, tips, and resources to manage their business better.[2733]

Farmers also wanted to know which crops are best suited for their soil. Most farmers wanted to get in touch and communicate these lessons learned with their neighbors.[2734]

Enhance the capacity of farmers and consumers to contribute to research and innovation, and to policy formulation.[2735]

Enhancing capacities of farmers and consumers to contribute to AR4D…[2736]

Participants recommended that in order to build capacities appropriate for AR4D, there is the need to strengthen the capacities of farmers and SMEs to profitably adopt technologies, strengthen the capacities of African institutions to generate new knowledge and technologies and adapt those generated from elsewhere, and the strengthen the institutional and physical infrastructure for scaling up innovations in the food system.[2737]

[2729] 101:16 p 8 in 325_May_19_21_ICLEI Africa_Multi

[2730] 102:5 p 6 in 326_May_5_21_ICLEI Africa_Multi

[2731] 102:28 p 8 in 326_May_5_21_ICLEI Africa_Multi

[2732] 103:60 p 35 in 007a_Dec_18_20_NAAGD

[2733] 109:8 p 6 in 061_Mar_02_21_Adeboye T

[2734] 109:12 p 6 in 061_Mar_02_21_Adeboye T

[2735] 111:15 p 5 in 070_Mar_09_21_Akinbamijo,O

[2736] 111:38 p 7 in 070_Mar_09_21_Akinbamijo,O

[2737] 111:42 p 7 in 070_Mar_09_21_Akinbamijo,O

Over the longer term, build skills and strengthen the role of farmers' organizations in structuring value chains and improving access to capital.[2738]

As a conclusion on how agroecology can contribute to addressing major climate and food challenges in Nigeria, what emerged was building the knowledge of farmers, indigenous peoples, and pastoralists, this could be done by government through extension workers or other food organization.[2739]

Education programs need to target both financial providers and recipients. Farmers need to understand the financial services business as much as financial services providers understand theirs.[2740]

Capacitate local authorities on the unique socio-economic and environmental benefits from organic agriculture to get their support for enabling policies and programs.[2741]

Put up farmer field schools that integrate climate resilience and sustainable organic farming.[2742]

In order to both improve global food demand and preserve/improve environmental quality we need to enforce environmental legislation. However we suggest a reduced focus on standardised guidelines, and instead increase awareness and train people to be local problem solvers. Previous experience has shown it is often the implementation of the policies which fail.[2743]

Capacity building of farming community: 1.5 million farmers having tube wells must be educated for optimal pumping and efficient use of water. That is possible by activating our extension system.[2744]

Focus on local capacity building for growing food and decision-making to produce and preserve food ways.[2745]

Building the capacity of farmers in the old lands for crop selection, utilization of user-friendly technologies and land management. Raising farmers' awareness of the effect of their water consumption on neighboring farms.[2746]

Empower farmers, as the end-users, and provide them with the knowledge for making their own decisions.[2747]

[2738] 115:24 p 10 in 085_Mar_17_21_IFAD_FSFS

[2739] 116:9 p 7 in 093_Mar_25_21_Adeboye_T

[2740] 120:47 p 16 in 127_May_13_21_IAFN_CWFS

[2741] 122:43 p 8 in 135_June_08_21_Calub_Gregorio

[2742] 122:48 p 8 in 135_June_08_21_Calub_Gregorio

[2743] 124:13 p 7 in 142_May_11_21_Carter L_Dennis S

[2744] 127:10 p 9 in 159_Apr_21_21_Hafeez M

[2745] 130:9 p 9 in 187_Apr_15_21_Livingston_Way

[2746] 132:43 p 10 in 193_Apr_19_21_Ringler_Kassim

[2747] 132:66 p 13 in 193_Apr_19_21_Ringler_Kassim

Developing farmer capacity to use improved irrigation systems, mobile applications and digitizing of the sector.[2748]

Institutionalise farmers' active participation and capacity building in decision making and implementation, taking into account the diversity of farmers seed perspectives, cultures, gender and social inclusion, and knowledge management systems.[2749]

Providing farmers with access to diverse seeds and with capacity strengthening.[2750]

Work with farmers to diversify crop productions and yields to fortify healthy diets.[2751]

Issue identity cards for women farmers in order for them to access government services such as educational programmes and trainings.[2752]

Recognise pastoralists as food producers and build their capacity to meet market demands.[2753]

The suggested steps were food diversification with a particular focus on drought resistance varieties, adoption of Agri technologies that increase productivity with less impact on climate, support and promotion of Agri extension workers to reach farmers with new skills and models, the role of agro-dealers in local markets, reduction of tax for Agri inputs, promotion of livestock farming in drought-affected regions and the use of farmers cooperatives if commercial farming in not exploited.[2754]

NGO and government to invest in training farmers about preservation and management of farmland.[2755]

Governments should support small-scale fishers through granting of secure and exclusive tenure rights for fishing to avoid competition with industrial sectors, and through investment in capacity building to enable co-management.[2756]

Lastly, support (both financial and skills-based) for farmers to implement sustainable development goals was a crucial part of the solution.[2757]

Better resourcing and funding of extension and adoption including adoption of any sustainability goals; a roadmap for how farmers can implement any goals and improve; practical help to dairy farmers so they know what to do.[2758]

[2748] 132:70 p 14 in 193_Apr_19_21_Ringler_Kassim

[2749] 140:29 p 9 in 223_May_12_21_Mushita A

[2750] 143:26 p 8 in 231_May_19_21_MCD

[2751] 149:5 p 6 in 243_June_03_21_Schwartz A

[2752] 152:28 p 7 in 262_May_04_21_ILC_Multi

[2753] 152:35 p 8 in 262_May_04_21_ILC_Multi

[2754] 154:5 p 6 in 265_May_07_21_CSONA

[2755] 154:14 p 7 in 265_May_07_21_CSONA

[2756] 155:27 p 8 in 272_May_12_21_Battista W

[2757] 156:17 p 6 in 275_May_13_21_Dornom H

[2758] 156:29 p 8 in 275_May_13_21_Dornom H

Shifting from Teacher-Centered Learning (TCL) to Student-Centered Learning (SCL) and Community & Student-Centered Learning (CSCL) will help contextualize the food value chain and food security, discuss the participatory model of sharing localized and contextualized best practices, contextualize the role of food justice, integration of traditional knowledge, and the development of place-based learning projects that promote community well-being.[2759]

To determine the effectiveness of level of linkages, they have to do away with the "controlled by national government system" towards the national agricultural research and extension systems model where it links the research extensions and other stakeholders in the process to have an inclusive, multi-stakeholders/multi-sectoral approach. This will work by building the capacities of farmers and farmers organizations: to organize themselves, to link with each other, to link with cooperatives, to assert that they should be recognized as legitimate stakeholders in the process, to facilitate and to push for the government's opening that farmers are given a seat in the decision-making.[2760]

Enhance capacity development of NARES etc.[2761]

Education – Education is critical to engage the SE FL community on improving food systems. Includes education of consumers about the environmental impact of diets and shelf-life, young people about careers in Food System and farmers about sustainability.[2762]

Encourage, fund, and educate traditional farmers on new technologies to yield higher nutritional crops by using hydroponic and aquaponic.[2763]

Support processors in new technologies, innovations, training, more organic production, production quality.[2764]

Establishing connections between agricultural scientists/researchers and smallholder farmers so they could share knowledge and data on how to deliver sustainable agricultural practices through optimal resource use with smallholder farmers through training and workshops.[2765]

Farmers must be supported and capacitated to adopt new technologies.[2766]

There is a time lag for young farmers from when they complete their education to actually getting the farm – so additional professional training is needed here to bridge this gap.[2767]

[2759] 157:39 p 8 in 278_May_18_21_Gregorio B

[2760] 157:79 p 11 in 278_May_18_21_Gregorio B

[2761] 159:15 p 6 in 287_May 20_21_Akinbamijo_Y

[2762] 163:27 p 6 in 300_May_27_21_Alesso_Pommeret

[2763] 163:155 p 19 in 300_May_27_21_Alesso_Pommeret

[2764] 164:25 p 10 in 304_June_02_21_FAO_Multi

[2765] 165:6 p 6 in 310_June_14_21_FAO

[2766] 169:24 p 8 in 327_May_18_21_CropLife

[2767] 170:18 p 7 in 328_May_19_21_Lalor_Teagasc

Farmer / producer continuous professional development in particular should be structured so that there is a progression in terms of learning. There should be mechanism to record training completed by farmers as part of this overall structure.[2768]

Encourage all farmers to attend farm walks, demonstration events, open days, discussion groups – use agricultural advisory services (public & private). Exemplar farmers in local areas – local demonstration farms (every county), demonstrate science to farmers so they will understand better and put into practice.[2769]

First of all, once again, education was considered to have a key role to play. Both consumers and farmers need to be well informed about existing initiatives and regulations.[2770]

Furthermore, it is good that farmers master the tools at their disposal in order to improve their production techniques and are updated on available agricultural best practices.[2771]

Continual and regular trainings to capacitate farmers on upcoming technologies.[2772]

To ascertain this vision, farmers recommended that adequate budgetary allocations be considered to ensure that research develops, test and adapt technologies and for extension to disseminate and equip farmers with the skills and knowledge to implement the technologies.[2773]

We, however, recommend that a series of focused commodity based workshops held amongst the farmers and with other actors in the food systems. This will allow the relevant stakeholders to discuss issues pertaining to the development of the food system they all want.[2774]

Farmers and farmer organizations should also be made aware of the negative impact of fertilizers and pesticides.[2775]

Facilitate a global capacity which enables knowledge transfer & empowers smallholder farmers in low & middle-income countries (LMICs) to obtain successful solutions & proven, context appropriate technologies.[2776]

Providing LMICs, such as those in Africa, with the means to improve efficiencies, genetics and environmental impact, would empower these farmers to finally be considered part of the global food system.[2777]

[2768] 170:42 p 10 in 328_May_19_21_Lalor_Teagasc

[2769] 170:86 p 16 in 328_May_19_21_Lalor_Teagasc

[2770] 171:13 p 8 in 329_May_19_21_CI_WFO

[2771] 171:14 p 8 in 329_May_19_21_CI_WFO

[2772] 173:42 p 12 in 331_May_24_21_LNFU

[2773] 173:45 p 12 in 331_May_24_21_LNFU

[2774] 173:137 p 21 in 331_May_24_21_LNFU

[2775] 174:11 p 6 in 332_May_24_21_FAO_UNDP

[2776] 175:7 p 6 in 333_May_25_21_GMA_Multi

[2777] 175:8 p 6 in 333_May_25_21_GMA_Multi

Advocacy for sustainability: Farmers, Civil society, and other food systems actors need to create awareness regarding seasonality of foods.[2778]

The capacity of farmer cooperatives should be strengthened so that they can deliver effective services to members including organizing collective access to inputs and output markets for farmers.[2779]

The government was therefore encouraged to promote these technologies through capacity building forums for Primary Producers. Producers are encouraged to adopt and make use of new technologies.[2780]

Calculating Production Costs; the group realized that the majority of farmers are not able to establish the production cost for a crop prior to production. They felt that it was important to Innovate to reduce production costs, they recommended that the Ministry of Agriculture, farmer organizations, and NGOs must intensify capacity building for primary producers to be able to calculate costs of production.[2781]

The dialogue felt that the government need to develop a training Curriculum for farmers, instead of conducting random training programs. All practitioners or institutions that train farmers must be accredited and follow the curriculum to avoid giving different and incorrect information to farmers.[2782]

Training on health and safety issues to ensure traceability and quality.[2783]

Set-up of specialised institutions that assist youth, women and other farmers to write projects that would help grow their business.[2784]

As proposed by a participant; create a plant academy to bridge the gap. The plant academy will consist of sharing of knowledge between new and old farmers about their ways of plantation and techniques that could be implemented to boost Agriculture.[2785]

The ability or capacity of food producers is also a requirement that according to participants is something that must be met to achieve efficient and sustainable food production with environmentally friendly agricultural principles.[2786]

Capacity building for food producers and the younger generation; in the form of intensive training provided to food producers to be able to optimize their production, be able to adapt using technology, and implement sustainable agriculture.[2787]

[2778] 177:62 p 12 in 335_May_26_21_Laar_Multi

[2779] 182:8 p 7 in 340_May_27_21_Mamba_L

[2780] 182:19 p 7 in 340_May_27_21_Mamba_L

[2781] 182:56 p 11 in 340_May_27_21_Mamba_L

[2782] 182:62 p 11 in 340_May_27_21_Mamba_L

[2783] 183:21 p 8 in 341_May_28_21_Sewraj_KS

[2784] 183:36 p 8 in 341_May_28_21_Sewraj_KS

[2785] 183:49 p 10 in 341_May_28_21_Sewraj_KS

[2786] 185:17 p 6 in 343_May_28_21_Abdullah_S

[2787] 185:31 p 8 in 343_May_28_21_Abdullah_S

Smallholder farmers need regenerative agriculture trainings and education to know modern ways of agriculture.[2788]

Smallholder farmers needs to be empowered in terms of finance and loans to have access to their money.[2789]

Farmers' capacity building.[2790]

Universities need to mobilize themselves to bring practical approaches to food security.[2791]

This will require institutional capacity building to empower farmers to take the lead and learn better from each other for example through farmer field schools.[2792]

Communications should be a key component of any agriculture project or intervention aimed at small-scale or small-holder farmers in rural areas.[2793]

Strengthening the capacity of all implementers of the Home-Grown School Feeding Programme to ensure that they can use the school meal planner to develop and prepare nutritionally adequate meals and generate predictable demand for commodities from farmer groups.[2794]

Continuous food safety advocacy including education and training of street food vendors and food businesses on basic nutrition and food safety and ensuring fair practices in food chains. The safety of food is paramount; if it is not safe, it is not food![2795]

The private sector, civil society organizations, and development partners to invest and build the capacities of individuals and institutions to adopt food and nutrition practices that promote good health and nutrition (skills).[2796]

Emphasis on food system resilience and skills training.[2797]

Promoting Agro-tourism as a way of encouraging agricultural production especially in indigenous food species, getting youth interested in agriculture and a means for creation of livelihoods. People need to be capacitated in business development for such unique agricultural business models.[2798]

[2788] 187:10 p 7 in 345_May_31_21_Buzingo J

[2789] 187:11 p 7 in 345_May_31_21_Buzingo J

[2790] 190:7 p 6 in 348_June_02_21_ASF Pakistan

[2791] 191:30 p 7 in 349_June_02_21_Ekwamu A

[2792] 191:32 p 7 in 349_June_02_21_Ekwamu A

[2793] 192:24 p 6 in 350_June_02_21_Farm Radio Int

[2794] 193:14 p 8 in 351_June_03_21_CIF_Multi

[2795] 193:44 p 10 in 351_June_03_21_CIF_Multi

[2796] 193:60 p 11 in 351_June_03_21_CIF_Multi

[2797] 198:31 p 6 in 357_Apr 14_21_Harfouche S

[2798] 201:17 p 7 in 360_May_18_21_ICLEI Africa_Multi

Support the efforts of Africa to invest in and transform its food systems and build the capacity needed to develop and implement a sustainable, inclusive food system.[2799]

Establishment of farmer field schools to strength local farmers by providing technical Trainings, exchange experience on Farmer to farmer.[2800]

Capacity building on resilience of Climate change or Covid-19, fluctuations in the market, should be research how to resilience and provide information to confidence in production, Farmers' innovation (researching climate-resilient crops, upscaling a successful model on new crop variety, etc.), meteorology information, Seasonal pest information…[2801]

Strengthen capacity for farmers in management, application of science and technology in production, processing and consumption through training courses.[2802]

Smallholder farmers have limited entrepreneurial ability, productive assets and skills potential for value addition. This warrants skilling such populations and improving the labor productivity. This will enable African Agriculture meet local and global food demand.[2803]

Some of the actions these countries are taking (or planning) to address these challenges were also shared. Proposed actions included the sustainable management of land & water; sustainable use of natural resources and of farm inputs (e.g. agroecology); promoting healthy dietary choices and sustainable consumption; strengthening urban-rural linkages; promoting sustainable rural entrepreneurship through the development of capacities and skills, with a focus on women and youth; reducing food losses and waste; improve and harmonise SFS governance at national and regional level, fostering reforms and strategies that cut across sectors (e.g. OneHealth), considering trade-offs, complementarities, also using some of the existing frameworks (e.g. F2F, FSS); etc.[2804]

Stronger cooperation between members of INOFO in the promotion of agroecology and organic agriculture and for exchange of experiences, study and improving human resources. Farmers exchange and training to diagnose the problems and they are equipped with the technology & management techniques are able to assist with plant health in their communities.[2805]

Establish network of community allotments/ growing spaces to enable access for every resident, along with growing workshops/skills development (including composting) - a 'master gardener' network in each ward Pilot a Social Supermarket, ideally in town centre location.[2806]

[2799] 206:13 p 7 in 365_May_27_21_Ekwamu A

[2800] 209:8 p 7 in 368_May_31_21_Lao Farmer

[2801] 209:15 p 7 in 368_May_31_21_Lao Farmer

[2802] 217:8 p 6 in 378_June_07_21_My Mai Bac

[2803] 223:6 p 6 in 384_June_09_21_Ekwamu A

[2804] 244:14 p 8 in 480_June_21_21_CIHEAM_Multi

[2805] 250:12 p 9 in 486_June_23_21_AFA_Multi

[2806] 260:10 p 9 in 496_June_23_21_Tradewell C

Farmers awareness and perceptions on climate ("carbon") issues should be increased.[2807]

Education: Environmental and social responsibility should be taught to children at basic education programs and knowledge about existing sustainable techniques and practices should be disseminated to farmers.[2808]

It is important to show farmers that there are economic viable models for a sustainable agriculture, as they will not invest in "Green" if they believe bank account is going to turn "Red".[2809]

Training & Education: Group training programs across fisheries sectors can be a start to working towards integrating communities for diversified livelihoods. Educating farmers about processing, to help them understand the process and value of their product better.[2810]

The Ministry of Commerce and National Statistics office to work closer with the Ministries of Agriculture and Fisheries to check on local production capacity and to make necessary adjustments to the import level of imported foods.[2811]

Educate fishermen on how to work sustainably or change their methods (e.g., to aquaculture combined with other practices) and financially incentivise them to cooperate.[2812]

Subsidies for plant-based agricultural production and transition away from subsidizing animal agriculture/ reduce it at least. Importantly, include animal farmers in the transition, help them move to plant-based farming through training, loaning material and supporting them economically.[2813]

Field training and site demonstrations are impactful in delivering the skills and expertise directly to farmers to understand and adapt their farming systems.[2814]

Strengthening capacities and resources of farmers, indigenous groups, women, youth, and micro-small, medium enterprises (MSMEs) to effectively engage along with the agri-food production systems.[2815]

In terms of proposed solutions, they suggested the need to sensitize local farmers on policies.[2816]

[2807] 261:13 p 6 in 497_June_24_21_Fontes_Multi

[2808] 261:27 p 6 in 497_June_24_21_Fontes_Multi

[2809] 261:82 p 11 in 497_June_24_21_Fontes_Multi

[2810] 264:64 p 12 in 500_June_26_21_Edible Issues

[2811] 265:31 p 7 in 501_June_28_21_Kairo K

[2812] 267:21 p 7 in 503_June_29_21_Schnyder_Boura

[2813] 267:26 p 7 in 503_June_29_21_Schnyder_Boura

[2814] 268:13 p 7 in 504_June_30_21_Susumu_Leiva

[2815] 268:26 p 9 in 504_June_30_21_Susumu_Leiva

[2816] 270:3 p 7 in 506_June_29_21_EAFF

On this issue, the members suggested the need for research on agro-ecological zones to ensure suitability of inputs, the need for agro-ecological zoning to ensure that inputs are customized according to soil maps and the importance of creating awareness amongst farmers on the proper use of chemicals.[2817]

Train smallholder farmers to increase their market competitiveness, enable them to meet sanitary and phytosanitary standards.[2818]

The evolution of farmers' profession over the past forty years calls for a crucial adaptation of their training; redefining the focus of already-existing public-private training systems would enable farmers to progress on sustainable practices. Agronomic schools & universities should integrate regenerative practices in their educational programs.[2819]

One is that education and social dimensions should not be forgotten. Bringing science to the farm.[2820]

Advisory and training programs for farmers.[2821]

In terms of solutions, the members suggested the need for availability of quality farm inputs, facilitation of custom clearance for farm inputs, the need to ease cross-border barriers, the need for governments in the region to assist farmers and sensitization of farmers on the importance of carrying out short cycle agricultural activities.[2822]

Some of the solutions suggested by the members include the need to secure farming areas, establishing proper systems for insuring farm products, sensitising farmers on existing financial services, providing affordable collaterals and governments supporting agricultural value chains for sustainability.[2823]

In terms of proposed solutions, the youth suggested the need for governments to openly share information with the young farmers, to sensitize young farmers on available policies, the need to gather feedback from youth on effectiveness of provided policies and for the governments to prioritise youth inclusion in policy making and implementation.[2824]

Further, there is need for more capacity building for young farmers, need to begin conserving the indigenous seeds for better productivity, we should adopt proper disposal/ reuse/ recycling of plastic waste and push for reforestation and tree planting for improved ecosystems.[2825]

The key is to gather varied and diverse experiences related to territorial development as a model adaptation/building tool, as well as connection/collaboration effort + creation of

[2817] 270:7 p 8 in 506_June_29_21_EAFF

[2818] 271:14 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[2819] 273:27 p 6 in 509_June_30_21_FFA_Nestlé

[2820] 273:35 p 8 in 509_June_30_21_FFA_Nestlé

[2821] 273:40 p 9 in 509_June_30_21_FFA_Nestlé

[2822] 275:6 p 8 in 511_June_30_21_EastAfricaFF

[2823] 275:12 p 10 in 511_June_30_21_EastAfricaFF

[2824] 279:6 p 7 in 515_July_01_21_EastAfricanFarmers

[2825] 279:17 p 9 in 515_July_01_21_EastAfricanFarmers

communities of practices, e.g. Farm Field and Business Schools enable farmers on the ground and offer a programmatic solution that can be scaled.[2826]

More timely and disaggregated data is needed to inform planning, policy and practice that meets the needs of and can be accessed by policymakers and producers to react to potential future shocks. Collecting, collating and analysing data, then preparing it for decision-makers, requires technical capacity.[2827]

Invest in skills to increase financial literacy in small/family farms (particularly among women).[2828]

Farmers and producers should be more aware on the importance of professional consulting services and provided training programmes in order to increase their capacities on sustainable production practices.[2829]

Food production is about transforming the society, beyond feeding the society: Throughout the discussion, food production cannot be just about producing enough food for the population. Instead, food production is intricately interlinked with incomes, livelihoods and nutrition provided to the society. Food producers come from many different communities, some coming from vulnerable and poor groups such as indigenous communities in rural area. Thus, ways to improve incomes for these food producers much be in consideration, including the provision of high quality seeds and training farmers. On the consumer end, especially with the COVID-19 impact, many households have reduced incomes, and thus may not be able to afford food. This is especially so for urban poor and refugee communities who do not have access to land to produce their own food. Urban farming can be a way forward to secure their food availability.[2830]

Training and capacity building are seen as core elements to the overall success of improved Food Systems in Sub-Saharan Africa. Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider training farmers on how to innovate and be competitive on the market and on how to link agricultural production to food and nutritional requirements. Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. Moreover, not only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge, favouring low-cost technologies and strategies, and adaptability to local farmers who do not have many practical tools.[2831]

In this respect, access to formal and informal education for farmers in remote areas needs to be enhanced. In some contexts, informal education and innovative ways of raising awareness among farmers towards innovation can be more important and effective than formal education. In addition, improving access of women to education must be taken into

[2826] 299:27 p 8 in 535_July_08_UNESCO Chair on Food

[2827] 302:27 p 10 in 538_July_09_21_IDS_Multi

[2828] 310:15 p 7 in 546_July_13_21_INDEP

[2829] 310:22 p 7 in 546_July_13_21_INDEP

[2830] 319:5 p 6 in 556_July_15_21_Von Goh_GenTan

[2831] 324:7 p 7 in 561_July_19_21_OCCAM

consideration, also in light of the importance of enhancing and valorising gender crops (such as Fonio) in Sustainable Intensification strategies in order to ensure women's social and economic empowerment.[2832]

Involving farmers in the development, testing and adoption of technologies and practices and promoting capacity building, training and sharing of good practices is also important. A key role in this sense will be performed by the Farmers Field Research Units within the EWA-BELT Horizon2020 Project.[2833]

Investing in smallholder producers to empower them and create opportunities for them to access to benefits and incentives. Frequently, the results of economic policies or subsidies in the food sector do not reach small holder farmers, who are often in need of dependable streams of finance/investment as well as technical support. Women and youth should be a major priority for such investments given their critical role in food systems globally.[2834]

Focus on small producers. Throughout the Dialogue, much emphasis was placed on the centrality of small producers, who are key agents in the agri-food system but the most vulnerable link in the chain. Consequently, they emphasized both the public and private perspectives, including the third sector, on the importance of regenerating and articulating the rural milieu, reinforcing precisely the actors that structure this milieu, i.e., small- and medium-scale family farming. The sustainability of agri-food systems is intrinsically linked to the empowerment and improvement of the conditions of small producers, and this objective must be a priority for both governments and companies.[2835]

Awareness-building and training of local stakeholders regarding agricultural best practices which are respectful of the environment: in this context, agricultural training and awareness-building on the importance of practicing sustainable agriculture will be crucial. The question of agricultural consulting will also need to be rethought in depth, for example with the use of digital approaches.[2836]

Contracts between stakeholders: The relationships of the stakeholders and the facilitation of contracts between them is an approach that can facilitate the go to market strategy of farmers' products, In particular those of the most poor: contractual agriculture is a possible example of agreements between producers and buyers. It is nonetheless important within this context to support small producers in their understanding and implementation of contracts in order for them to gain the best profit possible.[2837]

We identified a set of positive impacts from strengthening family farms in the program, as a practical, healthy and beneficial multifaceted route for actions related to the reopening of schools and school meals, in particular: Maintaining the supply of green parcels, as

[2832] 324:8 p 7 in 561_July_19_21_OCCAM

[2833] 324:30 p 9 in 561_July_19_21_OCCAM

[2834] 327:6 p 6 in 564_July_20_21_Bakarr_MI

[2835] 337:10 p 9 in 132a_May_27_21_Forética_Eng

[2836] 338:21 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[2837] 338:22 p 9 in 392a_June_01_21_Sidibe_Remy_Eng

supplements to the food parcels and as the basis of the menus for cooking and meals at school.[2838]

Family farmers – Support in various ways to facilitate the sales process for school meals, such as: accessing markets, diversifying production and seeking technical support.[2839]

It is understood that if FFs manage to successfully establish short distribution channel marketing, this would generate a reduction in waste. However, it is suggested that short distribution channels are not the only alternative for all FFs; it depends on where they live and the possibilities of placing all their produce on the local market. This is why it is necessary to support FFs in reaching more global marketing levels.[2840]

Support to farmers to develop healthy products in a healthy manner, to expand the variety and diversity of fruits and vegetables that can contribute to the nutritional value of the basic food basket. Provide adequate nutrition guidance for farmers and give them participation in decision-making on food sovereignty. Encourage collective and individual gardens. Inclusion in local commerce by zones.[2841]

Mechanisms should be created so that the training of small and medium-scale producers is a constant, to produce in a sustainable manner, in optimal conditions, guaranteeing productivity and profitability, promoting skills/techniques for commercialization.[2842]

How can we guarantee that the Human Right to Food is integrated into the country's regulatory framework (policies, mechanisms and instruments)? Empowering the population so that they can monitor compliance with existing regulations, and balancing political forces so that actions are carried out for the well-being of the majority, not just a few. Additionally, more technicians should be trained on the subject so their actions can be used to pursue that compliance.[2843]

It is essential that farming in the north be done in innovative ways that protect 124 environmental quality. This means new farmers must have proper training (e.g. 125 agricultural schools, internships, clear guidelines, etc.).[2844]

Systems approach or holistic

1. Sustainable development of food systems is a cross-cutting topic that affects not only the priorities of individual industries and sectors of agro-business, but also many adjacent industries, in fact, the entire national economy. Therefore, when making decisions regarding the development and regulation of the agro-business and the consumption of agricultural products, one must consider cross-sectoral positive and negative effects,

[2838] 339:53 p 13 in 393a_June_01_21_Food of Tomorrow_Eng

[2839] 339:77 p 17 in 393a_June_01_21_Food of Tomorrow_Eng

[2840] 340:25 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[2841] 349:4 p 7 in 423a_June_28_21_PROLIDER_Eng

[2842] 350:19 p 8 in 424a_June_28_21_PROLIDER_Eng

[2843] 351:21 p 7 in 552a_July_15_21_Frente_Parlamentario_Eng

[2844] 353:24 p 3 in 505a_June_29_21_Borchard_UNC

including the human well-being trends, the quality and availability of products manufactured, returns to scale, etc.[2845]

5. It is necessary to pay more attention to a comprehensive solution not only to the production problem, but also to the processing and destruction of generated waste, as well as to increase the deep processing of products (fish, aquaculture, etc.), while considering the tasks and needs of all key agro-business sectors and consumers. At the same time, manufacture and supply of products with higher added value and processing to international markets should not replace current ones, but supplement them, while contributing to expanding the supply and forming more favorable conditions for product consumers.[2846]

Need to unite food with public health.o Promoting healthy habits cannot just be a matter of "education."o A healthy diet affects spending on public and private health.o The consumption of unhealthy but "cheap" processed foods has a great cost in medical care, in the appearance of diseases such as diabetes and in the loss of quality of life in general.o Product labels must be understandable to everyone.o Economic inequality: Is it impossible to eat healthy if you depend on the food bank or if you have very little income?o Need to identify the main agents capable of promoting this change at all levels, including local.o Waste and reuse is a public health issue.[2847]

Achieve internal consistency and inter-sector integration carried out by the state both in agriculture and processing industry and in the field of education, science, etc…[2848]

Information system for exchanging skills and services: Take an inventory of residents' skills and strengths; what we do and what we produce; an inventory for linking producers with transformers.[2849]

BIPOC small farmers have the ability to increase and be successful in our environments, communities, on our small farms enterprises, and to work together to grow diverse nutritious food systems.[2850]

Holistic deliberate inclusive capacity building actions would enable wellbeing, positive change, and healthy local nutritious food systems in BIPOC communities and all communities.[2851]

Shift from linear approaches to research in food systems toward more interlinked and interdisciplinary process of food system research and analysis.[2852]

Tension is generated in terms of the decision-making system regarding a production model that young people want to follow, change agricultural systems but that do not generate

[2845] 507:1 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

[2846] 507:5 p 6 in 068a_Apr_23_21_Mikhailov S_Eng

[2847] 513:5 ¶ 237 – 244 in 090a_May_29_21_Theunissen D_Eng

[2848] 519:20 p 7 in 106a_June_18_21_Nurgaziev R_Eng

[2849] 526:11 p 7 in 124a_July_18_21_FEA Hatillo_Eng

[2850] 356:51 p 7 in 409_June_13_21_Mone S

[2851] 356:60 p 7 in 409_June_13_21_Mone S

[2852] 358:15 p 6 in 402_June 10_21_Ekwamu_El Dukheri

profitability, this generates confrontation within the families and that they do not have autonomy to decide. The clash of young people in the face of paradigms or cultural connotations.[2853]

Local currency and time banking: Promote the use of a digital token or local currency as a means to facilitate the exchange of goods and services among the residents and be able to avoid the difficulties cash brings. [2854]

To strengthen children's relationship with food, build in science and education about food systems and have school gardening projects and farm to school food procurement.[2855]

It is imperative to strengthen know-how, in particular, knowledge, and understanding of the system and opportunities within the system.[2856]

Hu Kitchen example of difficulty getting away from slavery in cocoa supply chain. Needs UN to come in to articulate and provide broader awareness to put teeth behind local/domestic/international work.[2857]

We will continue to engage in programmes and dialogues so as to educate the public on these important food system (Cocoa) issues.[2858]

If we are going to generate change, we need to focus on education. It is the true pillar for change. We need to educate on resources and systems, and teach people the real value of food.[2859]

This session emphasized that food systems are a wide and cross-cutting topic which are at the same time locally specific. Instead of focusing of individual components of food systems, such as food security, nutrition, vulnerability etc., the concept of food systems has sensitized the stakeholders about the need for a holistic approach, and discussions are expanding from commodity to systems, from activity to chains, from actors to stakeholders, from consumption to health, from present to future generations. Systems thinking is becoming more widespread. There is a paradigm shift from dealing with problems only inside 'silos', towards addressing problems in their entirety. Working across sectors and disciplines can be destabilizing but the dialogues are making stakeholders more comfortable with this approach and are understanding that food systems are key for the achievement of the SDGs. Increasing production is necessary but not sufficient as there is a need to simultaneously look at production, distribution and consumption in a systemic approach.[2860]

[2853] 523:11 p 8 in 113a_July_06_21_Fernandez I_Eng

[2854] 526:12 p 7 in 124a_July_18_21_FEA Hatillo_Eng

[2855] 404:53 p 13 in 445_May_26_21_ICLEI USA

[2856] 411:27 p 7 in 452_Apr_27_21_IFAD_Multi

[2857] 497:42 p 7 in 314_June_16_21_ICC_US Farmers_Multi

[2858] 499:37 p 8 in 394_June_01_21_Egyir I

[2859] 504:64 p 10 in 400_June_09_21_Viera_Pollmeier

[2860] 359:19 p 7 in 403_June_10_21_ESCAP_Multi

Achieving sustainable food systems requires an integrated approach;[2861]

That nutrient-based approaches (deficiencies, fortification, reformulation) are balanced with a holistic approach including the consequences of food processing and food systems.[2862]

The need to act together and to give a direction for the food systems transformation proposed by the UN Summit towards sustainability emerged from the debate. It was highlighted the complexity of the food systems environment, and how interconnected and interdependent challenges facing the transformation of food systems towards require to be addressed through a systemic integrated sustainable approach. It was pointed out that food systems transformation and ecological transition should be jointly achieved by taking into account environmental, economic and social issues in an integrated way. It was highlighted that today all countries are becoming aware that the ways of food production and the foods we eat affect the health of people and the planet.[2863]

Session 1: Towards a sustainable food system Social, economic and environmental changes of recent years, together with the current COVID-19 pandemic, have highlighted a global vulnerability of food systems. This vulnerability needs to be faced through an integrated approach for a food systems transformation towards sustainability, in which Italy can make an important contribution within the Summit in tracing the direction of this transformation.[2864]

The systemic view on health must also take into account the nutrition and microbiota of soils, given the direct relationship between soil health and plant nutrition. It was mentioned that school meals, for example, should prioritize regional foods, also with the support of the PNAE. A big challenge is to make industry and popular restaurants do the same. Not every healthy diet is sustainable, healthy diets may also generate waste.[2865]

Ambassador Bugailiskis shared examples of Indigenous-government collaborations, such as the new Food Policy in Canada, which acknowledges how historic government policies disrupted the food systems of Indigenous peoples. It ensures, she explained, "that the unique rights, interest and circumstances of the First Nations, the Métis Nations and Inuit are acknowledged, affirmed and implemented. It supports Indigenous food self-determination, meaning the ability of Indigenous peoples to define their own food systems and it takes a holistic approach that acknowledges that food is more than a product for Indigenous peoples.[2866]

Recognize the Holistic approach: food sovereignty and right to self-determination.[2867]

[2861] 359:28 p 8 in 403_June_10_21_ESCAP_Multi

[2862] 361:29 p 8 in 405_June_10_21_NCD Alliance

[2863] 386:9 p 6 in 429_July_05_21-CIHEAM Bari

[2864] 386:18 p 7 in 429_July_05_21-CIHEAM Bari

[2865] 389:59 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[2866] 390:17 p 8 in 432_Dec_15_20_UNPFII_FAO

[2867] 394:39 p 10 in 436_June_16_21_GIYC_Multi

In ensuring physical and economic access to safe and nutritious food, a holistic approach involving stakeholders from all spheres across the food system is required.[2868]

Governments should adopt a systems approach to developing policy, recognising the relationships and reciprocal links between food and water systems.[2869]

Strengthen common understanding of and political commitment towards sustainable food system development at regional and country levels, through a holistic and multi-sectoral approach.[2870]

A systems approach when researching food systems is necessary.[2871]

Panellists believe that an urgent change needed is the dismantling of silos. For example, researchers are doing important work around agriculture, diet, and climate change, but not enough of this research takes a systems based approach. This integration will be essential.[2872]

Policies on self-sufficiency tend to concentrate on certain species only, encouraging uniformity vs. diversity in species, thereby ignoring healthier and nutritious food options and placing stresses on the environment and threatening biodiversity.[2873]

There are often well-meaning policies which have negative socio-ecological impacts on the ground. Policy making should be more holistic in its approach, taking into view as well agroforestry and how forests figure in the discussion on food systems.

A more holistic human capital development is required to build the agricultural workforce, from production, to research and innovations, as well as entrepreneurship. African universities are pivotal in designing and implementing human capital development programmes.[2874]

The discussion presented connections between food systems, diet, the pandemic, and national security, among other concerns, indicating a need for a systems perspective when creating solutions. Panelists explained the need to incorporate gender and local culture in decision making and to seek opportunities for collaboration between the public and private sectors. Most importantly, all three panelists agreed that food is a human right and that it needs to be made affordable, accessible, and appropriate to local cultural and environmental context.[2875]

[2868] 397:20 p 7 in 439_June_17_21_INAI

[2869] 402:10 p 6 in 443_May_09_21_GIGH

[2870] 403:20 p 8 in 444_May_25_21_FAO_UNICEF_Multi

[2871] 407:19 p 7 in 448_Feb_25_21_IFAD_Multi

[2872] 407:23 p 7 in 448_Feb_25_21_IFAD_Multi

[2873] 408:35 p 17 in 449_March_08_21_Wild Foods_Multi

[2874] 416:18 p 8 in 457_May_20_21_Ekwamu_A

[2875] 423:10 p 5 in 464_June_10_21_IFAD_UNFSS_Multi

Further, a systems approach means that we should also be able to look at the whole picture when monitoring progress.[2876]

They mentioned that an important enabler of such a systems approach against childhood obesity is inculcating leadership and willingness at all levels, ranging from mayors to families.[2877]

Leadership is also needed to scale the program if successful, or to derive lessons from it if unsuccessful. Further, speakers elaborated that a crucial aspect of implementing a systems approach is firstly ensuring nutrition is on the political agenda. For this, it is important to elect mayors or political leaders that have a clear agenda for a healthy and vibrant city, where everyone can make a decent living, and a city which is well-connected to the surrounding rural areas.[2878]

Further, a systems approach is considered appropriate in acknowledging that food choices extend beyond individual decision-making.[2879]

…collaborations entail building networks and engaging with all stakeholders involved. Collaboration with civil society, academia, and private parties was especially highlighted for a systems approach.[2880]

For a successful systems approach, there is a need to establish childhood obesity as a system-wide priority that links to municipal priorities.[2881]

Hence, strong political leadership is considered important for several reasons in adopting a systems approach.[2882]

Based on this, participants elaborated that decision-making powers may lie at the national or city level in certain contexts, and this would affect how transferrable the above-mentioned learnings are with regards to urban systems approaches.[2883]

Additionally, an urban systems approach was also envisioned as one adopting a territorial approach such that governments consider urban-rural linkages and emissions throughout the food system and implementation of the systems approach.[2884]

Within a systems approach, communication was considered important both internally and externally. Internal communication entails coordinating activities within the approach, collaborating with multiple stakeholders.[2885]

[2876] 426:11 p 6 in 467_June_17_21_NWGN_Multi

[2877] 426:13 p 7 in 467_June_17_21_NWGN_Multi

[2878] 426:14 p 7 in 467_June_17_21_NWGN_Multi

[2879] 426:18 p 7 in 467_June_17_21_NWGN_Multi

[2880] 426:25 p 8 in 467_June_17_21_NWGN_Multi

[2881] 426:29 p 9 in 467_June_17_21_NWGN_Multi

[2882] 426:33 p 9 in 467_June_17_21_NWGN_Multi

[2883] 426:34 p 9 in 467_June_17_21_NWGN_Multi

[2884] 426:38 p 9 in 467_June_17_21_NWGN_Multi

[2885] 426:48 p 12 in 467_June_17_21_NWGN_Multi

For the purposes of internal communication, participants mentioned the need for a dedicated interdepartmental board to work with multiple stakeholders and ensure everyone is working towards the same direction and vision. This interdepartmental board was described as important because of its ability to implement 'cross-cutting communication', i.e., communication that goes beyond departmental boundaries and involves all stakeholders to successfully implement a systems approach.[2886]

Holistic approaches for Māori include Hua parakore that are not restricted to the land, e.g., food from the moana, awa, ngahere (sea, rivers, forests).[2887]

For farm policy, adopt a comprehensive and inclusive approach that includes experts in human nutrition, farmers/producers, and climate experts.[2888]

PARTNERSHIPS 1. With organizations that work in the larger context of sustainable development, beyond the usual stakeholders who are involved in the food supply chain, for a more holistic approach for interventions, innovation, and solutions.[2889]

In the meantime, most participants insisted that a systematic approach is crucial in any food system-related challenges and isolated solutions are definitely not the best.[2890]

More sustainable production and shorter supply chains will link producers and consumers more closely. Recommendation 1: Developing an enabling environment needs to be based on a systems perspective that includes a change in power structures (land rights), farmers empowerment (through farmers organization) and economics (access to capital). Who: governments and international financial institutions for loans. At the same time, farmer organizations need to be formed bottom up by farmers themselves rather than government. How: The role of the state should be that of an investor to guarantee sustainability, guarantee infrastructure and the required support. Specific action can include ensuring better rural roads so smallholder farmers have access to markets, adopting policy that supports land rights for farmers, and working more closely with the private sector to ensure easier access to capital and investment for farmers, especially women and youth. The majority of smallholder farmers need to organize themselves into producer cooperatives or other similar systems (youth and women in particular). Service provision to individual smallholders can never become financially viable.[2891]

Instead, investment should be allocated to reform the entire value chain, integrating different aspects of agriculture into a system that promotes food sovereignty. We agree in focusing first on systemic interventions, knowing that capital would naturally flow in the food system when there is an enabling environment to properly manage it, not necessarily

[2886] 426:49 p 12 in 467_June_17_21_NWGN_Multi

[2887] 427:27 p 11 in 468_June_18_21_Mayne A

[2888] 429:90 p 18 in 470_June_17_21_Burian_Multi

[2889] 429:128 p 7 in 470_June_17_21_Burian_Multi

[2890] 444:31 p 14 in 027_Feb_02_21_CBCGDF_UNFSS

[2891] 458:61 p 14 in 123_May_04_21_Mauderli U

to generate high profits, but rather to effectively achieve food security and equitable prosperity whilst protecting people and the planet.[2892]

To increase the contribution of GI to sustainable food systems, participants emphasized the importance of supporting a more comprehensive approach, including social and environmental pillars, with emphasis to their link to cultural heritage.[2893]

…we recognized that the food systems are complex, thus, to tackle existing issues requires holistic approaches, cross-sectorial efforts, both when it comes to policy making and actions…[2894]

Business is increasingly looking at the necessity of having a systems approach. On this level, we need to understand the true value of food, and also the true cost associated with it: the social and environmental cost.[2895]

Overcoming these diverse impacts requires adaptive, holistic management of the resources that we depend upon.[2896]

Embrace a One Health approach that addresses the deep interconnections between humans, animals and the environment.[2897]

We cannot solve the problem with isolated small interventions; we need a package of interventions based on systemic multisectoral, multi stakeholder approaches.[2898]

…working across silos to create a common platform that fosters collaboration and innovation on a holistic, integrated approach.[2899]

Adopt a systems thinking approach to deal with the complexity inherent to sustainable food systems.[2900]

Participants also highlighted the importance of holistic analysis to understand and prepare for trade-offs and areas of synthesis/reinforcement. Participants agreed that food systems must become more sustainable while also ensuring continued sufficient nutrient-dense food supplies that are safe, accessible, affordable, and appropriate to diverse consumer needs.[2901]

[2892] 460:120 p 18 in 131_May_25_21_IISLA Ventures

[2893] 462:23 p 10 in 133_May_27_21_CIRAD_Multi

[2894] 485:17 p 6 in 288_May_20_21_GAN_Multi

[2895] 486:90 p 14 in 291_May_21_21_Polman_Prabha

[2896] 500:22 p 7 in 396_June_01_21_Arttijeff_Multi

[2897] 501:15 p 6 in 397_June_04_21_WHO_Multi

[2898] 501:39 p 8 in 397_June_04_21_WHO_Multi

[2899] 501:53 p 10 in 397_June_04_21_WHO_Multi

[2900] 1:5 p 6 in 072_Mar_09_21_Sibanda L

[2901] 4:7 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

A more open, predictable, rules-based global trading environment with fewer barriers will facilitate more efficient movement of agriculture and food products, including to regions suffering from malnutrition and food insecurity.[2902]

Integrated farming systems needs to be boosted.[2903]

Animal agriculture should be viewed as a part of a broad, diversified system – and as a solution rather than a problem. Its benefits in high-quality protein and in providing nutrients to and management of the land are essential parts of the circle of life.[2904]

Systems-based agricultural research that is energized and integrated with SDG goals. Integrated research agendas should advance a systems approach to ensure health.[2905]

To build on that point, the group talked about what a full transformation of our food system could look like. Communication around sustainability is important because each person or region's definition might vary slightly, and practices look different across the globe. Our producers emphasized the importance of avoiding the one-size-fits-all approach. The food system is fragile, so transformation must be approached cautiously and include the voice of farmers.[2906]

There needs to be a focus on how tweaks to the beef production system – better health, better genetics, better grazing, better feeding – as they can improve productivity. We need to recognise that we are dealing with complex biological systems and need tools to help deal with unintended consequences of single topic decision.[2907]

Everyone should do something: we need a systemic transformation and there are so many actions needed. We have to change our eating habits, and one step is to change school lunch more plant-based. This should done urgently and it is a political decisions.[2908]

The participants of the dialogue stressed that the WEF nexus approach requires a shared vision for water and food security in the Central Asian region, and one that is facilitated by improved policy coherence and institutional coordination. Stronger collaboration and cooperation across and between governments and its multiple tiers is needed to achieve this, along with strengthening policy synergies with the private sector and civil society. The strong interdependency between water, energy, food and climate change in arid and semi-arid regions such as Central Asia calls for robust interventions, i.e. an approach that integrates management and governance across sectors, and where conventional policy and decision-making in 'silos' gives way to an approach that reduces tradeoffs and builds synergies across sectors in line with the global UN SDGs and climate targets. There is required to develop the long term regional limited planning for water allocation between sectors. Regional programs like the regional program for the basin of the Aral Sea is still

[2902] 4:12 p 8 in 104_Apr_8_21_Animal Agriculture Alliance

[2903] 7:19 p 8 in 167_Apr_13_21_Welthungerhilfe_Multi

[2904] 8:9 p 6 in 169_Apr_6_21_Shea E

[2905] 8:15 p 6 in 169_Apr_6_21_Shea E

[2906] 8:30 p 11 in 169_Apr_6_21_Shea E

[2907] 11:3 p 6 in 184_Apr_14_21_Genever_Multi

[2908] 13:6 p 7 in 207_Apr_28_21_WWF Finland Youth

rather sectoral and has only limited nexus elements. Also, the problem of the original programs is that they are developed mainly by water and ecology experts without referring to knowledge from other sectors like energy and agriculture.[2909]

The existing role and influence of communities on the policy in the field of renewable economic activity are very different in different countries (they are at different stages of development). Therefore, action planning should be maximally adapted to the situation in each individual country. The realistic goal is to raise the status of communities in the planning and implementation of the WEF policy in the country by one step. At least to the role of an "observer", it is better to the role of a "participant in the process" with an advisory vote, ideally to the status of a "full member" of a collegial body for shaping the national policy of the WEF.[2910]

Our current systems are structured in a linear fashion, with the primary focus on resource production and extraction. There is very little emphasis, if at all, on sustainable systems or community focused systems. These systems should become more circular, and activities such as regenerating clean water and putting it back into the system should become the norm.[2911]

Comprehensive approaches/strategies that engage all sectors (i.e. agriculture and environment; production and farming; delivery and processing; marking, distribution and purchasing; consumption and waste; etc.) are essential for change. Honing in on a social movement was recommended to transform a food system that is unsustainable and has negative health impacts. A whole-of-society approach is needed. A social movement will restore, rediscover, revive and reconnect people with their food heritage. A concrete example: the Pacific Island Food Revolution, a reality television cooking show featuring local cuisine of the South Pacific was effective, entertaining and showed evidence of impact in consumption patterns of participants and viewers.[2912]

How we will do it: Comprehensive approaches/strategies that engage all sectors (i.e. agriculture and environment; production and farming; delivery and processing; marking, distribution and purchasing; consumption and waste; etc.) are essential for change.[2913]

Some progress is being made on "circular economy" thinking and practice, but the system as a whole has not kept up with people's ideas and plans. Linking food, agriculture and health policies was particularly discussed.[2914]

At the same time, 'food as medicine' should be embedded within national public policy on health promotion. This involves formalising links between the food system and the health system to reduce highly prevalent non-communicable diet-related diseases and build

[2909] 17:2 p 6 in 164_Apr_15_21_Anarbekov_Akramov

[2910] 17:33 p 13 in 164_Apr_15_21_Anarbekov_Akramov

[2911] 18:6 p 6 in 114_Apr_19_21_Maurer H_Roskruge N

[2912] 19:4 p 6 in 115_Apr_24_21_Foronda_Multi

[2913] 19:26 p 6 in 115_Apr_24_21_Foronda_Multi

[2914] 20:22 p 10 in 116_Apr_21_21_Hein JR

consumer demand for high-quality, affordable food. Increased support for green prescribing is also called for, including in the management of certain chronic diseases.[2915]

They stressed the importance to reconnect with food traditions, retouch cultural values, invest on social capital, connect the food we eat with its environment, conceptualize new ways of planning territories and use the urban areas as connectors to build a more dense and interconnected system.[2916]

The main requests of the young changemakers were that diversity should be considered as a unifying factor along the entire chain of future food systems, in the sense that a dense network of deeply connected small and different realities leads to more resilience and better collaboration.[2917]

Moreover, the young changemakers highlighted the importance of connecting modern practices with the original roots, as a way to embrace small-holder realities and change the system.[2918]

One key outcome that emerged from this first SFS-MED Dialogue was the need to strengthen a common understanding of sustainable food systems and their complexities, through a holistic approach, specific for the Mediterranean context. It was recognized that the multiple challenges of the Mediterranean, further exacerbated by the effects of the COVID-19 pandemic, are deeply interrelated. Food system transformation is a very complex and dynamic process that requires considering food systems in their entirety, linking production and consumption, and in a cross-sectorial as well as inter-disciplinary manner. The importance of the nexus approach, which allows to connect and valorise the connection among different aspects and areas related to food, was also acknowledged. To this effect, it was recognised that: green, blue and circular economy are pivotal to food systems transformation; mainstreaming biodiversity and sustainable land and water management are key issues to climate change resilience; sustainable fisheries and aquaculture are also central to improve the sustainability of food systems; cities and local food policies play a critical role in moving towards more sustainable food systems.[2919]

Develop structures for an integrated approach when reviewing/developing policy (e.g. involve agriculture, health, environment, trade, safety, education) due to potential synergies and trade-offs.[2920]

Food system transformation is a very complex and dynamic process that requires considering food systems in their entirety, linking production and consumption, and in a cross-sectorial as well as inter-disciplinary manner.[2921]

[2915] 20:23 p 10 in 116_Apr_21_21_Hein JR

[2916] 22:4 p 7 in 191_Apr_16_21_Donati L

[2917] 22:11 p 9 in 191_Apr_16_21_Donati L

[2918] 22:13 p 9 in 191_Apr_16_21_Donati L

[2919] 23:19 p 6 in 205_Apr_27_21_CIHEAM_Multi

[2920] 23:72 p 11 in 205_Apr_27_21_CIHEAM_Multi

[2921] 23:73 p 6 in 205_Apr_27_21_CIHEAM_Multi

Circular economy approaches should also be promoted, not just in terms of food but the overall capital of a community.[2922]

The solutions discussed for the above mentioned concerns included strengthening the local, circular economy, ensuring better price realization for farmers and creating equitable systems of production. This will involve knowledge generation at the grassroots level, enterprise development and infrastructure, all of which would require public investment.[2923]

This group began the discussion by recognizing the complexity of the interconnections between various aspects of food systems. The importance of learning from nature, linking indigenous knowledge to modern science and disseminating it with the help of digitalization were also acknowledged.[2924]

Adoption and integration of an ethical approach to food systems transformation through the promotion of ethics of respect and stewardship for nature especially for ecosystems relevant to food and agriculture productions will significantly accelerate food systems transformative process.[2925]

We have to transform our culture of exploitation and promoting the Rights of Nature can drive forth the cultural realization that humans are part of nature and the environment and cannot be view separately.[2926]

Policy: Governments should recognize the protection and preservation of the environment as a public interest because our ability to produce food is directly link to the state of our planet, ecosystems and natural resources.[2927]

Engaging in circular economy activities such as the recycling of biomass (composting) and livestock waste (biofuels) can add great value to our environment, once done right.[2928]

Adoption of a food systems approach that acknowledges inter-system and intersectoral linkages and the multiple outcomes of the food system: food security and nutrition, environmental, social and economic.[2929]

It finally stressed the necessity of taking actions in a collective and holistic manner and not only individually.[2930]

Holistically identify critical areas of development and missed opportunities within the agricultural sector. This will justify an increase in budget allocation to the agriculture

[2922] 26:27 p 8 in 023_Jan_29_21_Bharat K S

[2923] 26:33 p 10 in 023_Jan_29_21_Bharat K S

[2924] 27:42 p 10 in 044_Feb_18_21_Bharat K S

[2925] 29:9 p 7 in 066_Mar_5_21_Nkenglefac T

[2926] 29:18 p 7 in 066_Mar_5_21_Nkenglefac T

[2927] 29:18 p 7 in 066_Mar_5_21_Nkenglefac T

[2928] 35:98 p 6 in 095_Mar_27_21_Chinapoo C_Multi

[2929] 36:9 p 6 in 096_Mar_29_21_ESCWA

[2930] 39:20 p 9 in 175_Mar_16_21_Donati L

sector or departments within. Education of the general populace on the importance of the agricultural sector.[2931]

Food security needs a holistic food perspective with bottom-up and top-down action. Macro-economic policies need to be created at a university and national level to support the most vulnerable on campus.[2932]

A systems approach to the food system and its supply chain is an imperative.[2933]

Complexity: We recognize that food systems are complex, and are closely connected to, and significantly impact, human and animal health, land, water, climate, biodiversity, the economy and other systems, and their transformation requires a systemic approach.[2934]

It is important to take a larger perspective, embracing the whole value chain from production, transformation, distribution, and consumption.[2935]

Proposal: Promotion of a holistic view, focusing on local agriculture as a primary provider of food security, with emphasis on quality and not only quantity and eco-friendly agriculture.[2936]

We have to tackle this issue in a holistic way to help all stakeholders join for the good of all. There is a lack of a national holistic food policy. Each ministry works independently without any coordination.[2937]

Promotion of a holistic view, focusing on local eco-friendly agriculture as a primary provider of food.[2938]

Holistic approach: the environment and people's behaviour should be targeted simultaneously, through a mix of complementary mandatory and voluntary interventions, while considering socioeconomic and health aspects, and having in mind the 'triple wins' of sustainability - health, planet and economy.[2939]

However, points critical for food systems transformation came to the surface, including: the need for comprehensive definition of sustainability; acknowledgement of complexity & interdependency of food systems; the need for holistic, cross-sectoral, multi-level approaches to multifaceted complex issues; the lack of education on healthy lifestyles, and especially on healthy sustainable food systems; the need for comprehensive, interconnected, evidence-based policy; the lack of data as key hurdle, and integration of key performance indicators; the need to improve representation of businesses/industry, as well as of farmers & citizens in the FSSD, who all must be part of the solution; existence of

[2931] 44:33 p 11 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[2932] 48:5 p 6 in 078_Mar_11_21_Cadogan T

[2933] 50:2 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[2934] 53:43 p 2 in 001_Nov_5_20_CGIAR

[2935] 59:15 p 5 in 020_Jan_26_21_IFAN

[2936] 64:15 p 6 in 041_Feb_17_21_Adler D

[2937] 64:75 p 12 in 041_Feb_17_21_Adler D

[2938] 64:81 p 13 in 041_Feb_17_21_Adler D

[2939] 66:80 p 14 in 052_Feb_25_21_EUFIC

vested interests, and the polarisation that they can lead to; the need to recognize the true cost of food; the need for tradeoffs between local and global food systems; the need to recognize differences in production, consumption, and the different needs of the food systems transformation between Global North & South.[2940]

Food systems are complex. It is not just an issue for a Minister of agriculture. Food systems define our health. Food systems define our environment. Food systems are central for the future of our young people and this complexity, this interdependence, is often hard to manage - but if you come to a city, to a village, to a landscape; this complexity becomes manageable. So, while framework conditions need to be created from the top down, it is even more important to build from the bottom up, the communities of practice we want to work with.[2941]

So it is important to think across the food systems value chain, but also across different sectors - from environment to water sanitation to land use. Soil regeneration is very important so that no one solution adversely affects another part of society.[2942]

But all systems are dynamic and often complex thus, a more holistic approach is required to understanding phenomena.[2943]

There is no single solution for continuing to strengthen the Mérida food system. We need to develop a set of actions simultaneously that are going to attend to the challenges and opportunities of the Mérida food system. Although there are actions that can be implemented in the short term and others that require more time for implementation, all of them should have a holistic approach and a long-term vision with citizen participation and monitoring.[2944]

In the area of urban planning, it is essential to have a coherent food governance that includes a reflection on how to secure in the medium-term – 20 years- fresh food availability and identifying the fresh food actors that can do this as to increase the ability to supply growing Asian populations. For instance, governments should plan where to develop wholesale markets, positioning them in such a way that their reach and connections are extensive in the best way possible. Food security can be improved through farming in peri-urban areas with systems as central to a holistic approach to proximity, logistics, and planning.[2945]

Many agricultural projects focus on farmers and their production and productivity. Without processing industry and more developed markets, improving production and quality doesn't change the system. Action needs to be taken on the systems as a whole and competence development is necessary on all levels. It's important to increase jobs

[2940] 66:89 p 15 in 052_Feb_25_21_EUFIC

[2941] 74:9 p 8 in 189a_April_16_21_Ateneo de Manila

[2942] 74:40 p 37 in 189a_April_16_21_Ateneo de Manila

[2943] 74:49 p 17 in 189a_April_16_21_Ateneo de Manila

[2944] 75:2 ¶ 37 – 38 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[2945] 77:19 p 9 in 108_Apr_13_21_Carrara E_Multi

opportunities in the whole food system, not just in farming. Project support that progresses in 3-5-year cycles doesn't give enough support for long-term change.[2946]

...key aspect is the key word "relationship" because the main target of the food system transformation is, indeed, provided by a set of relationships. FEBA Annual Convention 2021 "for a sustainable future food system" tried to identify the most important challenges for this transformation, recognising their complexity. Food systems are very complex entanglements of relations, some of them are visible, but many of them are hidden and they should be recognised in order to face this challenge. ... Four pillars have been recognised in this respect: bringing together the social and the natural, creating or strengthening positive flows and interactions within and between food systems, making space for pluralism and connecting food with other public goods (health, well-being, the environment, the welfare system). In this context, there are some tangible and interrelates goals for food system transformation such as the generation of co-benefits, the strengthening of linkages, social inclusion and connectivity. In fact, food insecurities are indicative of underlying socio-economic and environmental problems that need to be addressed holistically. Connecting food with other complex systems and policy priorities is a key factor, both for the private and NGO sectors.[2947]

The food supply chain is broken and needs to be changed: following the transition from a linear to a circular economy, it is now needed to use this momentum as an opportunity to re-design and move to a food system model with future resilience. On the other side the problem of food insecurity in Europe is growing with millions of people in precarious situations and in need. Moreover, there is a climate emergency and many analyses declared that governments around the world will not meet the Paris Agreement's targets without tackling food loss and waste. Therefore, it is evident how food loss and waste prevention is an integral part of the food system transformation. During the FEBA Annual Convention 2021 "For a sustainable future food system" some game-changer aspects were identified in this regard starting from the interconnectivity of this process. What are the key aspects that need to be transformed within the food system? Everything it is interconnected and to face a problem it is necessary to look at the entire picture with all the interconnectivities. Regarding the food loss and waste, it is fundamental to look at the framework of public and private actors and the role played by governments, businesses and civil society organisations.[2948]

Holistic knowledge and food system approaches are needed to ensure access to sufficient amounts of aquatic foods that is sustainably produced, nutritious and safe to eat and consumed as part of healthy diets for generations to come. The benefits derived from giving aquatic foods greater recognition in the food systems agenda can contribute to building the sustainability, resilience and inclusivity of aquatic food systems and related value chains. Innovative and holistic approaches to aquatic food systems hold significant

[2946] 79:43 p 10 in 118_Apr_21_21_Huvio T

[2947] 81:1 p 6 in 145_May_6_21_Vandenschrik J_Multi

[2948] 81:19 p 13 in 145_May_6_21_Vandenschrik J_Multi

opportunities for boosting health, livelihoods and wellbeing, especially of the poor and vulnerable.[2949]

It is imperative to make systematic change visible. The benefits and successes of systematic collaboration should be made visible as it will inspire those who want to see a change in the food system to do so. Moreso, it will expose those who continue with the status quo and force them to change.[2950]

Recognize interconnections: Multisector solutions depend on identifying interconnections across the food system. Participants wanted to bolster connections between farmers, schools, food banks and urban communities to build mutual support, understanding and resiliency. Specific to dairy, participants recognized the strong connections between animal welfare, environmental sustainability and social science to enhance consumer trust and support farmers' livelihood.[2951]

Finally, this group also touched on food production and food insecurity. While millions of people across the United States go hungry each day, there are times when farmers are forced to dispose of surplus food. Participants cited the need for a cohesive system (vs. present ad hoc models) that connects farmers with hunger coalitions to identify mutually beneficial options that get surplus food into the hands of those that need it most. Dairy farmers expressed their strong and historical support for participating in such systems and referenced the work undertaken by the U.S. dairy community to support address food insecurity when COVID-19 disrupted the food system.[2952]

Participants agreed that the link between environmental challenges, climate change, malnutrition and economic inequality is becoming clearer. Society is looking to the convergence of nutrition and sustainability for solutions. Change at speed and scale is essential to ensure global food systems can provide healthy, sustainable foods. There is a tremendous – and essential – role for the private sector to play in delivering innovation, collaboration and transformation for food systems. Participants believe the aquaculture sector has proven experience mobilizing responsible production progress. It shows how a sector can work collaboratively to identify and implement solutions to environmental challenges at a global scale. This experience is transferrable to other sectors.[2953]

Participants emphasized that progress cannot simply occur in a private sector silo. There's a critical need to link science-based regulations, knowledge transfer from big to small companies, and holistic business policy frameworks. Ideally, this approach will enable momentum, collaboration and accountability from the United Nations as well. Participants saw a clear role for private sector to partner with the United Nations and public institutions; they recognized that each of these groups has a unique and vital role to play.[2954]

[2949] 82:6 p 6 in 150_Apr_30_21_GANSFOIWFSN

[2950] 83:4 p 6 in 152_Apr_29_21_Kubheka M

[2951] 84:7 p 7 in 153_Apr_28_21_GCNF_Multi

[2952] 84:26 p 10 in 153_Apr_28_21_GCNF_Multi

[2953] 85:3 p 6 in 160_20_Apr_21_GSI

[2954] 85:5 p 6 in 160_20_Apr_21_GSI

The Dialogue highlighted the need for bottom-up approaches and by affording those affected a say in necessary changes. This includes discussing how food should be incorporated in urban planning, such as considering the primary modes of transportation a locality uses, geographic barriers, and zoning plans. Improved quality in food pantries and incentives for cheaper pricing and wider selection of healthy options in grocery stores (and improved profitability) can improve consumption patterns in America. Finally, food justice should be deliberately incorporated into sustainable consumption and urban planning as it relates to food policy.[2955]

The Lancet Commission's six planetary boundaries best describe nature-positive production. The boundaries are climate change, biodiversity loss, land system change, freshwater use, and nitrogen and phosphorus flows. It is significantly difficult to consider these boundaries separately, as they often affect or are dependent on one another. Promoting soil health and carbons sequestration through regenerative practices can address these boundaries. Unfortunately, economic, and political lock-ins incentivize chemical-dependent, high-yield, monoculture agricultural practices, further complicate these issues. Therefore, major reform must include additional research on agricultural methods that balance both the financial and environmental goals of farmers and a general deconstruction of the economic and political lock-ins that continue to promote current American agricultural. Factors to consider include: Planetary boundaries as interconnected elements. Promotion of soil health and stability through regenerative practices. Intensive rather than extensive agricultural growth. Incorporation of indigenous knowledge in farm policy. Inclusive policymaking. Incentives for farmer investment in nature-positive methods through tax credits and payment for ecosystem services. Concentration within agricultural and small farm operations access to finance. Public buy-in and involvement of multiple stakeholders. Data collection and education. Reduced food waste and loss at all levels of the food supply chain. Regional and local initiatives as incubators for national-level change. Equitable livelihoods require a broad systemic change to increase food access to all individuals. This change will take time and immediate ameliorating action is needed. A raised minimum wage will combat food insecurity among low-income individuals and families and recognize the value of workers within our food system.[2956]

The need to make rural areas livable was acknowledged. To this end, it is important to consider holistic development initiatives that permit mitigation of problems such as emigration; reduce chronic child malnutrition; and improve the situation of access to water and sanitation.[2957]

It was highlighted how the absence of an articulation of shareholders does not allow overcoming the challenges the region faces. Therefore, addressing the issues of rural development from a more holistic perspective is considered important, which should result in better training, access to basic services, and new jobs.[2958]

[2955] 86:8 p 6 in 162_Apr_16_21_Fountain G

[2956] 86:9 p 6 in 162_Apr_16_21_Fountain G

[2957] 89:18 ¶ 79 in 186a_Apr_15_21_Caballeros_eng

[2958] 89:21 ¶ 83 in 186a_Apr_15_21_Caballeros_eng

Of note, participants flagged that not all sustainable opportunities require trade-offs (i.e. food waste) but where trade-offs exist, there is a role for government in reducing them by ensuring policies are created through a holistic 'food-system' lens.[2959]

The F2F strategy can be the answer but it will be a challenge to implement all the ambitions. We need to start thinking about the food system as a whole.[2960]

She suggested that the public should utilize a "systems thinking approach which is constituted by six fundamental concepts according to Leyla Acaroglu (2017).[2961]

Fostering a holistic and systemic approach along with the multidimensional nature of food (FAO 10 elements of Agroecology).[2962]

So it is important to think across the food systems value chain, but also across different sectors - from environment to water sanitation to land use.[2963]

Embracing a systems approach and catalyzing non-State Actors (private sector, farmers, NGOs) Improving a food system necessarily calls for a systems approach which in turn entails devising an institutional mechanism for the relevant actors to work systemically.[2964]

Due to the complexity of the issues for farmers and farm households (different viability challenges for different cohorts (age, system, region)), it was agreed that actions must involve systems solutions.[2965]

Adopting a systems approach will support a move from silo thinking to bringing all elements together. These actions will also support capacity development, leading to diffusion of learning among rural communities.[2966]

Participants agreed that communications should be aimed at those who trust and believe in science, rather than the detractors. For some complex, emotive topics, such as animal welfare, we need to adopt a systems approach to communicating and understanding the complexity of the issues.[2967]

Water, energy, and food security is necessarily cross-cutting, and requires an integrated, systems approach to navigate through trade-offs and competing industries that exist, and to leverage positive interlinkages and ways to make the WEF nexus more functional.[2968]

[2959] 90:12 p 8 in 206_Apr_27_21_CCANCC

[2960] 99:24 p 8 in 285_May_20_21_TFFF_Multi

[2961] 103:19 p 17 in 007a_Dec_18_20_NAAGD

[2962] 103:43 p 31 in 007a_Dec_18_20_NAAGD

[2963] 103:68 p 37 in 007a_Dec_18_20_NAAGD

[2964] 111:30 p 6 in 070_Mar_09_21_Akinbamijo,O

[2965] 112:34 p 9 in 074_May_18_21_O'Mara_Teagasc

[2966] 112:41 p 9 in 074_May_18_21_O'Mara_Teagasc

[2967] 112:99 p 16 in 074_May_18_21_O'Mara_Teagasc

[2968] 117:43 p 12 in 109_Apr_13_21_Jacobs-Mata I

Regional coordination, alongside the systems approach, can help avoid issues of inward looking policies that may be detrimental to a country in the long-run.[2969]

Systems-based approach linked to livelihoods & holistic response options.[2970]

The need to address gender issues in a holistic manner that ensures all areas and issues affecting women in food systems are necessary to achieve transformation. For example, addressing the lack of access to finance does little if we do not concurrently address the challenges of tenure rights. Policy makers and stakeholders must work together in a coordinated approach to tackle these issues and ensure systemic change.[2971]

Over half a million women die annually due to maternity complications. Therefore there is need to understand the linkages between women's empowerment, decision making power and maternal health care. Better information and messaging for vulnerable groups is required. Better investment, better education, more health workers and nutritional services are needed to cover these vulnerable populations. A system approach that involves schools and educational departments can help integrate maternal health education into curriculums.[2972]

There is need for holistic approaches that foster access to extension services by women. Private-public alliances that promote the extension of knowledge and new technologies to women must be fostered. Consideration should be given to who should approach women farmers, depending on country, customs, religious contexts.[2973]

'Food as medicine', as a core strategy for healthier islands through sustainable food systems is a holistic approach to the prevention and control of non communicable diseases like diabetes and risk factors like hypertension and obesity --- as environmental modifications focus on food as a solution and not a cause of ill-health by ensuring that all people in all islands have access to healthier, affordable and locally produced and gathered food from sustainable resources.[2974]

"We are what we eat" - articulates a holistic view of culture and identity in relation to a holistic view of food.[2975]

Synergize roles of local authorities, organic enterprises, farmers and academe, to lead people into community action through systemic solutions to food systems problems.[2976]

This is a complex topic and understanding the risks and benefits of adopting a circular economy cannot be achieved by working solely on our areas of interest and in isolation. We need to adopt a nexus approach bringing together expertise in food, energy, sanitation,

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[2969] 117:45 p 12 in 109_Apr_13_21_Jacobs-Mata I

[2970] 117:69 p 16 in 109_Apr_13_21_Jacobs-Mata I

[2971] 120:3 p 5 in 127_May_13_21_IAFN_CWFS

[2972] 120:14 p 7 in 127_May_13_21_IAFN_CWFS

[2973] 120:19 p 7 in 127_May_13_21_IAFN_CWFS

[2974] 121:3 p 5 in 130_May_22_21_Foronda R_Gloria C

[2975] 121:8 p 5 in 130_May_22_21_Foronda R_Gloria C

[2976] 122:34 p 8 in 135_June_08_21_Calub_Gregorio

environment, human health, and policy. Collaborative thinking will require funding mechanisms to be put in place support future interdisciplinary research initiatives.[2977]

A holistic approach and reliable database on water resources and their use across Pakistan is the key to achieving food, water, and energy security in the ¦fth most climate-vulnerable country in the world, participants of the UN Food Systems Summit Independent Dialogue (Pakistan) have reported.[2978]

Moreover, a systematic approach is needed with much more information for balancing tradeoffs. While making a decision, consider a link between managing the canal and groundwater, and determine the impacts and implications of canal risk management. Canal management is an intervention tool, for recharging groundwater. Conservative water management is important that is already happening in Pakistan however, there is a need to further improve the traditional water management to adopt a water balancing system approach and to understand the availability of resources to be used efficiently. In summary, a systematic approach is required to improve productivity by integrating packages that include pumping, storage, efficient irrigation systems, tools, technologies/techniques/practices, etc. to increase productivity–isolated solution does not work sustainably.[2979]

Taking a systems thinking approach that includes looking at communities, cultures, ecology, and arts. These are systems that allow the community to continue to function, and food systems are one vital component of the entire system.[2980]

On tackling malnutrition, we must look at all aspects of the food systems, including WASH, Health, social protection and livelihoods; this came out strongly from IFPRI and IDS research.[2981]

Exploring an integrated or combination approach is critical given that gender is a cross-cutting approach, and it involves different institutions and stakeholders.[2982]

Actions that focus on going back to basics – systems thinking and systems innovation, taking into account externalities and systems solutions.[2983]

Improving nutrition security requires a systemic approach, which combines for example creating demand with improving the enabling environment and the supply of nutritious foods. This makes it more complex and is why it is not always easy to deliver outcomes at the level of improved diets (i.e. which are more diverse, safe, healthy, and affordable). But it is also why working through a multistakeholder approach is promising.[2984]

[2977] 124:3 p 6 in 142_May_11_21_Carter L_Dennis S

[2978] 127:1 p 7 in 159_Apr_21_21_Hafeez M

[2979] 127:56 p 15 in 159_Apr_21_21_Hafeez M

[2980] 129:14 p 10 in 179_Apr 01_21_Livingston_Way

[2981] 131:17 p 8 in 190_Apr_16_21_Cullen N

[2982] 137:13 p 6 in 212_May_04_21_Akinbamijo Y

[2983] 138:20 p 9 in 214_May _05_21_50by40

[2984] 141:27 p 13 in 229_May_18_21_NFP_Rabobank_Multi

Address those challenges the participants stressed the importance of a holistic approach - integrated landscape management, which involves a whole region and all stakeholders. The leadership and participation of all actors are key in that approach, as is the use of validated methods and tools and neutral facilitation.[2985]

Altering "one size fits all" policies that work well in certain areas but poorly in others.[2986]

Build a stronger partnership between the public, private sectors, farmers' associations, civil society, research, and universities, to ensure that inclusive approaches are used across the agricultural value chains.[2987]

It is important to shift from a sectorial approach to a systemic one. By supporting cities and local governments, a systemic approach can be progressively built, connecting markets to other food systems components.[2988]

Analyse incentives and disincentives for different users of land resources through participatory approach and manage rangelands to get better achievements.[2989]

Primary agriculture should adopt a larger food systems perspective and explore opportunities to further engage in food systems conversations to pursue a more integrated and comprehensive approach and understanding.[2990]

Ensuring interconnectedness of academe, policy, research, and governance to provide holistic approach/system on food systems.[2991]

Adopting the landscape approach, looking beyond the farm, and taking a more holistic approach to sustainability.[2992]

Delivering an integrated and holistic approach in curriculum design in agriculture, food systems, and innovation.[2993]

It further prescribed the agricultural innovation systems approach to and the best research to development partnership model.[2994]

Eight nine percent of the participants agree that innovations systems approach is the best research for development model to be used.[2995]

[2985] 141:51 p 16 in 229_May_18_21_NFP_Rabobank_Multi

[2986] 143:40 p 11 in 231_May_19_21_MCD

[2987] 150:15 p 6 in 253_Apr_29_21_AFDB_Multi

[2988] 151:9 p 7 in 261_May_03_21_Carrara_Le More

[2989] 152:36 p 8 in 262_May_04_21_ILC_Multi

[2990] 153:27 p 10 in 263_May_06_21_CCGA

[2991] 157:28 p 6 in 278_May_18_21_Gregorio B

[2992] 157:53 p 9 in 278_May_18_21_Gregorio B

[2993] 157:68 p 11 in 278_May_18_21_Gregorio B

[2994] 159:23 p 7 in 287_May 20_21_Akinbamijo_Y

[2995] 159:27 p 7 in 287_May 20_21_Akinbamijo_Y

Incorporate a system thinking approach to food systems.[2996]

Integrate the systems approach with the end-user being the community member. Critical to engage them to learn about their pain points in order to create solutions (don't assume).[2997]

But we also need to find ways to encourage the farmers to take a whole-of-farm system approach (within the local, regional and global food system) to manage their livestock in a commercially relevant way.[2998]

This last dialogue aimed to identify mutually beneficial solutions for food systems transformation, promoting a systemic approach to sustainable food systems through closer collaboration between producers and consumers.[2999]

An integrated system approach, where we work collectively and leverage all available tools, to advance sustainable development has tremendous potential.[3000]

The discussion was opened by Daniela Ropelato, Director of the Doctoral School of the Sophia University Institute, who asserted the "culture of care" (Laudato Si', 231) as the necessary paradigm for holistic and collective action. Engaging political processes relating to food systems through the lens of care, would allow for the appreciation of the complementarity between men and women in political processes and forge necessary alliances in decision-making. Afterwards, Lola Castro, Regional Director for Southern Africa, World Food Programme (WFP), urged audiences to move beyond the interpretation of women as victims of an unsustainable, unjust and fragile food system, and recognize them as "agents of change" and leaders in the reformulation of systems. She reiterated the need to formally recognize their contributions across all stages of food systems, and enhance their participation in political processes destined to shape them. She stressed the importance of increasing the involvement of women in early prevention and response strategies to food crises, and increasing their representation in leadership positions.[3001]

Innovation must come from people coming together, both in an international multi stakeholder setting as well as at the grassroots level. We have to acknowledge the intricacies of each of these issues.[3002]

Why are we, as a global society, allowing for the continuous oppression and execution of indigenous communities and cultures? Around the world these communities are denied of a voice- whether that be because of a lack of access to technology, visibility, or because of more violent systems of oppression. In the Amazon and Andes, indigenous communities are disenfranchised and displaced. In many of the regions where human rights are violated, it

[2996] 163:73 p 10 in 300_May_27_21_Alesso_Pommeret

[2997] 163:154 p 19 in 300_May_27_21_Alesso_Pommeret

[2998] 175:20 p 8 in 333_May_25_21_GMA_Multi

[2999] 178:5 p 6 in 336_May_26_21_CI_WFO

[3000] 188:12 p 5 in 346_May_31_21_CANEUS_Multi

[3001] 200:7 p 6 in 359_May 17_21_FAO_IFAD

[3002] 204:7 p 8 in 363_May_26_21_Mehta_Bautista

is the state and private companies denying that are denying these communities of what is inalienable. We must enforce a system of accountability to ensure that people are given the right to their land- allowing for ancestral and nature positive production to flourish. In light of the boycott coming from indigenous and peasant farming, we need to make sure that their message is heard at the upcoming Summit. We need to propose to the UNFSS a simple message: everyone must see their role in food systems transformation, not just multi-national corporations and neoliberal civil society organizations.[3003]

Dr. Esben Larsen, fellow in Food, Forests, and Water Program, World Resources Institute (WRI) proposed; i) a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North, ii) guarantee the Global South real access to technology, and iii) increase opportunities for vocational training in agri-food production to equip workers to optimise the use of available technologies.[3004]

Finally, Sr. Helen Alford outlined the role and responsibility of the Church in guiding international debates towards the common good. The universal church must be active in mobilizing its resources to connect COVID-19 recovery plans with the people who need support, and enrich global discussions with values that can promote systemic change towards the achievement of the Sustainable Development Goals once and for all.[3005]

Need for a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North.[3006]

Institutional innovation along the lines of a lifecycle approach, integrated policy and local empowerment.[3007]

Work collaboratively with African universities and other actors in and outside Africa to marshal the needed response to strengthen Africa's food systems and for scaling out best practices. There is need to bridge the disconnect between academia and government and between technocrats and politicians who allocate resources to support food systems enhancement.[3008]

Foster global partnerships to develop more sustainable, inclusive, and resilient food systems that consider the needs of smallholder farmers and youth.[3009]

Encouraging the building of national and international farm to fork strategies, encompassing areas such as environmental standards to also have a food safety component.[3010]

[3003] 204:8 p 8 in 363_May_26_21_Mehta_Bautista

[3004] 205:6 p 6 in 364_May_26_21_DPIHD

[3005] 205:12 p 6 in 364_May_26_21_DPIHD

[3006] 205:16 p 9 in 364_May_26_21_DPIHD

[3007] 205:19 p 9 in 364_May_26_21_DPIHD

[3008] 206:8 p 7 in 365_May_27_21_Ekwamu A

[3009] 206:9 p 7 in 365_May_27_21_Ekwamu A

[3010] 207:17 p 8 in 366_May_27_21_Cumbers S

He highlighted the need to bring the voices of vulnerable communities to the center of international political debates, promote circular models of food production and consumption, enhance local and traditional knowledge to ensure better protection of natural resources and reform present-day technological and financial structures to support the transformation of food systems.[3011]

The participants understood that "We are all in this together" type problems (such as the pandemic) require strong public institutions at national and supranational levels.[3012]

The participants discussed the needs for cross- country research to promote One Health. The participants discussed the needs for a systematic global effort to monitor pathogens emerging from animals.[3013]

To build resilience, the focus must be on food systems and not on farming systems. The food system incorporates wider food resources beyond the farm, for example from forests, wetlands, and home gardens – and therefore spreads risk and improves the ability to cope with shocks and stress.[3014]

Participants emphasized that systems thinking is required to embrace the Summit's Principle 'Recognizing Complexity'. Systems thinking, as part of comprehensive food systems evaluations, can illuminate how natural, human, social and produced capital linked to food systems are interconnected. Systems thinking requires that game changing solutions are not considered in isolation within their action tracks but that capital impacts and dependencies of solutions are assessed across all action tracks.[3015]

The private sector calls for the creation of a measurement matrix that values both positive steps but also targets negative interventions. This will allow different stakeholders to compare each of these diverse aspects and make decisions based on more 'complete' information, not just between businesses, but across the full value chain from farmer to consumer.[3016]

Funding international schemes. Innovation helps better manage water, but there is a need to fund innovation also in poorer countries. One of the obstacles to this solution is to find ways to convince wealthier countries to act internationally even in a situation where the emergency could be still hard to grasp within their own national borders.[3017]

The regional "Central American" aspect under the integration process, complemented in turn by the actions being developed nationally in each country since we are stronger united as a region. The "public-private partnership," in which the skills and abilities of each country and their productive sectors are coordinated.[3018]

[3011] 210:2 p 6 in 369_May_31_21_Holy See

[3012] 212:6 p 9 in 371_June 01_21_Güngören A

[3013] 212:7 p 9 in 371_June 01_21_Güngören A

[3014] 219:21 p 12 in 380_June_08_21_Shakya_Chettri

[3015] 220:1 p 6 in 381_June_08_21_UNEP_Multi

[3016] 220:8 p 9 in 381_June_08_21_UNEP_Multi

[3017] 224:15 p 9 in 385_June_09_21_Lazzaris S

[3018] 235:1 p 6 in 276a_May_13_21_CCIE_English

It is necessary to broaden the view of agriculture since it has a multidimensional effect on health, nutrition, food security, the environment, and biodiversity and is therefore an important factor in transforming food systems to achieve the 2030 SDGs.[3019]

It is important to have a systemic view that integrates the intersection between human, animal, plant, and ecosystem health. Improving the relationship between soil and food quality has an impact on national and international food security. Likewise, agriculture cannot be thought about independently, without considering economic, environmental, geographical, and social issues.[3020]

To address the challenges of these issues in education and training, it is extremely important to detect those regions and rural areas that are most vulnerable to climate change and natural disasters. In the case of the Caribbean, it is important to work together with other regions.[3021]

Several speakers also stressed the importance of the cultural and "human" dimension of food in the region, with the Mediterranean diet as an opportunity to build healthier and more sustainable food systems. In this context, there was a call to switch to sustainable consumption and production models, noting that often consumption and production are still treated separately by policies and stakeholders, and recognizing that only a systemic approach would allow moving towards sustainable food systems.[3022]

By taking into account the interconnected social, environmental, economic and nutritional and health-related challenges present in the Mediterranean, it was stressed that it is crucial to adopt an integrated approach, people-centered and specific to the Mediterranean context, to provide a better understanding of the multidimensionality of the sustainability of food systems, by linking the sustainable management of natural resources with the sustainable food consumption and production (SCP). In this context, the Mediterranean Diet could act as a sustainable lever to bridge the gap between consumption and food production in the region.[3023]

It is important to take a holistic approach when addressing resilience issues, considering how global dynamics play out at a local scale. Every ingredient needs to become resilient to have a resilient supply chain. A local solution might not work for a global system.[3024]

Countries could consider establishing "Food Ministries", rather than having separate ministries for agriculture and fisheries, to ensure holistic food policies. This can also be established through cross-governmental task forces.[3025]

To close the opening forum, convenors reiterated the need to restructure food systems towards delivering healthier diets, economies, and environment through a holistic food-

[3019] 236:1 p 6 in 277a_May_14_21_IICA_English

[3020] 236:3 p 6 in 277a_May_14_21_IICA_English

[3021] 236:9 p 6 in 277a_May_14_21_IICA_English

[3022] 244:15 p 8 in 480_June_21_21_CIHEAM_Multi

[3023] 244:22 p 9 in 480_June_21_21_CIHEAM_Multi

[3024] 245:26 p 11 in 481_June_23_21_Global Counsel

[3025] 251:14 p 7 in 487_June_29_21_Selwyn_Multi

land-water approach and repurposing public support for agriculture to prioritize nutrition, deliver public goods like research and extension, and reduce market distortions and inefficiencies to ensure meaningful and equitable participation in the agri-food system.[3026]

In this discussion group, participants agreed that there is a general lack of communication about sustainability, as well as sustainable standards. This group strongly felt that a holistic approach is needed, which includes all stakeholders.[3027]

An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the challenges holistically, avoiding trading off one aspect against another. b. Design/test for - and commit to - scaling up, at speed. c. Cater to more different individuals and communities and unmet needs. d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving and supporting mindset and cultural shifts. e. Decentralise access to good food f. Empower people through food skills and knowledge.[3028]

Interconnected considerations for approaches to plant-based innovation to help catalyse a just transition to better diets. To be more transformative, that innovation needs to: Address the challenges holistically, avoiding trading off one aspect against another (eg human health vs the environment) or ignoring some issues altogether (eg living wages for food workers).[3029]

There is a shift happening within organisations from dealing with the emergency response, to a more holistic approach which aims to consider the drivers and looking on an individual basis at how to bring people into a state of food security.[3030]

Apply a systems-based approach to support self-understanding of challenges, needs, and solutions.[3031]

Advocate justice and take measures against fishery crimes through system-based approaches.[3032]

A food system approach does not just happen. For scalability to happen analysis is needed in order to match solutions with the most urgent needs. Change makers need to be identified, supported and connected.[3033]

Regenerative agriculture is a holistic approach to farming which takes into account the biophysical environment of the soil, but also the broader efficiency of land use.[3034]

[3026] 254:12 p 6 in 490_June_22_21_Yasmi Y

[3027] 256:19 p 9 in 492_June_23_21_Liu JA

[3028] 259:3 p 6 in 495_June_23_21_Forum for the Future

[3029] 259:10 p 8 in 495_June_23_21_Forum for the Future

[3030] 260:5 p 6 in 496_June_23_21_Tradewell C

[3031] 263:16 p 6 in 499_June_25_21_GANSF

[3032] 263:18 p 6 in 499_June_25_21_GANSF

[3033] 263:34 p 8 in 499_June_25_21_GANSF

[3034] 273:8 p 6 in 509_June_30_21_FFA_Nestlé

The importance of taking a holistic system view is at the heart of the debate, which encompasses environmental, social and economic indicators, and potentially not disparate indicator, we need to think of it more broadly across the food system as well.[3035]

In order to make holistic and systemic changes we need to agree on a more holistic vision for nutrition science and food system transformation. We need to identify the people who have agency to come in and endorse definitions.[3036]

To realize the transition to sustainable food systems through territorial governance, support is needed to integrate across multiple scales and sectors.[3037]

Scaled policies and good practices can crystalize solutions to ensure needed impacts at territorial levels and bring everyone in the system together. These can be designed into context-specific projects and programs but also provide cross-cutting solutions relevant in several contexts. While locals build good practices, continued effort is needed for flexible, replicable models and knowledge-sharing networks.[3038]

Municipalities and local governments have a series of tools to support the re-territorialization of food systems, such as public procurement (e.g. for school meals), zoning (eg. for public markets and community gardens/kitchens) or strategies to restore nature and culture. But the challenge is to integrate top-down and bottom-up approaches. The public sector can regain a role through the participatory construction and implementation of local food policies shifting from sectoral approaches to integrate all dimensions of territorial systems.[3039]

Food Systems are complex; we need more complex approaches that recognize intersectoral linkages for the development of risk assessment systems for more effective response. Comprehensive policy responses must consider environmental, social protection, health and food security factors in a contextual, evidence-informed way. The precarity of the informal sector has deepened and addressing this will be key to fostering more resilient food systems.[3040]

Food literacy needs to happen both at school and at home. Drawing parallels between Africa and Ireland, sometimes even when children are educated at school, they go home and all the effort is lost as the parents either do not understand or cannot afford to eat more nutritious food. We have to take a holistic approach looking at the whole picture.[3041]

Ensure integrated, participatory, rights-based approaches to governance and policymaking at all levels to address the structural inequities and power imbalances in food systems. Build processes and policy platforms on democratic principles, transparent

[3035] 273:76 p 12 in 509_June_30_21_FFA_Nestlé

[3036] 280:43 p 9 in 516_July-01_21_Anastasiou K

[3037] 299:10 p 6 in 535_July_08_UNESCO Chair on Food

[3038] 299:26 p 8 in 535_July_08_UNESCO Chair on Food

[3039] 299:45 p 9 in 535_July_08_UNESCO Chair on Food

[3040] 302:7 p 7 in 538_July_09_21_IDS_Multi

[3041] 308:23 p 8 in 544_July_13_21_Omved Gardens_Chefs' Manifesto

deliberations, shared power, and inclusive participation to ensure that policies are driven not only by evidence but also by ethics and the broader public interest.[3042]

The dominant framing of dietary guidelines is on personal responsibility, leaving food choices in the hands of individuals. However, dietary habits are influenced by multiple factors from age and gender to education, income and health status, food environments, culture and nutritional and cooking knowledge. There must be a reframing to recognise that policy and business bear key responsibility for system transformation rather than the individual 'consumer'.[3043]

The urgency and complexity of food systems transformation underscores the need to consider multiple perspectives and pathways.[3044]

Reducing food loss and waste in food systems requires systematic thinking and approaches, with additional policy attention to developing effective market systems, especially for perishables. The market access could be improved by supporting the formation through farmer groups, cooperatives, associations and link them to markets, encourage contractual farming and long-term contractual agreements between growers and processors.[3045]

Reducing FLW in food systems with systematic approaches from pre-harvest farm-level losses to post-harvest losses, where additional policy concerns are given to vegetables, fruits and the perishables wastes which accounting for 20-30% of total FLW, not merely the grain losses.[3046]

For many farmers, particularly smallholders, lacking financial means to implement food loss-reducing investments such as better storage solutions is a major impediment. One of the key actions needed in the food system to reduce food loss is therefore to financial innovation and incentive mechanisms. Since 1994, the Agriculture Development Bank of China (ADBC) was set up as one of China's Policy Banks with a set mandate to contribute to agricultural development and poverty alleviation. ADBC has introduced a loan system that covers every segment of the food supply chain, which includes a series of credit products to serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc. All these advancements have the potential to reduce food waste through making processes more efficient and streamlined. Furthermore, ADBC implement preferential credit policies to support and further incentivize reduction of grain waste and losses.[3047]

The Dialogue also identified the challenge of communicating the interdependence of all food system players in a way that is easy to understand. At the consumer level, sustainable food businesses need to make it convenient and easy for eaters to think about eating not only for human health but planetary health. New labels, for example, can frame carbon

[3042] 309:21 p 7 in 545_July_13_21_Mbenya R

[3043] 312:20 p 9 in 548_July_14_21_Genoni A

[3044] 313:36 p 11 in 549_July_14_21_Meah N

[3045] 315:5 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[3046] 315:17 p 8 in 551_July_15_21_FAO_ESCAP_Multi

[3047] 315:27 p 10 in 551_July_15_21_FAO_ESCAP_Multi

footprints similar to calories on food packaging. Companies must find simple ways to show that their products are part of many solutions to a large, interconnected problem.[3048]

Moving forward, participants focused on the need to shift core values not only for food business but the consumers purchasing from them. With simultaneous and interconnected planetary crises, it's not enough for companies to be less harmful; sustainability and equitability must be inherent in their core products or services -- not just side product lines -- and companies should find a way to include advocacy in their work.[3049]

Participants also spoke about marrying conversations surrounding sustainability more broadly. Often, food-specific discussions and climate-specific discussions focus on the same issues in separate forums. The food and agriculture system needs to be brought fully into the global conservation surrounding the climate crisis at forums like UNFCCC's COP. The industry should acknowledge its role in the global environmental, human health, and social justice crises, and also recognize its potential as a powerful solution for those same crises.[3050]

Some of the ideas in transforming the society beyond feeding the society is as follows: 1. Developing community-based agriculture that leverage on local biodiversity. 2. Developing opportunities for indigenous communities, including on being part of the organic food production. 3. Building an ecosystem with incentives to foster multi-stakeholder effort. 4. Urban farming as a solution for the urban poor to obtain some nutritious food items, requiring policy action and civil society movement. 5. Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.[3051]

Participants agreed that evaluation is able to deliver the knowledge and evidence needed to inform decision-making leading to transformation of food systems. For this to happen and for the evaluation community to fully release it's potential, the field of evaluation needs to keep up to and evolve as much as are the development challenges we are confronted to, which are becoming increasingly complex and urgent.[3052]

It is important to advocate for strengthening the evaluation culture and to balance accountability and learning, aiming for evaluation to become everyone's business. Evaluators come from different educational and professional backgrounds, and addressing systems, complexity, and uncertainty may require a mindset shift, as we are not evaluating a linear process. Linked to this is the choice of appropriate methods, making a case for non-traditional and creative approaches to be encouraged: this may be difficult sometimes for evaluators to select and promote, though we need to move away from the notion of a gold standard to appreciating participatory, developmental, adaptive approaches.[3053]

[3048] 316:15 p 7 in 553_July_15_21_Food Tank_Oatly

[3049] 316:22 p 9 in 553_July_15_21_Food Tank_Oatly

[3050] 316:23 p 9 in 553_July_15_21_Food Tank_Oatly

[3051] 319:10 p 7 in 556_July_15_21_Von Goh_GenTan

[3052] 320:7 p 7 in 557_July_15_21_EvalForward_FSRD

[3053] 320:14 p 9 in 557_July_15_21_EvalForward_FSRD

In addition, while applying new tools and methods more suitable to addressing systems transformation and complexities, it will be important not to lose track of quality. All of this calls for having capacity development for all actors to understand and for evaluators to be confident in proposing methods and approaches.[3054]

The food and land use system offers a critical opportunity to achieve multiple goals, or potential for a win-win-win scenario: alongside climate and emissions reduction outcomes, nature-based solutions offer the ability to achieve broader environmental goals (including healthy soils, sustainable water use, protection and restoration of biodiversity) as well as supporting regional livelihoods and healthy diets.[3055]

The need for coordinated action across stakeholders and at different scales to achieve multiple goals, and to realise win-win-win scenarios, where outcomes across climate and emissions reduction are achieved alongside nature and broader environmental goals, as well as supporting regional livelihoods and healthy diets.[3056]

There are many powerful tools available to reduce methane emissions from livestock such as feed additives, manure management, and animal efficiency. While reducing enteric methane emissions is promising it is not the only strategy. In fact, reaching 50% methane reduction will be an uphill battle with feed additives as our only weapon. There is no silver bullet for farmers. We must look at the system as a whole and make reductions along the supply chain at every chance we have. If we zoom out and look at the whole system we can begin to identify inefficiencies. We then must communicate these efficiencies to the whole supply chain.[3057]

Establish an integrated, multi-sectoral strategic approach to nutrition, specifically inclusion of hygiene awareness.[3058]

Articulation of an integrated, multi-sectoral nutrition strategy.[3059]

Complexity of the issue/need to integrate complementary programs to school meals, especially with governance structures such as CONSEA or the Food Procurement Program.[3060]

Innovate the processes that make up the Food System from production to consumption, based on co-innovation and technical assistance.[3061]

The presentation of FF as a system of production and development beneficial to humanity should be incorporated at all formal educational levels, not only in primary schools, and

[3054] 320:15 p 9 in 557_July_15_21_EvalForward_FSRD

[3055] 326:5 p 6 in 563_July_20_21_ClimateWorksAustralia

[3056] 326:13 p 8 in 563_July_20_21_ClimateWorksAustralia

[3057] 328:7 p 9 in 565_July_20_21_Mitloehner_Kebreab

[3058] 330:69 p 13 in 568_July_21_21_Cooper-Liverpool M

[3059] 330:78 p 13 in 568_July_21_21_Cooper-Liverpool M

[3060] 339:35 p 9 in 393a_June_01_21_Food of Tomorrow_Eng

[3061] 340:10 p 9 in 406a_June_10_21_COPROFAM_CLOC_Eng

the message should be conveyed to those responsible for providing food in educational centers.[3062]

Training of rural extension system operators on the practices necessary to change from the current production systems to the proposed ones, and thus have a favorable impact on climate change factors. Importance of co-innovation due to its contribution within the territory, but which must necessarily be accompanied by development policies that help to lift the limitations that are being found in the systems for their redesign and progress towards more sustainable systems. Think about innovation in other dimensions beyond productive practices, generating more proximity and involvement of other actors: Create an extension department in agroecology for example in FAGRO or in other careers such as nutrition, psychology, CCSS, innovation in machinery, industrial design, e-commerce, etc.[3063]

Make joint efforts, from the Government, companies, agro-industries and other stakeholders, so that it can be produced in a sustainable way and with the nutritional elements required by the diet of the Dominican population, contemplating adequate planning of what is produced, imported and exported.[3064]

Nutrition requires a multi-layered approach; it is necessary to promote the consumption of foods with specific socio-environmental, cultural and nutritional characteristics. Intersectoral and interministerial partnerships are required in order to ensure Food and Nutrition Security.[3065]

A plan among local governments for promoting access to food through holistic actions is necessary.[3066]

Transformational approaches

Transforming food systems is a challenge but comes with opportunities and success stories. It is important that there is a joint effort towards better cooperation and coordination at the global level.[3067]

Promote farmer-centric approach for better adoption of innovations.[3068]

- Ensure that foreign assistance truly supports communities in becoming resilient and self-sufficient rather than perpetually dependent on aid.[3069]

- Direct food relief should not be used as a long-term solution, we need to be looking at empowerment models that encourage local self-reliance.[3070]

[3062] 340:14 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[3063] 340:28 p 12 in 406a_June_10_21_COPROFAM_CLOC_Eng

[3064] 350:20 p 8 in 424a_June_28_21_PROLIDER_Eng

[3065] 351:1 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

[3066] 351:3 p 6 in 552a_July_15_21_Frente_Parlamentario_Eng

[3067] 361:13 p 6 in 405_June_10_21_NCD Alliance

[3068] 414:9 p 6 in 455_May_14_21_Ekwamu_A

[3069] 424:13 p 6 in 465_June_16_21_Congressional Hunger

[3070] 424:21 p 7 in 465_June_16_21_Congressional Hunger

There is need to mainstream strategies and frameworks aimed at transforming food systems from development actors and national systems.[3071]

Scale up effective approaches, such as: AgriCorps, Whole Child Development, and Integrated Community Development.[3072]

In the Action Track 5 discussion, a central concern was the link between the social and environmental aspects of systems.[3073]

Information is often missing on the social aspects of systems, as well as on "tipping points" for both social and environmental systems. Cost benefit analysis is also missing on the impact of various possible initiatives to build resilience

Firstly, participants emphasized the need for farmer-driven and farmer-centric approaches. While recognizing the importance of top-down methods in policy-making, the different groups highlighted the key role of bottom-up approaches in ensuring research and innovation are tailored to the needs of farmers and offer practical and context-specific solutions.[3074]

Circular economy approaches to improve both aquatic food production and other components (e.g., health, social inclusiveness, peace and justice).[3075]

Adopt circular approaches with better integration of agriculture and aquaculture.[3076]

…raise awareness, the need for greater access to up-to-date mapping and data where people facing food insecurity are was highlighted as a key role of government, as well as the need for indicators on waste specific to Brazil, in addition to campaigns on conscious consumption and integral use of food items.[3077]

Advocacy on food loss and wastage.[3078]

Consumer education on food wastage.[3079]

The first main finding has been to nurture the need for Compost Creation and Education to give major heed to Food Waste as a significant positive national resource, never acknowledged to this degree in importance before in the history of Aotearoa to assist with the Climate Change threat and fresh-water health restoration. Soil carbonaceous material, part of the make-up of compost acts as a water quality filter—enter SDG 14, Life Below Water. (Compost is the common denominator between all Tables)[3080]

[3071] 425:28 p 7 in 466_June_17_21_Ekwamu A

[3072] 429:283 p 20 in 470_June_17_21_Burian_Multi

[3073] 434:9 p 7 in 475_June_18_21_Kadiresan K_Multi

[3074] 463:26 p 6 in 155_Apr_27_21_FCDO_Multi

[3075] 485:27 p 6 in 288_May_20_21_GAN_Multi

[3076] 485:44 p 9 in 288_May_20_21_GAN_Multi

[3077] 389:131 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[3078] 397:13 p 6 in 439_June_17_21_INAI

[3079] 397:30 p 8 in 439_June_17_21_INAI

[3080] 427:7 p 7 in 468_June_18_21_Mayne A

Government & Community: Education in schools on food waste reduction.[3081]

Table 1 – Food Waste Reduction Table 1 focused on actions government, business and community can take to reduce food waste. For example, government needs to issue a definition of 'food waste' and support measurement projects. Business and government need to enable food waste innovation, such as upcycling. For community, food waste education needs be incorporated into schools and urban farming/ composting infrastructure supported.[3082]

In terms of packaging, demands for sustainability were often countered with practicality issues. One participant in the 'main' Dialogue, for example, argued that plastics should not be completely banned as they are sometimes the best packaging for certain products. This argument was rebutted by two organisations working on the manufacturing of bio-plastics made from cassava and sweet potato. Whilst concerns were raised on the solubility of bio-plastics, which make them unfit for wet goods, it was pointed out that research and development is already ongoing to make bio-plastics suitable for fresh produce, long transport, and warm weather. However, we remain cautious of the need to minimise waste. The use of bio-plastics, therefore, should be coupled with increased composting practices, implying the need to capacitate both producers and consumers on proper waste disposal.[3083]

...protein from plants - jackfruit is going waste - because SMEs are not utilising well. use forums to make people aware of such technology to turn them into leather products, etc…[3084]

- changing the way we consume and not taking advantage of biodiversity…[3085]

That is why we want to explore together how to rethink our multi-sectoral collaborations to create a future that leaves no space for food waste.[3086]

Create chains of communications between all – create a marketplace where all actors can easily exchange information around food waste.[3087]

Communicate and build awareness in the consumers and the restauration sector on the food waste and methods to fight against it.[3088]

Create workshops on how to reduce food waste - learn how to use composting bins, and use it for the fields. Reward system: If citizens recycle and create only little waste, you

[3081] 427:15 p 8 in 468_June_18_21_Mayne A

[3082] 427:30 p 5 in 468_June_18_21_Mayne A

[3083] 460:105 p 14 in 131_May_25_21_IISLA Ventures

[3084] 492:18 p 7 in 302_June_01_21_FAO_ICC_Multi

[3085] 504:31 p 8 in 400_June_09_21_Viera_Pollmeier

[3086] 504:41 p 9 in 400_June_09_21_Viera_Pollmeier

[3087] 504:48 p 9 in 400_June_09_21_Viera_Pollmeier

[3088] 504:49 p 9 in 400_June_09_21_Viera_Pollmeier

have to pay less for the rubbish. It can be implemented locally by governments (example: is already implemented in Switzerland where you pay per bag of waste).[3089]

Seek transformational approaches and solutions for broad societal interest and the common good.[3090]

The main finding of the Regional Dialogue was the need to work with gender transformative, intersectional and intersectoral approach, in all sectors. In this way, it was agreed that to achieve food and nutrition security and to contribute to the sustainable development it is fundamental to pay attention to women's rights (SDG 5).[3091]

"Our current systems are too linear and all about taking of the resource and very little emphasis on giving back".[3092]

He stressed the importance of acknowledging a transformative process for the people and the environment allowing to recognize the work behind food without wasting and losing it. When it came to the youths, Giorgio Marrapodi highlighted the centrality of young people in the transformative process. At the same time, he stressed the importance of not giving away the responsibility of the older generations to change the system.[3093]

The need for transformational changes in the whole system.[3094]

Adoption and integration of an ethical approach to food systems transformation through the promotion of ethics of respect and stewardship for nature especially for ecosystems relevant to food and agriculture productions will significantly accelerate food systems transformative process.[3095]

Besides, the transformation of the food system should deliver healthy and nutritious diets for everybody in Latin America.[3096]

Transform food systems to address climate and biodiversity crises.[3097]

A fresh look into production, transformation and distribution towards a healthy and sustainable diet for all will bring us to profound systemic changes.[3098]

[3089] 504:68 p 10 in 400_June_09_21_Viera_Pollmeier

[3090] 1:10 p 6 in 072_Mar_09_21_Sibanda L

[3091] 3:1 p 6 in 099_Mar_31_21_FAO_IFPRI

[3092] ***18:13 p 9 in 114_Apr_19_21_Maurer H_Roskruge N***

[3093] ***22:23 p 10 in 191_Apr_16_21_Donati L***

[3094] ***23:33 p 7 in 205_Apr_27_21_CIHEAM_Multi***

[3095] ***29:9 p 7 in 066_Mar_5_21_Nkenglefac T***

[3096] ***53:29 p 8 in 001_Nov_5_20_CGIAR***

[3097] ***54:28 p 7 in 002_Nov_19_20_CGIAR***

[3098] ***60:10 p 6 in 021_Jan_27_21_Donati L***

Public-private money spent on seed and propagation materials as a catalyst for transformational change.[3099]

The Dialogue showed that a social justice approach is needed when talking about food systems. Access to education, information and participation, as well as basic human rights, such as the right to a healthy environment and the right to be involved in important discussions, were addressed as key elements in the transformation of food systems.[3100]

She suggested that the public should utilize a "systems thinking approach which is constituted by six fundamental concepts according to Leyla Acaroglu (2017). Basically, a system is composed of interrelated parts which have inherent effects on each other and systems thinking helps aid a person to view systems from a broader perspective using 6 tools as shown in Figure 7.[3101]

If we want lasting change, the process needs to start at the grassroot level and be gradual to be effective.[3102]

Support transformative approaches that strengthen women's confidence, knowledge and skills, relations and transform structures that withhold gender-based discrimination and improve their rights to earn livelihood.[3103]

We cannot unlock the full potential of our food system without collaboration. The food system is highly fragmented one where solutions are provided in silos. Collaboration is imperative in order for us to end the cycle where the same solutions are constantly provided. Cross-sector solutions should become the norm where government, ICT, financers, universities, entrepreneurs, etc. are working together at solving systematic issues.[3104]

Participants discussed how schools are trusted food environments that can help drive food system transformation via school meal programs and more education on food/nutrition, farming and agriculture.[3105]

Participants agreed that the link between environmental challenges, climate change, malnutrition and economic inequality is becoming clearer. Society is looking to the convergence of nutrition and sustainability for solutions. Change at speed and scale is essential to ensure global food systems can provide healthy, sustainable foods. There is a tremendous – and essential – role for the private sector to play in delivering innovation, collaboration and transformation for food systems. Participants believe the aquaculture sector has proven experience mobilizing responsible production progress. It shows how a

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[3099] ***63:38 p 9 in 037_Feb_12_21_Food Systems for the Future_Multi***

[3100] ***65:6 p 6 in 050_Feb_23_21_World Vision Ireland***

[3101] 74:22 pp 17 – 20 in 189a_April_16_21_Ateneo de Manila

[3102] 79:6 p 6 in 118_Apr_21_21_Huvio T

[3103] 79:48 p 10 in 118_Apr_21_21_Huvio T

[3104] 83:3 p 6 in 152_Apr_29_21_Kubheka M

[3105] 84:13 p 9 in 153_Apr_28_21_GCNF_Multi

sector can work collaboratively to identify and implement solutions to environmental challenges at a global scale. This experience is transferrable to other sectors.[3106]

We know that we need to get back on track; transforming our food systems is among the most powerful ways to change course.[3107]

In essence, while many different views and objectives were expressed on how to achieve food systems transformation in the region, the role of water was critical in all of them. It was further emphasized that we have to move beyond the sectoral coordination approach, although this is very key – to examine the political transformations that are important in realizing more just systems transformation.[3108]

They should be developed using transformative approaches that allow for the engagement of all stakeholders at a community level where gender norms are deeply entrenched.[3109]

The Dialogue highlighted the need for transformative approaches to promote equity and inclusion in water energy food (WEF) nexus governance for sustainable water, energy and food systems.[3110]

Building Back Better from COVID-19: 2021 presents a window of opportunity for 'transformational change' towards reaching the SDGs. In doing this we must ensure that we reach the furthest behind first, and take a 'food systems approach'. Policy responses to COVID-19 must also be gender sensitive if we are to 'build back better'. One tool identified is the Gender Action Learning System (GALS) which is a practical guide for transforming gender and unequal power relations in value chains.[3111]

In doing this we must ensure that we reach the furthest behind first, and take a 'food systems approach'.[3112]

Focusing on agricultural transformations will help trigger further innovations all along the food chain.[3113]

Why are we, as a global society, allowing for the continuous oppression and execution of indigenous communities and cultures? Around the world these communities are denied of a voice- whether that be because of a lack of access to technology, visibility, or because of more violent systems of oppression. In the Amazon and Andes, indigenous communities are disenfranchised and displaced. In many of the regions where human rights are violated, it is the state and private companies denying that are denying these communities of what is inalienable. We must enforce a system of accountability to ensure that people are given the right to their land- allowing for ancestral and nature positive production to flourish. In light of the boycott coming from indigenous and peasant farming, we need to make sure

[3106] 85:3 p 6 in 160_20_Apr_21_GSI

[3107] 103:69 p 37 in 007a_Dec_18_20_NAAGD

[3108] 117:5 p 7 in 109_Apr_13_21_Jacobs-Mata I

[3109] 120:25 p 9 in 127_May_13_21_IAFN_CWFS

[3110] 127:2 p 7 in 159_Apr_21_21_Hafeez M

[3111] 131:10 p 8 in 190_Apr_16_21_Cullen N

[3112] 131:11 p 8 in 190_Apr_16_21_Cullen N

[3113] 169:23 p 7 in 327_May_18_21_CropLife

that their message is heard at the upcoming Summit. We need to propose to the UNFSS a simple message: everyone must see their role in food systems transformation, not just multi-national corporations and neoliberal civil society organizations.[3114]

There was contention on how a capitalist economic model can be used to foster Food Systems Change. Some participants believed that our system could shift the current power dynamics, which create inequity if utilized in the right way. Others believe that a radical transformation in our system is necessary for true, sustainable change.[3115]

Universities themselves have to change how they do business and respond to emerging needs and advance processes and mechanisms that ensure that graduates appreciate agriculture and agribusiness as a source of employment and livelihood.[3116]

To translate science into actionable ideas for producers, IWMI-CGIAR is designing a leadership programme to directly bridge this gap, noting that a forthcoming Water-Food-Energy-Forest-Biodiversity Nexus Initiative seeks to significantly redesign research agendas.[3117]

Ensure that programs/projects to be implemented partly or entirely in indigenous peoples' lands/territories or those that will impact on indigenous peoples' lives; undertake full and effective consultations with IPs to be affected consistent to the rights of Indigenous Peoples to free, prior and informed consent; respect community protocols; institutionalize/require the following as programs/projects standard components in all initiatives : define, with IPs i) a benefit-sharing scheme and mechanisms for implementation in partnership with IPs themselves and/or organizations/institutions endorsed by IPs; ii) accessible grievance mechanism; and iii) waste segregation and recycling policies ensuring allotment of resources for implementation, monitoring and exit strategies; take into account gender disparities and other factors of marginalization of other members of IP communities in the above processes.[3118]

Support the strengthening of indigenous food systems by supporting community initiatives and linking them to various experts for capacity building towards social enterprise development, support/organize meaningful food festivals in schools/colleges, urban centers and in communities where they operate including creating champions for indigenous food and food systems. Indigenous community social enterprise can influence the reversion of migration for income purposes, especially among the youth; women and youth collectives and initiatives should also be encouraged to facilitate knowledge transfer noting also the roles and capacities of the youth to influence transformation towards gender equality.[3119]

The future transformation of food systems in Africa requires innovativeness in research and education approaches that are rooted in local contexts. Universities in Africa need to adopt and create knowledge to strengthen and transform the food systems through

[3114] 204:8 p 8 in 363_May_26_21_Mehta_Bautista

[3115] 204:31 p 11 in 363_May_26_21_Mehta_Bautista

[3116] 206:4 p 6 in 365_May_27_21_Ekwamu A

[3117] 216:6 p 7 in 377_June_07_21_Arden_Caucci

[3118] 221:21 p 11 in 382_June_08_21_AIPP_Multi

[3119] 221:23 p 11 in 382_June_08_21_AIPP_Multi

strengthening links and improving productivity, processing, storage, transport, food quality and business that link them with consumers. Universities need to anticipate the skills set and knowledge demanded by the rapidly changing food systems and provide this information and skills in ways that trickle through the entire economy. Universities then need to translate the knowledge created into innovations that then transform and develop potentials that drive their own and Africa's food system. There is need to reassess and redesign the African Universities and assist them to build their capacity to develop and deliver Africa's food system transformation.[3120]

There is need for collaboration beyond the boundaries of jurisdiction and in particular within the East African Region. This will enable joint efforts towards tackling a challenge cutting across several countries.[3121]

In the face of this threat, comprehensive social, economic and political transformations are proposed, including agrarian reforms incorporating policies and legislation that can provide legal security to those who live on and from the land, and that can put an end to the dominance of the current global corporate command of the food systems, and the concentration of land in the hands of a very few. Guaranteeing individual and collective rights over the land is a key factor in facilitating the sustainable contribution of rural, indigenous and agrarian men, women and youth to the agri-food systems. Only through the total conversion of the current system's hegemonic approach to an agro-ecological model can sustainable food systems be achieved. For this reason, agro-ecology should be treated as an instrument of transformation in the results of the Food Systems Summit. ... Rural youth can contribute to the transformation of the current food systems, if they are motivated and responsive to their needs and aspirations, including access to land, inter alia. Their capacity for innovation, creativity and the value they place on caring for the environment and agro-ecology will all facilitate the making of this change. In this sense, rural youth are a sustainability guarantee. … A major effort that needs to be made for the transformation of the current food systems is to build bridges between the agro-ecological movement, the movement for the land and all the agrarian movements, with urban movements fighting for health, for the rights of women. youth and food. Expanding the urban-rural connection also implies the development of inter-consumer relationships.[3122]

A more transformative approach that incentivizes investments with long-term sustainability impact despite little immediate benefit. These include nature-based solutions and natural resource management, and ensuring the equitable participation of underserved sectors in the agri-food system.[3123]

Stakeholders involved in investments approached the issue of sustainability in two ways. First, by focusing on production systems that provide tangible benefits to investors and end-users; and then via a more transformative approach that incentivizes broader sustainability impact within a longer timescale. These pathways generally align with short-

[3120] 223:2 p 6 in 384_June_09_21_Ekwamu A

[3121] 223:15 p 8 in 384_June_09_21_Ekwamu A

[3122] 234:22 p 6 in 273_May_12_21_ILC_FILAC_Multi_Eng

[3123] 254:23 p 10 in 490_June_22_21_Yasmi Y

and long-term views on food systems transformation, and can be implemented in parallel if there is coordination and collaboration among the relevant sectors.[3124]

Specific focus will be given to the transformation of food systems by promoting an integrated approach for development, a notable departure from the rural–urban dichotomous development paradigm.[3125]

Some participants felt that there needs to be a greater emphasis on decision making processes result in transformative changes to current food system activities.[3126]

A review of recent evidence (see links provided at end of report) shows the importance of technical innovation driven by research, development, and extension as drivers of agricultural productivity growth, and further, the catalytic role of agricultural productivity-led growth in poverty reduction, food systems resilience, and economic transformation.[3127]

Transformative innovation which builds on local and indigenous knowledge for sustainable local ecosystems needs to replace conservative innovation geared to support the present economic model.[3128]

We need a new paradigm and vision for local food strategies and policies which are integrated in a functional multi-level territorial governance system. Food regulation is a political issue and should not be delegated to the market—food must be recognized as a right not a commodity.[3129]

Territorial alliances to advocate action for structural challenges: Structural issues around effective landscape/ecosystem action including poverty and food insecurity are significant challenges for cities/regional governments and impose pressing demands on budgets. Recovery packages could strengthen local food provision and build from innovative modalities (e.g., participatory budgeting). Structural issues need long term solutions, including shifting the narrative around food systems so needs are at the center. Subsidies can also be shifted. OECD agricultural subsidies totaled US$720 billion/year from 2018-20, yet only one in six dollars promoted sustainable productivity growth and agricultural resilience. Shifting more money to agroecology would be game changing.[3130]

The dialogue also highlighted importance of strengthening the resilience of local food production systems (essential for reducing vulnerability) while strengthening global systems to enable a global response to local crises. The coexistence of local systems/strengthening of local production systems while strengthening global production is

[3124] 254:30 p 11 in 490_June_22_21_Yasmi Y

[3125] 266:11 p 6 in 502_June_28_21_Zhang_Basher

[3126] 280:83 p 13 in 516_July-01_21_Anastasiou K

[3127] 298:8 p 6 in 534_July_07_21_WBADB_ADI_Multi

[3128] 299:9 p 6 in 535_July_08_UNESCO Chair on Food

[3129] 299:34 p 9 in 535_July_08_UNESCO Chair on Food

[3130] 299:53 p 10 in 535_July_08_UNESCO Chair on Food

an important challenge that we face in reforming and transforming food systems. In the past, changes were made to the benefit of some, and to the detriment of others.[3131]

In order to create a just food system we need to reform our food system to address the inequities that Indigenous communities face. Participants also expressed the need to involve and listen to the voices of Indigenous people in the food system.[3132]

Participants identified how the understanding of sustainability has been altered to seeing surface-level changes, such as using paper straws or bamboo cutlery, as methods to maintain sustainability; In reality, it is the system as a whole that needs to change.[3133]

Conscious that the food systems transformation agenda is long overdue, and many social movements have been fighting for systemic and structural transformation of food systems, stressing the urgent need for a radical shift from fossil fuel-based industrial agriculture and corporate monopolies of food and agriculture to food sovereignty and agroecology.[3134]

Participation and Local ownership of farmers need to be at the centre of Food Systems Transformation In the spirit of "leave no one behind", and localization, it is key to have local ownership of food system transformation.[3135]

With regard to the upcoming Food Systems Summit, participants look forward to continuing the conversation around building a sustainable food system in Kosovo and work together to transform a wealth of ideas, evidence and recommendations into concrete and practical solutions to advance equitable livelihoods in Kosovo's food system. Efforts will be made to better integrate these into ongoing initiatives already taking place all over Kosovo. To name a few, these include: initiatives to reduce food waste (ex. UNDP Food Waste Challenge), municipalities' plans to improve local livelihoods, CSO efforts to promote a culture of recycling and more responsible use of resources.[3136]

Leverage the potential of agro-tourism in Kosovo, as a leading example of sectors (other include eco-tourism) that have been undergoing transformation to promote a shift towards more sustainable ways of doing business, which put sustainability and environment at the core of their model.[3137]

Dietary guidelines have an important role as part of a wider process of food system transformation that is urgently needed. The guidelines can be a catalyst for change, as many sectors access them. If the guidelines consider the impacts of diet on the Sustainable Development Goals, it is more likely that other government portfolios start engaging with them as a lever.[3138]

[3131] 302:9 p 7 in 538_July_09_21_IDS_Multi

[3132] 307:34 p 9 in 543_July_13_21_YRYFC

[3133] 307:41 p 10 in 543_July_13_21_YRYFC

[3134] 309:12 p 6 in 545_July_13_21_Mbenya R

[3135] 309:19 p 7 in 545_July_13_21_Mbenya R

[3136] 310:11 p 6 in 546_July_13_21_INDEP

[3137] 310:34 p 9 in 546_July_13_21_INDEP

[3138] 312:15 p 9 in 548_July_14_21_Genoni A

Finally, the Dialogue centered on the theme that there is no one-size-fits-all for the food system. Rather than searching for a silver bullet, it's imperative that all players focus on supporting family farmers, sustainable agricultural practices, education, and other investments to help incentivize making a radical change towards a healthier future. Moving forward, sustainable food businesses must maintain this open conversation and continue to challenge each other.[3139]

Finally, participants emphasized the need to move forward with solutions, even if they may not be perfect. Being more vocal about the barriers facing the solutions already at work can help push the dial. Often, we learn more from failures rather than successes. Pushing forward with what's working right now, not what might work 50 years from now, should be the focus of the discussions.[3140]

Food production is about transforming the society, beyond feeding the society: Throughout the discussion, food production cannot be just about producing enough food for the population. Instead, food production is intricately interlinked with incomes, livelihoods and nutrition provided to the society. Food producers come from many different communities, some coming from vulnerable and poor groups such as indigenous communities in rural area. Thus, ways to improve incomes for these food producers much be in consideration, including the provision of high quality seeds and training farmers. On the consumer end, especially with the COVID-19 impact, many households have reduced incomes, and thus may not be able to afford food. This is especially so for urban poor and refugee communities who do not have access to land to produce their own food. Urban farming can be a way forward to secure their food availability.[3141]

Some of the ideas in transforming the society beyond feeding the society is as follows: 1. Developing community-based agriculture that leverage on local biodiversity. 2. Developing opportunities for indigenous communities, including on being part of the organic food production. 3. Building an ecosystem with incentives to foster multi-stakeholder effort. 4. Urban farming as a solution for the urban poor to obtain some nutritious food items, requiring policy action and civil society movement. 5. Movements such as agroecology, which takes into account the whole ecosystem of diversity, human and social values.[3142]

New approaches and innovations are required to transform food systems, for a more equitable and sustainable world. Evaluation has a key role to play in supporting this, by shedding light on the complexities and interdependencies of food systems and identifying actionable and timely solutions, and ultimately contributing to the 2030 Agenda for Sustainable Development.[3143]

Regarding specific tools and methods that evaluators can use to address the complexities of food systems and their transformation, Theories of Change were mentioned, and in

[3139] 316:11 p 6 in 553_July_15_21_Food Tank_Oatly

[3140] 316:26 p 9 in 553_July_15_21_Food Tank_Oatly

[3141] 319:5 p 6 in 556_July_15_21_Von Goh_GenTan

[3142] 319:10 p 7 in 556_July_15_21_Von Goh_GenTan

[3143] 320:5 p 6 in 557_July_15_21_EvalForward_FSRD

particular new nested approaches to Theories of Change design, which are important for bringing stakeholders together. In the toolbox of evaluators, there should also be a place for Stakeholder mapping, and in order to deepen and expand on specific stakeholders input and influence, influence mapping in decision-making.[3144]

In addition, while applying new tools and methods more suitable to addressing systems transformation and complexities, it will be important not to lose track of quality. All of this calls for having capacity development for all actors to understand and for evaluators to be confident in proposing methods and approaches.[3145]

There is a crisis of imagination - people cannot imagine another world where these identified issues and challenges have been overcome – therefore the majority of participants would like to see clear and substantive reforms that that are good for small farmers and for the planet. This will only come about by the relevant stakeholders reimagining the current system but crucially sharing that new vision with their populations. Every member of our global society must be encouraged to rise up and demand change.[3146]

The Dialogue focused mainly on the major challenges that exist today on the road to the sustainability of agri-food systems. However, they emphasized the fact that this transformation has already begun, showing certain parallelism with the transformation that other sectors, such as energy or mobility, are already undergoing today, at a faster pace, undoubtedly due to their high impact on the fight against climate change. Therefore, the objective must be to position the relevance of the agri-food system's transformation at the same level on the global political agenda to join forces and accelerate the transition.[3147]

Greater global governance. On the one hand, from the public perspective, they discussed the need to position the relevance of agri-food systems transformation at a more significant level on the world political agenda. In this sense, global governance appears as a crucial element in reducing system imbalances and avoiding the differences in competitiveness that may exist, depending on the production systems and place of origin of the companies. In the view of the Ministry of Foreign Affairs, European Union and Cooperation, the first step towards a faster and more efficient transformation would be for all stakeholders in the system to adopt the Voluntary Guidelines on Responsible Governance of Land and Resource Tenure (promulgated by FAO), which guide responsible and sustainable practices to ensure food security. On the other hand, from the third sector's perspective, a paradigm shift is needed in the approach to agri-food systems governance; currently more focused on the commercialization of food than on quality food for people. This change would require greater involvement of small producers, and collaboration between all actors in the value chain.[3148]

[3144] 320:11 p 8 in 557_July_15_21_EvalForward_FSRD

[3145] 320:15 p 9 in 557_July_15_21_EvalForward_FSRD

[3146] 323:23 p 7 in 560_July 19_21_Arbuthnott_Multi

[3147] 337:1 p 7 in 132a_May_27_21_Forética_Eng

[3148] 337:9 p 9 in 132a_May_27_21_Forética_Eng

Development of a new agricultural policy which breaks with the past and is participatory: a policy which defines the outlines of a change of approach is urgently needed and must result in an approach which involves the different stakeholders of the channels: farmers but also the stakeholders in the private sector must be active participants in this reflection and in the strategic choices to be implemented because they will then be those who implement it; a paradigm shift is required at the level of the ministry in charge of agriculture: it must become a ministry of sustainable agricultural production.[3149]

Need to adapt the existing legal and regulatory frameworks to the challenges and realities of AFCI and the transition of systems towards more sustainable systems.[3150]

By rethinking food sovereignty, progress could be made in the work of resilience and mitigation in the face of the pandemic, guaranteeing a supply of healthy food to the population throughout chain. This in turn involves the creation of a comprehensive plan that boosts the resilience of small producers for recovery, prevention of future crises and transformation to sustainable and healthy food systems. This implies support for countries to adopt innovative, inclusive and sustainable approaches that contribute to bridging the digital gaps of the rural population; for women, indigenous people and Afro-descendants equally.[3151]

We need a group of countries that collaborate and create an alliance to establish global models, and it would serve to put it under discussion, give transparency to the balances and demonstrate the transformational perspective.[3152]

It's the opportunity to promote family farming among the peasants and indigenous people through and endogenous development strategy which leads to social, cultural and economic transformation based on the creation and strengthening of public policies and the actions of organizations to rebuild food systems by rescuing ancestral traditions, respect for the environment and equitable production relationships from food sovereignty, agroecology and agrarian reform.[3153]

Guiding Theme 15. Innovate and Integrate What Is Already Working

Awareness/education of community innovation

Beef cattle, pork, and row-crop farmers provided multiple examples of innovation on their farms. On swine operations, for example, composting is a significant investment but has huge impacts on the operation and there are cost share programs available. A challenge is making sure other producers are aware of those incentives and programs.[3154]

[3149] 338:18 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[3150] 340:32 p 13 in 406a_June_10_21_COPROFAM_CLOC_Eng

[3151] 344:2 p 6 in 418a_June_18_21_CLOC_Eng

[3152] 344:4 p 7 in 418a_June_18_21_CLOC_Eng

[3153] 344:5 p 7 in 418a_June_18_21_CLOC_Eng

[3154] 8:28 p 11 in 169_Apr_6_21_Shea E

A global townhall initiative for agtech innovations to showcase innovations and share experiences/support each other. [3155]

Empower consumers through education which can impact acceptance of innovation. Science-based education on food and how it is produced is key, particularly targeting consumers (and policymakers), and starting from schools. Empowering consumers from being 'passive' to 'active', includes better product information. The concept and understanding of food systems is not well understood, and the role of all actors in a value chain (producers, processors, distributors, consumers etc.) needs to be better explained, and a holistic solution sought.[3156]

Consumer awareness is important. The role of the consumer is fundamental to understand that a seasonal product is seasonal, innovation while duly regulated is good, regenerative agriculture is the future, monoculture is damaging…[3157]

Adequate sensitization is required in order to advance food producer and other actors (within the value chain) to embrace innovation and obtain knowledge on sharing risk to minimize losses and build resilience.[3158]

Incentivize innovations and investments that help lower agriculture's vulnerability to climatic/environmental impacts and lead to more affordable healthy food consumption.[3159]

Establish innovation platforms for interaction among actors in the commodity value chains.[3160]

Need to for science research journalism to communicate innovations effectively to end users. The media is too silent, not communicating science-based innovation to the populace.[3161]

Increase investments in locally relevant, adaptive national-level agricultural research and development, including the investments in improved institutional and absorptive capacity and ownership at National Agricultural Research Systems (NARS) and improved education for innovation actors, including on-farm actors.[3162]

Resistance to change: there are strong cultural challenges, both on the part of consumers and farmers. Firstly, from the consumer perspective, greater awareness and sensitization are needed to change consumption patterns and encourage more sustainable consumption and reduce food waste. On the other hand, for farmers, the "traditional" nature of the

[3155] 46:31 p 12 in 049_Feb_23_21_SAFIN_Multi

[3156] 99:3 p 6 in 285_May_20_21_TFFF_Multi

[3157] 99:26 p 9 in 285_May_20_21_TFFF_Multi

[3158] 139:13 p 8 in 216_May_06_21_Ben_Aniabi

[3159] 262:10 p 6 in 498_June_24_21_Danquah E

[3160] 262:25 p 6 in 498_June_24_21_Danquah E

[3161] 262:37 p 7 in 498_June_24_21_Danquah E

[3162] 298:11 p 6 in 534_July_07_21_WBADB_ADI_Multi

sector means there is great resistance to changing traditional cropping systems, and there is often a certain reluctance to use new techniques and innovative solutions.[3163]

Finance innovation/solutions

Entities that finance agriculture also need to be part of the process of meeting food security and other SDGs. Otherwise, their terms or leases can come in conflict the way farms seek to operate more sustainably.[3164]

Beef producers, for example, have taken great strides in grazing management and taking advantage of new ways to utilize government cost programs. The swine industry has focused on implementing sustainability measures to mitigate methane and greenhouse gases. The pork industry over the last decade has been working on decreasing its environmental footprint – and has built partnerships up and down the value chain, making it easier to take on sustainability initiatives. Cost-share programs, both privately and publicly funded, are very important to these types of ventures.[3165]

Funding – Funding for non-conventional food systems initiatives, such as regenerative agriculture, is often difficult to source.[3166]

The participants then discussed the benefits of knowledge intensive and regenerative agriculture. This kind of agriculture encourages carbon sequestration, which in turn increases the groundwater table (for every gram of carbon sequestered, the soil can hold 8 grams more water). Regenerative agriculture also improves the soil microbiome. These can lead to greater resilience of farming to climate change and also decrease the chance of zoonosis like Covid-19. The practicalities of promoting and implementing regenerative agriculture were then discussed. A crucial question was how these schemes would be funded. Participants suggested linking grassroots organisations in need of funding with financial/donor institutions that are looking to finance green initiatives. An example was Microsoft, which recently gave 1 billion US dollars to companies that were showing long-term carbon sequestration, to help them achieve their net zero carbon goals. It was also necessary to empower communities and facilitate development that spreads from farmer to farmer. Women's SHGs and farmers could be considered as the unit of knowledge transfer. Universities could be enlisted to provide financial and capacity building training to these communities. The idea that farming is a business that has to provide financial as well as ecological returns should be mainstreamed.[3167]

[3163] 337:5 p 7 in 132a_May_27_21_Forética_Eng

[3164] 8:7 p 6 in 169_Apr_6_21_Shea E

[3165] 8:31 p 11 in 169_Apr_6_21_Shea E

[3166] 27:50 p 6 in 044_Feb_18_21_Bharat K S

[3167] 27:53 p 10 in 044_Feb_18_21_Bharat K S

Reduce industrial costs by reducing taxes imposed on food factories and inviting them to exploit the largest available percentage of production capacity, adopting special prices for fuel (especially electricity) and supporting use of renewable energy equipment.[3168]

Development of traditional and innovative sources of finance, (such as, crowdfunding, diaspora investment, franchising, fintech, etc) and tailored risk-management products such as farmer-centric insurance products for each value chain.[3169]

Game-changing solutions require a combination of better financial tools and products meeting the needs of young food entrepreneurs, incentive mechanisms for FSPs and investors, and common metrics and standards to reduce transaction costs and improve transparency and competitiveness in the financial ecosystem.[3170]

A fifth and final proposal was to better track and coordinate development finance at the source given that it is difficult to track the large number of operators. In short, donors could publicly disclose the projects they fund and create a comprehensive database/visual geo-localization of all projects. They should also request new entities asking for their support to develop synergies with at least 2 ongoing initiatives form this map. Block chain could be used to trace the resources at the level of end-beneficiaries to foster synergies and avoid duplication.[3171]

Scoring models that can guide the development of financial models for agri-SMEs and technology solutions providers. c) A global competition allowing small entrepreneurs to access large pools of capital based on random selection, to be used for innovation piloting. d) Local investor networks pooling resources to tap and finance local tech innovations e) A global townhall initiative for agtech innovations to showcase innovations and share experiences/support each other. f) A global blended facility or country-level blended facilities pooling capital for start-up ag-tech entrepreneurs to pilot their innovations.[3172]

More flexible innovative financing systems with modified systems of risk management, coaching and technical support is needed 3. There is need to examine the processes/bureaucracy involved in climate smart financing and develop investment regimes more aligned to SDGs that do not simply copy and paste traditional risk models and regimes of the banking sector 4. There is need to position financing regimes to better align and accelerate action on global goals and to better account for the risk in not taking action on climate risk. [3173]

Crowd funding Innovative sustainable financing.[3174]

[3168] 36:40 p 9 in 096_Mar_29_21_ESCWA

[3169] 44:27 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[3170] 46:17 p 9 in 049_Feb_23_21_SAFIN_Multi

[3171] 46:26 p 11 in 049_Feb_23_21_SAFIN_Multi

[3172] 46:30 p 12 in 049_Feb_23_21_SAFIN_Multi

[3173] 50:3 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[3174] 52:22 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

Technology is key to overcoming informational challenges leveraging also financial innovations and improved warehouse receipt systems, improved regulations and standards also help overcome information gaps.[3175]

Encourage digital payment options such as mobile banking to reduce information asymmetry and link warehouse receipts to financial system to support farmers' access to credit.[3176]

Attract Small and medium enterprises through innovative financing to produce diverse nutritious foods.[3177]

Direct tools and finance instruments should include: • Digital innovation a.o. to reduce transaction costs, filter deals, and link them to finance • Bundling finance with inputs, knowledge, marketing partnerships • Risk management – how to change the equation • Micro-loans • Smallholder financing through coops • An "Uber" for farm implements and TA • Size and cost of the investment case • Small ticket financing – ready for SMEs.[3178]

Design blended structures with a deliberate agenda of data generation, financing innovation, learning, and informing policy, rather than just with an agenda of mobilizing capital on a time-bound basis.[3179]

A long-term goal is to dismantle current economic lock-ins for American agriculture practices. One method involves restructuring farm subsidy policies, specifically crop insurance, to be more environmentally friendly and could involve insurance that is not crop-specific but applies to all crops. Another policy approach involves reforming antitrust policies for the nation's largest industrial farms.[3180]

Economic incentives for ecosystem services, to promote nature-positive methods of farming that produce co-benefits of food production, soil regeneration, carbon storage, and biodiversity. Cost share programs for investments in new practices. Payment for ecosystem services through tax credits. Restructure crop insurance program practices. Competitive prices for farmers; make the profit from taking land out of production higher than what would have been produced with poor practices.[3181]

Involve the financial institutions to finance food system actors' dealings in the city. Also exploring innovative finance measures or ways of organisation such as Savings and Credit Co-operatives (SACCOs) to facilitate saving and access to loans especially for small scale farmers and informal actors across the food value chain).[3182]

[3175] 59:21 p 5 in 020_Jan_26_21_IFAN

[3176] 59:36 p 8 in 020_Jan_26_21_IFAN

[3177] 62:8 p 5 in 035_Feb_9_21_Hussein AO

[3178] 63:17 p 7 in 037_Feb_12_21_Food Systems for the Future_Multi

[3179] 63:30 p 8 in 037_Feb_12_21_Food Systems for the Future_Multi

[3180] 86:21 p 10 in 162_Apr_16_21_Fountain G

[3181] 86:25 p 10 in 162_Apr_16_21_Fountain G

[3182] 101:33 p 10 in 325_May_19_21_ICLEI Africa_Multi

World Bank and all other financial institutions should revoke the existing financial packages for construction of NPK fertiliser plants, and bring it to an immediate halt.[3183]

Advance innovation on institutional aspects for participatory planning of investments that can then be financed through blended solutions.[3184]

Financing innovation: Rebrand and repackage seaweed projects to better appeal to blue investors; protect the intellectual property of coastal communities; better understand market signs and production costs; and collaborate across stakeholders.[3185]

All felt that the creation of seaweed research and funding institutions could provide financial support to the industry, bring costs down, and make scaling-up production a more achievable goal. Some participants also noted that lack of utilization of all parts of the plant keeps costs high.[3186]

This would require innovation in access to finance and insurance for farmers with only small plots of land or those who do not own any land, as well as access to technology and investment in bringing the technology to farmers.[3187]

Explore innovative financing mechanisms like blended finance, and simultaneously build knowledge and capacity through technical assistance allowing research engagements and sectoral analysis.[3188]

It was noted that finance is needed at three key stages of the innovation process: 1. Incubation, 2. Start-up, 3. Acceleration.[3189]

Digital credit ratings and credit scoring tools for farmers.[3190]

Investments in value added and domestic food production. Strong value added and local and regional food systems are needed to increase consumer choice/availability of domestic food supplies and diversify market risk. Increased investment, innovation, and productivity can overcome existing barriers.[3191]

Banks and institutional investors looking to 'decarbonise' their lending, favouring only low emissions sectors.[3192]

Growing carbon trading and biodiversity credit markets.[3193]

[3183] 114:6 p 6 in 076_Mar_11_21_Tan R

[3184] 118:15 p 6 in 117_Apr_22_21_Dinesh D_Multi

[3185] 119:6 p 6 in 121_Apr_28_21_Doumeizel V

[3186] 119:39 p 11 in 121_Apr_28_21_Doumeizel V

[3187] 132:1 p 6 in 193_Apr_19_21_Ringler_Kassim

[3188] 141:38 p 14 in 229_May_18_21_NFP_Rabobank_Multi

[3189] 150:34 p 9 in 253_Apr_29_21_AFDB_Multi

[3190] 150:35 p 9 in 253_Apr_29_21_AFDB_Multi

[3191] 153:5 p 6 in 263_May_06_21_CCGA

[3192] 156:62 p 12 in 275_May_13_21_Dornom H

[3193] 156:63 p 12 in 275_May_13_21_Dornom H

Enabling financial grants to support farmer-led innovations through funds mobilized by the university research institutions.[3194]

There is need to look at innovative financial systems.[3195]

Adopting a type of circular economy and the example provided was the use of bio-waste turning it into fertilizer, etc. This is more sustainable in terms of being able to use resources that are already at hand.[3196]

The resource mobilization efforts could explore funding from technology tax, support from industry corporate social responsibility fund and support from philanthropic endowments.[3197]

Need for green entrepreneurship. Circular blue economy.[3198]

Establishment of agricultural innovation grants to support farmers and easy access to financial resources.[3199]

Innovative financing solutions are required for farmers and businesses to advance the sustainable agricultural commercialization.[3200]

There needs to be recognition of the innovation that has taken place so far within industry and consideration and support needs to be given to allow for continued innovation which will be impactful in mitigating GHG emissions even further.[3201]

Building on Credit systems prioritising economic status of smallholder farmers.[3202]

For small scale farmers, to develop a model to increase productivity and reduce costs.[3203]

Dr. Esben Larsen, fellow in Food, Forests, and Water Program, World Resources Institute (WRI) proposed; i) a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North, ii) guarantee the Global South real access to technology, and iii) increase opportunities for vocational training in agri-food production to equip workers to optimise the use of available technologies.[3204]

[3194] 157:75 p 11 in 278_May_18_21_Gregorio B

[3195] 158:36 p 9 in 279_May_18_21_Yoovatana M_Multi

[3196] 158:47 p 10 in 279_May_18_21_Yoovatana M_Multi

[3197] 159:28 p 7 in 287_May 20_21_Akinbamijo_Y

[3198] 172:12 p 6 in 330_May_19_21_RYFP_UNMGCY

[3199] 173:33 p 10 in 331_May_24_21_LNFU

[3200] 174:30 p 6 in 332_May_24_21_FAO_UNDP

[3201] 175:31 p 11 in 333_May_25_21_GMA_Multi

[3202] 183:23 p 8 in 341_May_28_21_Sewraj_KS

[3203] 196:33 p 7 in 354_June_07_21_NAMAC

[3204] 205:6 p 6 in 364_May_26_21_DPIHD

Establish startup/venture capital funds that will enable young graduates to adopt agriculture as a career for self-employment and to employ peers.[3205]

Currently poor farmers have limited access to formal finance which forces them to seek loans from informal money lenders at exorbitant interest rates, that end up trapping poor families in a vicious cycle of poverty and oppression. Under current lending terms provided by the informal money lenders, poor farmers end up losing all their resources and properties to pay back the loans. Action is needed to end such exploitation of poor farmers by informal financial agencies. Fish farmer associations should be empowered to create and run own credit operations for fisher communities. Addition efforts can be made where loans at low or concessional interest rates may be provided. This would require capacity building and start-up funds with close monitoring and regulation by relevant government agencies.[3206]

This included access to capital: for example, venture capital to expand farms, or government capital and investment to establish markets. It is noteworthy here to pause and briefly emphasize that this was, again, not merely a complaint about desiring more wealth. Farming is uniquely multi-generational in terms of both ownership and geographic location: as such, past inequities and injustices in a given location and upon a given farm are inextricably linked to modern-day outcomes as previously stated. Inequitable access to capital in the past has left many Black farmers behind in terms of their success, to the point where their capacity to farm has not kept pace with overall societal trends. For example, participants commented on the increasing price of land, and the increasing acreage necessary to sustain a family farm: given that these communities have been systemically disadvantaged, the pace of their own economic development has not kept up with the pace of inflation in terms of prices or competitiveness. This results in a food system which, over time, will systematically exclude Black farmers from starting, maintaining, and/or expanding their farms. In this vein, a concerted and substantial transfer of capital--for instance, (recommendation 1) establishing a separate fund for Black farmers, run by Black farmers--seems to be a key solution for redressing their exclusion from the food systems.[3207]

Black owned and operated related resource arm that provides loans, capital, etc., advocacy etc. that is a user-friendly gateway to correct previous mistreatment, access, etc.? Relatedly, participants discussed difficulties in accessing markets. Again, this had to do with both capital resources (for example, advanced transportation methods) and also systemic discrimination from markets. Some of these discriminatory practices are more subtle than others: for example, in the United States especially, the aesthetic demands of crops can favor larger-scale farmers who use industrial-scale methods to selectively breed marketable crops. This causes smaller family farms to be excluded from the market, and again can lead to destructive cycles of eroding the connection between food systems and

[3205] 206:12 p 7 in 365_May_27_21_Ekwamu A

[3206] 208:19 p 9 in 367_May_27_21_Kachulu_Thilsted

[3207] 213:4 p 7 in 373_June_02_21_Bread for the World_Multi

small- to mid-sized farmers. Start-up venture capital funds are needed to enable young graduates to adapt agriculture as their careers.[3208]

Entry points for investors from the need for blended financial models for local and regional supply chain development, to increased conversations across financial entities (e.g. private equity, family offices, philanthropy, banking) for them to work together to de-risk investments in the space.[3209]

Innovative financing instruments such as impact bonds and blended finance were viewed as potential tools for increasing investments from the private sector; it was also suggested that new investors should be cultivated from the younger generation.[3210]

Payment for environmental services could come from premium at commodity prices and/or carbon monetization.[3211]

Adopt pro-poor financial innovations for small producer in the aquatic sector.[3212]

More innovation needed for farming seaweed but also for processing and extraction of certain elements from seaweed.[3213]

ADB, EIB, and GCF have confirmed to work together to set up the INCFF to support green agri-business platform while the International Fund for Agricultural Development and FAO can potentially join this important endeavor later after further discussions. This dialogue brought together a number of development organizations and created an opportunity to kickstart an innovative financing platform to transform our food system for a green and resilient recovery, and future…[3214]

Establishing innovative and blended financing mechanisms and leveraging private sector funding to support high impact projects and making finance more accessible to farmers and other stakeholders.[3215]

To overcome the barriers such as the "business as usual approach", "policy inertia" and "resistance in government", decision makers need to better manage those challenging changes (which mainly are coming from the 'big food' industry) and trade-offs.[3216]

Innovative mechanisms of financing such as blended finance vehicles being implemented in Indonesia (Tropical Landscape Finance Facility) and in India (Sustainable India Finance Facility) provide inspiration for Sri Lanka to also explore such options in the country through collaborations between the different stakeholders. The Global Alliance for a Sustainable Planet (GASP) offered support to Sri Lanka and invited local stakeholders to

[3208] 213:7 p 7 in 373_June_02_21_Bread for the World_Multi

[3209] 249:37 p 14 in 485_June_22_21_Levesque_SD

[3210] 254:26 p 10 in 490_June_22_21_Yasmi Y

[3211] 261:24 p 6 in 497_June_24_21_Fontes_Multi

[3212] 263:38 p 8 in 499_June_25_21_GANSF

[3213] 264:58 p 11 in 500_June_26_21_Edible Issues

[3214] 266:22 p 6 in 502_June_28_21_Zhang_Basher

[3215] 271:28 p 8 in 507_June_30_21_AKADEMYA2_FANPRAN

[3216] 280:29 p 8 in 516_July-01_21_Anastasiou K

collaborate with them. SLBA SBI has been also exploring such blended finance facility in Sri Lanka for some time.[3217]

The need for Sri Lanka to mobilize different funding avenues including blended finance, impact bonds, etc, were discussed. The need to access Green Climate Fund and other vertical funds through collaborative engagements with Government, banking sector and other actors coming together was reiterated.[3218]

Consensus was reached around the need for increased local and international investments in locally relevant, adaptive national level agricultural research and development, including the investments in improved institutional and absorptive capacity and ownership at National Agricultural Research Systems (NARS), improved education for innovation actors, including on-farm actors, and incorporating indigenous knowledge and technologies.[3219]

Financial resource mobilization, including disbursements to communities to support needs, guarantees provided for financial flows, and increased engagement of financial actors. Design public and private finance so it can be contextualized at a local level to support farmer and community transition to agroecology, processing and infrastructure with a wide variety of instruments and mechanisms: nature-positive subsidies, carbon credits/payments for ecosystem services, agricultural/forestry insurance products, grants for development processes, technical assistance, longer-term tenure loans, etc.[3220]

Mobilizing funding for landscape organization and investment: Funds for informal platforms or loose multi-stakeholder planning can be linked to more formal planning/decision-making structures. Landscapes and long-term resilience need links between local private sector and local SMEs that work beyond industrialized food system. Outside funding (e.g., GEF) can be useful but building bridges with other resources should be a priority.[3221]

Territorial alliances to advocate action for structural challenges: Structural issues around effective landscape/ecosystem action including poverty and food insecurity are significant challenges for cities/regional governments and impose pressing demands on budgets. Recovery packages could strengthen local food provision and build from innovative modalities (e.g., participatory budgeting). Structural issues need long term solutions, including shifting the narrative around food systems so needs are at the center. Subsidies can also be shifted. OECD agricultural subsidies totaled US$720 billion/year from 2018-20, yet only one in six dollars promoted sustainable productivity growth and agricultural resilience. Shifting more money to agroecology would be game changing.[3222]

[3217] 281:3 p 6 in 517_July_03_21_Perera A

[3218] 281:8 p 7 in 517_July_03_21_Perera A

[3219] 298:17 p 8 in 534_July_07_21_WBADB_ADI_Multi

[3220] 299:23 p 6 in 535_July_08_UNESCO Chair on Food

[3221] 299:51 p 10 in 535_July_08_UNESCO Chair on Food

[3222] 299:53 p 10 in 535_July_08_UNESCO Chair on Food

Reduce barriers for small farmers and other particular groups in agriculture through the provision of microcredit and more accessible and affordable financing mechanisms.[3223]

Building resilience to these hazards also entailed interventions such as changing cropping systems, adopting productivity-enhancing technologies and infrastructure—which require financial investments that vulnerable smallholder farmers were unable to afford. Access to financial mechanisms and other necessary resources was particularly limited for women and youth, as well as those living in remote, less developed communities.[3224]

Financial innovation and incentive mechanisms is one of the key actions in the food system to reduce food loss and facilitate the transformation of food system. With a loan system designed by policy banks to cover all segments of the food supply chain, a series of credit products could be harnessed to benefit small farmers and serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc.[3225]

For many farmers, particularly smallholders, lacking financial means to implement food loss-reducing investments such as better storage solutions is a major impediment. One of the key actions needed in the food system to reduce food loss is therefore to financial innovation and incentive mechanisms. Since 1994, the Agriculture Development Bank of China (ADBC) was set up as one of China's Policy Banks with a set mandate to contribute to agricultural development and poverty alleviation. ADBC has introduced a loan system that covers every segment of the food supply chain, which includes a series of credit products to serve the whole industry of grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc. All these advancements have the potential to reduce food waste through making processes more efficient and streamlined. Furthermore, ADBC implement preferential credit policies to support and further incentivize reduction of grain waste and losses.[3226]

Participants agreed that policy needs to catch up to forward-thinking companies' ambitions and the scientific consensus as to the impact of the current global food system on planetary and human health. The government has a big role to play in making necessary changes. Because policies support industrialized agriculture, affordability remains a main concern in scaling sustainable production practices, as well. Participants spoke about how better policies can support sustainable and regenerative systems by incentivizing farmers to experiment with different ways of farming. By supporting and scaling regenerative supply chains, farmers can make a living wage while companies gain better access to healthy ingredients and these products are accessible to all consumers. Policy may also reimagine how consumers interact with food labels and expand what those labels look like to include factors like carbon footprint and animal welfare.[3227]

[3223] 310:18 p 7 in 546_July_13_21_INDEP

[3224] 313:16 p 7 in 549_July_14_21_Meah N

[3225] 315:13 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[3226] 315:27 p 10 in 551_July_15_21_FAO_ESCAP_Multi

[3227] 316:10 p 6 in 553_July_15_21_Food Tank_Oatly

Local financial opportunities for indigenous women represented by Earth Empower. Development of locally food-based businesses owned by indigenous women to reduce migration. The innovation is social and consists in development projects, researchers, private sector and others working together with indigenous women to create financially viable local businesses that at the same time value and recognize the women's knowledge and expertise of particular herbs and other food. This is possible thanks to: • Development of partnerships with local and international actors.• Capacity building of the women that are part of Earth Empower, including in relation to business, marketing, product design and use of computers to contribute to their economic and social empowerment.• Not dependent on external funding or donations but rather financially self-sustainable via selling of tea products, consultancies and capacity development.• Pandemic regarded as an opportunity to democratize further the organization and to the development of small home factories. Some larger cities delivered DRY PARCELS (without green and fresh produce), and there was also the MEAL CARD solution, worth between R$55 and R$103 so that families could purchase food themselves; this latter model was suspended due to an initiative by the Public Prosecutor.[3228]

Implement systems that make it possible to take advantage of food in an adequate state of preservation and with an expiration date that operators decide not to offer to consumers (for commercial reasons), through donations from private agents (wholesalers and/or retailers and/or industrialists) before they must be thrown away (not placed on the market), and count them as part of the payment of taxes at a lower value than the replacement value of the merchandise in order to promote it. The purpose of this measure is to direct these donations in favor of vulnerable populations with difficulties in accessing to food.[3229]

Loans and financing for investment and working capital, with grants for the transition from conventional production systems to agroecological systems. Provide special financing for the transition phases and what this implies given that these are periods in which maximum productivity is not reached while these changes are being implemented. There are precedents, for example, that have been developed by the ADR of the Intendencia de Canelones in the Laguna del Cisne basin for financing associated with the transition. (Agreement with RAU) Create taxes for non-natural, processed foods and beverages that do not contribute to health, which are used for the development of adequate and nutritious agricultural products.[3230]

Innovation

Displaced people during Covid started food gardens successfully.[3231]

[3228] 339:12 p 7 in 393a_June_01_21_Food of Tomorrow_Eng

[3229] 340:21 p 10 in 406a_June_10_21_COPROFAM_CLOC_Eng

[3230] 349:7 p 7 in 423a_June_28_21_PROLIDER_Eng

[3231] 1:44 p 8 in 072_Mar_09_21_Sibanda L

Bridging the gaps between supply and demand through aggregation systems. A good example is the aggregator model developed by Africa Harvest and deployed along the Sorghum value chain in Kenya, and parts of Tanzania, which has fast tracked the commercialization of Sorghum production among smallholder producers in arid and semi-arid areas of the country, working with a large off taker in the malting industry. The role of private sector players, especially that of end-users/processors is pivotal in this drive through Africa's rapid urbanisation will also be converted to an innovative advantage given that the urban population already consumes more than 50% of the food although they are less than 50% of the population. This will be achieved through aggregation and agro-logistical innovations that will see SSFs and SMEs achieve economies of scale and dominate both rural and urban the food systems' value chains, especially in industrial processes.provision of sustainable local off-take SMES & other markets.[3232]

Civil society and the municipal government should design and disseminate actions for the conservation of water, and the agricultural sector should be supported with innovation and technology to make better use of water.[3233]

We have to continue Innovating to reduce Food Loss in the fields, manufacturing processes and reduce Food Waste in the marketing chains…[3234]

The financing of innovation is a topic of renewed importance to increase efficiency, competitiveness, and resilience in agriculture. It is also important to solve several problems, especially in the current context of the digital revolution, climate change, food security problems, water scarcity and shortage, soil salinization, and the Covid-19 crisis. The creator of innovation in the agricultural field may be ignorant of the issue of financing, so it seems necessary to instruct them on the stakes and the constraints of each form of financing. This group considered the multiplicity of funding sources: special funds for subsidizing innovation, government funds, cooperation programs, development banks, and associations.[3235]

Group 3: Important aspects that consider the ease of use of the technology; making sure the software is intuitive and can be used with minimal training. Furthermore, make clear the use and significance of the various tools. Ensure the tools can be adapted to the farmer, and not the other way around. They must be adapted with consideration to the target audience (youth, women. etc.).[3236]

Foster innovative approaches to stimulate the acceptability and accessibility of traditional vegetables as part of a healthy diet.[3237]

[3232] 505:2 p 6 in 062_Feb_16_21_FARA-CAADP

[3233] 506:10 p 3 in 065a_Mar_31_21_Hidalgo Multi_Eng

[3234] 511:3 ¶ 217 in 083a_May_27_21_Leiva M_Eng

[3235] 520:28 p 10 in 107a_June_22_21_Trimarchi A_Eng

[3236] 509:4 p 4 in 073a_May_18_21_IICA_Eng

[3237] 16:28 p 8 in 251_Jan_25_21_World Vegetable Center

Strengthen skills and training across different actors of the value chain, creating communities of green entrepreneurs, foster innovative solutions in the agri-food sector; especially for women and youth.[3238]

Innovation and communication systems easily involve youth.[3239]

Policy that incentivized funding for non-conventional agriculture was also crucial.[3240]

We must use innovative policies tools to give nature a voice in decision making about how we treat the land.[3241]

…here is a need to address the innovation gap and more investments into innovation.[3242]

Institutions – invest in the institutions that we have set up for innovation, even national institutions or international institutions, or set up to facilitate those innovation processes.[3243]

Scaling up innovation - when we talk about innovation, is it something new and useful? It can be a new idea, or it can be a new way of doing things. There are lots of excellent ideas out there, but why are they not being scaled? And this could be because there is no conducive policy environment and sufficient investment.[3244]

Develop local plant varieties and animal breeds to increase production and productivity.[3245]

To accelerate sustainable innovation, investments are key to provide farmers access to new technologies and assistances, for which funding pathways should be established[3246].

Innovative solutions and technical assistance should be able to reach farmers and be delivered in partnership with the private sector.[3247]

Tradition is a dynamic and complex concept due to its constructed nature. For this reason, it cannot be said that tradition and innovation are opposed, because the latter needs the former and innovation has always been part of development.[3248]

Moreover, innovation is necessary when the current situation does not produce sustainable results. In order to link tradition and innovation to create a better future in terms of food

[3238] 23:11 p 9 in 205_Apr_27_21_CIHEAM_Multi

[3239] 23:17 p 14 in 205_Apr_27_21_CIHEAM_Multi\

[3240] 27:11 p 8 in 044_Feb_18_21_Bharat K S

[3241] 29:6 p 7 in 066_Mar_5_21_Nkenglefac T

[3242] 32:10 p 7 in 082_Mar_15_21_Yoovatana M

[3243] 32:11 p 8 in 082_Mar_15_21_Yoovatana M

[3244] 32:12 p 9 in 082_Mar_15_21_Yoovatana M

[3245] 36:3 p 9 in 096_Mar_29_21_ESCWA

[3246] 53:2 p 4 in 001_Nov_5_20_CGIAR

[3247] 53:35 p 5 in 001_Nov_5_20_CGIAR

[3248] 60:3 p 8 in 021_Jan_27_21_Donati L

production and consumption, cooperation between the different generations is necessary as much as the reform of the education system.[3249]

Innovation at serving lower-income consumers – rather than just medium and higher-income consumers…[3250]

…lack of innovation adapted to the specific local needs of the towns and regions of Mexico…[3251]

Promote innovation projects for all stages of the agri-food chain. Connect young people, universities, and research centers with all Mérida food system shareholders in developing innovations.[3252]

During the first part of the discussion, participants talked about how young people can contribute to a sustainable food system in innovative ways and what Food Banks can do to involve and communicate with young people[3253].

Innovative solutions, such as knowledge tools and mobile applications that are efficient, cost-effective and accessible, are critical to bridge technical gaps and develop consumer knowledge and understanding of diverse aquatic foods and their benefits.[3254]

Societies will be more open to innovation with practices and ingredients that people already familiar with.[3255]

E-vouchers whereby financiers can support farmers: electronic provision of loans - introduced also in emergency situations. Also leads to more generation of information such as gendered allocations of the e-vouchers.[3256]

Set up participatory research and innovation mechanisms, as well as multi-stakeholder incentive-based mechanisms. Support the alignment of mountain food systems with national policies, and the alignment of national policies with local potential and farmers' priorities, addressing land rights and tenure issues…[3257]

Innovation comes faster than regulation, and the next-generation has the tools and skillset to enable this shift towards more sustainable food systems for all. As digital natives, the next-generation inherently understands the importance of digitalization and data-driven decision-making.[3258]

[3249] 60:38 p 8 in 021_Jan_27_21_Donati L

[3250] 63:2 p 7 in 037_Feb_12_21_Food Systems for the Future_Multi

[3251] 67:13 p 10 in 054_Feb_25_21_Guzman HS

[3252] 75:51 ¶ 66 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[3253] 81:21 p 10 in 145_May_6_21_Vandenschrik J_Multi

[3254] 82:30 p 6 in 150_Apr_30_21_GANSFOIWFSN

[3255] 88:23 p 6 in 174_Mar_20_21_Niode K

[3256] 96:16 p 7 in 255_Apr_27_21_ICLEI Africa_Multi

[3257] 98:55 p 8 in 282_May_18_21_Romeo R

[3258] 99:62 p 6 in 285_May_20_21_TFFF_Multi

...here is a challenge to take an innovation from niche to mass market – for that, regulatory support is needed.[3259]

Making it pay: It costs a lot to bring innovation to market – innovators need regulatory certainty to give them confidence to invest. If farmers are to try new methods or diversify their crops, they need certainty that they will make a profit. Intellectual property rights: Start-ups need access to IP, and large MNCs should not guard IP when they are slowing down new innovation.[3260]

Enablers to innovation: Who: Entrepreneurs and innovators; farmers; agile players; consumers; private companies; regulators/policymakers; scientists/academics; NGOs; young people; retailers. What: Technologies; transparent frameworks; multi-stakeholder approaches; co-creation; an open-mind; funding (public and private); decentralized autonomous organisations; open-source solutions; public procurement processes; multinational agreements impact framed, education; openness to change.[3261]

Explicitly include aquaculture and water-based food production.[3262]

Participants recommended that in order to build capacities appropriate for AR4D, there is the need to strengthen the capacities of farmers and SMEs to profitably adopt technologies, strengthen the capacities of African institutions to generate new knowledge and technologies and adapt those generated from elsewhere, and the strengthen the institutional and physical infrastructure for scaling up innovations in the food system.[3263]

It was agreed that smart technologies have a major role to play across the full supply chain, from soil to food, and that blockchain will be an important tool for enhancing transparency in the system. Critical actions to be undertaken include identifying the gaps in knowledge, data and technology, increasing engagement and supporting education in the area. Incentives will also be required to scale-up promising approaches and tools. Divergences of opinion emerged as to the use of genetics as a tool and culling among herds to improve efficiencies.[3264]

Collaboration: Innovators must work with the players on the ground who would use the technology, such as farmers or consumers, during the innovation process. This will help innovations meet real needs as well as guide innovators on how to make it user-friendly.[3265]

Youth are central to innovation and more programs are needs for students and to inspire youth globally to work in food systems.[3266]

[3259] 99:64 p 9 in 285_May_20_21_TFFF_Multi

[3260] 99:65 p 9 in 285_May_20_21_TFFF_Multi

[3261] 99:66 p 11 in 285_May_20_21_TFFF_Multi

[3262] 110:14 p 7 in 067_Mar_05_21_O'Doherty M

[3263] 111:54 p 7 in 070_Mar_09_21_Akinbamijo,O

[3264] 112:121 p 13 in 074_May_18_21_O'Mara_Teagasc

[3265] 113:50 p 5 in 075_Mar_10_21_IFAN

[3266] 113:51 p 6 in 075_Mar_10_21_IFAN

The formation of national and regional innovation hubs will also promote cross-pollination of ideas and technology. These hubs enable active knowledge transfer between researchers, business, government and farmers…[3267]

Societal and Institutional Innovations to build leadership and improve scale. Multistakeholder partnerships are key.[3268]

While innovations are often triggered by societal stimulations, governments have a role to play in providing the guarantees and financial safety nets that investors require. Each innovation requires a support structure.[3269]

Policies can sometimes be the obstacle, not the pace of innovation or willingness of companies to change.[3270]

Digitally-enabled innovations for increased PDB sustainability and outreach - PDBs have specific role and advantage in incentivizing and rolling out digital innovations.[3271]

Create Indigenous innovation tracks in higher education institutes: University of Hawai'i - West Oahu has an Indigenous Studies track that includes Sustainable Communities Food Systems course - where students, many who are Native Hawaiian students, are learning foundational practices and values, working with Indigenous Science and transforming their educational experience; there is an entire degree focused on Indigenous led restoration work. These tracks of study are opening up opportunities for Indigenous and non-indigenous students alike to build capacity, be supported in their advancement and give rightful validation to their knowledge base and innovations.[3272]

Using low-cost technologies in climate smart irrigation and on-farm water management practices.[3273]

Use of climate smart crops (heat, water and salinity tolerant crop varieties) and scaling up using an efficient seed system.[3274]

A platform for joint learning, such as on new challenges and emerging crises (e.g. COVID-19).[3275]

Funding of trans-regional and transdisciplinary research.[3276]

[3267] 113:56 p 10 in 075_Mar_10_21_IFAN

[3268] 113:57 p 11 in 075_Mar_10_21_IFAN

[3269] 113:59 p 11 in 075_Mar_10_21_IFAN

[3270] 113:61 p 13 in 075_Mar_10_21_IFAN

[3271] 115:29 p 9 in 085_Mar_17_21_IFAD_FSFS

[3272] 130:18 p 9 in 187_Apr_15_21_Livingston_Way

[3273] 132:85 p 12 in 193_Apr_19_21_Ringler_Kassim

[3274] 132:86 p 12 in 193_Apr_19_21_Ringler_Kassim

[3275] 133:28 p 6 in 196_Apr_20_21_Attah-Krah K

[3276] 133:29 p 6 in 196_Apr_20_21_Attah-Krah K

Intensification: What kind of technology (GAP) do we need to intensify to take care of the increasing population?[3277]

The speaker from GOAL Global based in Niger showed innovative methods to addressing malnutrition through mass awareness by using digital technologies to spread information. Reaching communities that were further away from the sample site.[3278]

AWARD has therefore developed a model that tracks what empowerment looks like, and some of the elements measured are power from within, power to do, power over resources – the power to be able to attract funding, for example into their research institutions, power to collaborate – that's power with, and most importantly, the power to empower others. The dialogue therefore embodied an open collaboration in building science skills, synergy, expanding networks, growing institutional capacity, advancing women leadership in Agricultural research, advancing policy for inclusive agricultural research and collaborative training.[3279]

Innovation i. Facilitation and the application of science, technology and innovation in African agriculture while tightening the loop between technology generation, adoption, refinement, use of technologies and its commercialization. ii. Deploy innovative solutions to addressing critical issues on issues on climate change, cultural, political and economic environment, and agricultural systems in particular iii. Develop technologies with the users, the people who will use them because it ensures that they are going to address the needs and priorities of the users.[3280]

Investing in testing and pilot projects with farmers and producers, especially in areas with limited resources, to get early feedback to include into the process is crucial.[3281]

Rethinking / restructuring the system of local market supply in providing nutritious foods to markets in big cities. This often contributes to lack of nutritious food in local rural markets.[3282]

The practice of "mercy release" by Buddhists has a more obvious faith based background, and the key audience may be limited to faith groups and individuals. When communicating with the public, it is easy to form a stereotype of "veganism in connection to faith". Faith based communities are vegetarians. It is possible, however, to achieve more cooperative and innovative ideas in terms of advocacy.[3283]

Humanity can lead to innovation, and has done so with controversy: animal protein accelerates climate change, then meat created in a lab. Agriculture totally modified genetically, now wheat more resistant to plagues and climate shocks, higher nutritional

[3277] 133:32 p 7 in 196_Apr_20_21_Attah-Krah K

[3278] 136:18 p 9 in 211_Apr_30_21_Chisholm N_Multi

[3279] 137:42 p 5 in 212_May_04_21_Akinbamijo Y

[3280] 137:50 p 8 in 212_May_04_21_Akinbamijo Y

[3281] 138:38 p 8 in 214_May _05_21_50by40

[3282] 143:57 p 8 in 231_May_19_21_MCD

[3283] 145:13 p 8 in 233_May_22_21_CVS_Multi

content. Vertical agriculture and underwater, recycling 90% of water. Robotization, automation, biofortified confused with GMF.[3284]

The best way chefs can contribute is by using their platforms as trendsetters to advocate for good food and clean eating, to educate the people and most importantly to promote buying local and seasonal products. By doing this they can help us achieve the SDG's goals. Education starts from home but is up to us to continue the work and really emphasise that small changes can have a big impact. The change can be as small as reimagining vegetables not as a side dish but as the star of the main meal, and highlighting lesser-known crops; or be as big as pushing plant-based meals front and centre on restaurant menus. Advocating for good food and clean eating should be our priority for the next 3 years.[3285]

There is need for new digital technologies that collect and organize information on farm conditions and options to improve productivity, address climate variability and address potential environmental impacts.[3286]

There are already be a number of technologies and approaches that we could taking off the shelf - agroecology for example. Such technologies to address interrelated climate and water management risks such as irrigation are perhaps not ground breaking, but will be essential.[3287]

Innovations are not necessarily something totally new. Innovation is equally about how local, old and new knowledge and technologies can be applied in new contexts or scaled-up. With this basis understanding there are a wide range of innovations ready for scale. Achieving scale may be about aligning interests - takes us back to partnership and respect.[3288]

Initiatives to stimulate creativity and innovation. Exhibitions and awards ceremony for the best companies with an example on organic packaging.[3289]

Food systems are not a zero sum game: Innovation can create win-win opportunities for people and planet. There is an urgent need for more innovation to help future food systems meet the ever more complex set of expectations that society places on them – from food security and nutrition to livelihoods, ecosystem services and climate mitigation.[3290]

Innovation can take many forms – from researching new technologies, to scaling up of existing approaches and applying new ways of working, partnerships and practices. Facilitating a better connection between farmers and consumers is essential in order to better understand innovative approaches in the food system.[3291]

[3284] 146:53 p 16 in 235_May_25_21_Gonzalez B_Multi

[3285] 147:28 p 7 in 239_May_27_21_Allen K

[3286] 158:3 p 6 in 279_May_18_21_Yoovatana M_Multi

[3287] 158:4 p 6 in 279_May_18_21_Yoovatana M_Multi

[3288] 158:5 p 6 in 279_May_18_21_Yoovatana M_Multi

[3289] 164:5 p 8 in 304_June_02_21_FAO_Multi

[3290] 169:2 p 6 in 327_May_18_21_CropLife

[3291] 169:3 p 6 in 327_May_18_21_CropLife

Innovation needs to reach the whole agri-food chain. The gap between innovation and regulation needs to be bridged.[3292]

Innovation should also focus on ways of collaborating more effectively and widely.[3293]

Proper legislation and regulation are important to create an enabling environment for innovation. "If that's right, the investment will follow.[3294]

Farmers need to be supported as business people and their work treated as such. Uptake of innovation cannot happen if farmers cannot make a profit from doing so.[3295]

Artificial intelligence is guiding new systems for farming, observing many factors simultaneously like climate controls, water etc. all remotely.[3296]

Innovation needs to be focused around farmers' needs. "There is still a huge gap between the lab and the land."[3297]

Innovations must also reflect both the socioeconomic and agroecological contexts of the food system to which they are being applied. "As a farmer, what I need is a motorcycle but you give me an airplane."[3298]

Innovations should resonate right along the Food Innovation System chain. Currently there are innovation 'silos', with little communication to others in the chain. Fairness is important. Innovations should yield benefits for farmers, processors and consumers.[3299]

There is a difference between established and 'first time' innovators – by supporting first time innovators, they will get a taste for innovation and do more of it. Mentoring is important – e.g. Innovation agents etc. But, some innovators may fear loss of Intellectual property. Potential Impact- Innovation will convert ideas into products and jobs. Push/pull innovation – from both farmers and consumers – can generate social licence to continue with innovation. Greater focus within the food system and prioritisation of areas of expertise – where will we be in the future? What are the new areas we will win in?[3300]

Visionary statement Farmers envision 60% of women and youth participating in beekeeping as this industry does not require weighty manpower, women and youth would do well.[3301]

Meat and Livestock Australia analysis shows that the sheep meat industry in Australia is nearly carbon neutral. The point was made that we need to be climate neutral rather than

[3292] 169:4 p 7 in 327_May_18_21_CropLife

[3293] 169:5 p 8 in 327_May_18_21_CropLife

[3294] 169:6 p 8 in 327_May_18_21_CropLife

[3295] 169:7 p 10 in 327_May_18_21_CropLife

[3296] 169:9 p 11 in 327_May_18_21_CropLife

[3297] 169:10 p 12 in 327_May_18_21_CropLife

[3298] 169:11 p 13 in 327_May_18_21_CropLife

[3299] 170:3 p 14 in 328_May_19_21_Lalor_Teagasc

[3300] 170:6 p 14 in 328_May_19_21_Lalor_Teagasc

[3301] 173:11 p 14 in 331_May_24_21_LNFU

carbon neutral. Carbon is only one element of the climate challenge, and thus focusing on carbon alone is not likely to enable climate targets to be met. There needs to be recognition of the innovation that has taken place so far within industry and consideration and support needs to be given to allow for continued innovation which will be impactful in mitigating GHG emissions even further.[3302]

CONSUMER INFORMATION A general consensus was reported on the importance of increasing awareness and information among consumers, who are too often victims of both political and commercial biases. The focus of the discussion, therefore, was on the proper use and structure of labels. Labels cannot be the solution. They often report information in a partial or extremely superficial way, failing to reflect the complexity of certain realities such as the issue of sustainability. A feasible solution would be to develop technologies that support both producers and consumers, such as QR codes.[3303]

Provide new farming techniques such as vertical farming.[3304]

There are two key drivers of technological innovations, the recent advances in earth observation systems and the increased use of mobile phones –90% of the precision decision making data comes from these two technologies.[3305]

…adopting a culture that values nutritious food, accountability for people who are complicit in action, asking how we can remove colonial practices from the workplace, what traditional foods can we provide that honours the people we are serving?[3306]

When employed in the right way, innovation and finance can be essential tools for developing models of economically-viable food production, capable of recognizing farmers' rights, strengthening supply chains and ensuring the integrity of ecosystems for future generations.[3307]

The future transformation of food systems in Africa requires innovative research, education, and training approaches that are rooted in local contexts.[3308]

Farmers' innovation (researching climate-resilient crops, upscaling a successful model on new crop variety, etc.).[3309]

Engagement of youth and technological innovations is crucial in revitalizing ethnic cuisines: It is vital to involve the youth through programmes such as fellowships to promote local cuisines, and ensure conservation of traditional knowledge and agrobiodiversity.[3310]

[3302] 175:4 p 11 in 333_May_25_21_GMA_Multi

[3303] 178:1 p 7 in 336_May_26_21_CI_WFO

[3304] 183:10 p 10 in 341_May_28_21_Sewraj_KS

[3305] 188:2 p 7 in 346_May_31_21_CANEUS_Multi

[3306] 204:22 p 10 in 363_May_26_21_Mehta_Bautista

[3307] 205:24 p 5 in 364_May_26_21_DPIHD

[3308] 206:21 p 5 in 365_May_27_21_Ekwamu A

[3309] 209:19 p 6 in 368_May_31_21_Lao Farmer

[3310] 219:27 p 7 in 380_June_08_21_Shakya_Chettri

While technological innovations are in theory already available for farmers to grow food more efficiently, in reality farmers often can't access these innovations as they do not have the financial means to implement them.[3311]

Participants acknowledged that innovations for more sustainable production are in theory already available to farmers. However, the small and medium scale farmers who took part in the dialogue said that farmers are often unwilling or financially unable to take up these innovations, it seems important to create incentives for farmers to actually adopt these technologies.[3312]

Game-changing Innovation ideas include 1. Investing in labour and time saving technologies, methods and techniques to make the profession of Organic farming more attractive to a wider number of people. Without mimicking conventional practices that are not regenerative, farmers switching to Organic need to know they can do so as a commercially viable alternative. Much of the innovation depends on sharing of current knowledge and technologies, which need to be collected, curated and in some cases scientifically tested. 2. As mentioned above under Culture and Tradition, this group also proposed exploring innovation into indigenous and traditional knowledge and practices. The Pacific Oceania community does not let go of their roots and highly values indigenous and traditional socio-ecologic farming and cropping systems. The region is more than ready to be proactive and pioneering on all levels. Based on their unique island and community structures, a multi-level approach with system transformation are likely to be successful in the Pacific.[3313]

With climate change, the water needs of plants and/or crops may increase and investments in infrastructure, technologies and agricultural innovations may be needed to cope with periods of drought, floods, severe pest attacks and to compensate for shortages.[3314]

Give priority to innovation, research and development; ICTs, technology, irrigation, among others, increase efficiency and biotechnology.[3315]

...regarding safe and nutritious food for all, in which we will develop material to look for innovative solutions to accelerate the reduction of hunger, make nutritious foods more available and accessible, and make food systems more secure.[3316]

The fisheries and aquaculture industries are underpinned by a significant degree of mistrust between policymakers and producers - a culmination of decades of disconnected decision making that neglected to award many producers direct input or voice at the decision making table. Because of this, policy for positive innovation has often misaligned with industry needs and legislation (or lack thereof) has caused bottlenecks to innovative

[3311] 224:28 p 6 in 385_June_09_21_Lazzaris S

[3312] 224:31 p 7 in 385_June_09_21_Lazzaris S

[3313] 226:15 p 10 in 387_June_09_21_Mone S

[3314] 229:20 p 6 in 226a_May_17_21_Oteyami O_English

[3315] 232:3 p 3 in 270a_May_11_21_MinAgri_English

[3316] 235:21 p 6 in 276a_May_13_21_CCIE_English

progress. Greater linkages and dialogue between these two sectors is needed - communicators and interdisciplinary actors will be integral to bridging this gap.[3317]

Current feed options are incredibly cheap and are outcompeting innovation. There is a need for legislation to enable the creation of markets for competition between innovators, instead of between innovators and current 'conventional' feed providers.[3318]

Prioritise feed innovations: Alternative feeds and tighter regulation on sourcing of current feed options could offer significant reductions for the industry's footprint…[3319]

Create a market for innovation with legislation. Legislation that enforces industry adoption of sustainable alternatives could create a market for innovators to compete against each other rather than against more financially attractive, often cheaper and less sustainable options. [3320]

Develop innovations that add value to producers: Adoption and implementation of sustainability oriented innovation could be improved by placing greater emphasis on producing solutions that add value to producers, not only environment or animal welfare.[3321]

Two types of innovation were discussed as important for driving the agricultural transition - Incremental innovation that works alongside existing practices; and transformational innovation that brings new technologies to innovate new ways of doing agriculture. These are both felt to be key for an inclusive approach that allows all stakeholders to participate and be part of innovation. Innovation should not work in a way that leaves behind certain stakeholders. Major specific innovations that were highlighted was animal feed innovation to drive decarbonisation.[3322]

Barriers to innovation uptake were identified at the individual level: resistance to change or lack of acceptance among end-users, as well as insufficient financial capability—and at the institutional level, or the lack of an enabling environment or policy support for nutrition-related innovations. While poor knowledge, understanding or skills were identified as underlying factors, a lack of understanding on the part of program implementers about the social, cultural, behavioural factors of end-users was also acknowledged and the need for more participatory dialogue mechanisms was presented as a possible solution. Lack of evidence was also presented as a barrier: for as long as innovation has demonstrable benefits for its intended end-users, uptake will not be an issue.[3323]

[3317] 240:42 p 6 in 319_June_30_21_Fredriksson O

[3318] 240:43 p 6 in 319_June_30_21_Fredriksson O

[3319] 240:44 p 8 in 319_June_30_21_Fredriksson O

[3320] 240:45 p 8 in 319_June_30_21_Fredriksson O

[3321] 240:46 p 9 in 319_June_30_21_Fredriksson O

[3322] 245:31 p 8 in 481_June_23_21_Global Counsel

[3323] 254:32 p 8 in 490_June_22_21_Yasmi Y

Finally, it was concluded that there is need to support innovation and research addressing gender and business success.[3324]

Rather than trying to make women fit into current systems or practices, new systems that are women friendly need to be devised to include alternative collateral systems, gender responsive procurement to ensure women can engage in value chains.[3325]

Six key solution areas for plant-based innovation to contribute to a just transition to healthy, sustainable diets in the US/Europe - innovations that: a. enable us to mainstream the use of a greater diversity of healthy, sustainable, plant-based foods and ingredients as well as preparation methods and processes b. embed, democratise and improve how much we value skills, knowledge and awareness about healthy, sustainable plant-based foods c. improve the short AND longer-term affordability of healthy and sustainable plant-based foods d. bring people at all income levels closer to healthy and sustainable plant-based foods and without stigma e. increase the diversity of people, in the broadest sense, in the plant-based movement f. generate business models that create and distribute value more evenly.[3326]

Enablers for more transformative kinds of innovation: a. Breaking out of our "innovation bubbles" to develop better ideas more in line with what the world needs b. Rethinking partnerships to build in more ambition and make the best use of respective capabilities c. "Matchmaking" to drive impact, including innovating where it's needed the most and supporting those who already offer a solution d. More collective voice and coordination across existing smaller-scale innovators e. Combining the best of the past (e.g. recipes) and the present (e.g. science) to go faster f. Supporting some innovations as bridges to a better place if not our ultimate, ideal solution g. Advocating for policies, subsidies, regulation etc that recognise the connections between health, nutrition, food and the environment.[3327]

1. Innovations that enable us to mainstream the use of a greater diversity of healthy, sustainable, plant-based foods and ingredients as well as preparation methods and processes (e.g. fermentation) - providing the right enabling conditions and incentives on farms, in homes, on menus and on store shelves. (...) 2. Innovations that embed, democratise and improve how much we value skills, knowledge and awareness about healthy, sustainable plant-based foods - from home cooks to school curriculums, mainstream professional training and qualifications (...) 3. Innovations that improve the short AND longer-term affordability of healthy and sustainable plant-based foods (...) 4. Innovations that bring people at all income levels closer to healthy and sustainable plant-based foods and without stigma, whether it's growing, cooking or eating; and whether it's about physical proximity/access or improved general visibility and transparency of the foods (...) 5. Innovations that increase the diversity of people, in the broadest sense, in the plant-based movement: products, meals, brands etc. that appeal to a broader range of people and communities 6. Business models that create and distribute value more evenly.

[3324] 255:14 p 6 in 491_June_23_21_Dido_Otieno

[3325] 255:15 p 7 in 491_June_23_21_Dido_Otieno

[3326] 259:24 p 6 in 495_June_23_21_Forum for the Future

[3327] 259:26 p 6 in 495_June_23_21_Forum for the Future

Plant-based innovation alone can only achieve so much, however well-designed and well-intentioned.[3328]

Enablers of more transformative kinds of innovation: - Breaking out of our "innovation bubbles" to develop better ideas more in line with what the world needs: more open innovation processes. (...) Rethinking partnerships: to build in more ambition and make the best use of respective capabilities - working with those who can take our innovations to scale in different ways, help us share knowledge and information more effectively, distribute our products/services, or help make them more affordable… - "Matchmaking" to drive impact, including innovating where it's needed the most, or supporting those who already offer a solution to my problem (rather than competing or reinventing). More collective voice and coordination across existing smaller-scale innovators, such as community-based initiatives and entrepreneurs (often overstretched and underfunded) to share skills and resources, and demonstrate collective impact and value. Perhaps starting with a national union of community initiatives? Combining the best of the past and the present to go faster: drawing on existing/traditional foods, recipes, cooking techniques and knowledge together with today's science, technologies and insights, to reach positive impact faster and without reinventing the wheel. Supporting some innovations as bridges to a better place if not our ultimate, ideal solution (e.g. recipe kits as a stepping stone towards more scratch cooking).[3329]

Reflections, personal actions, and questions to explore further: - Tipping current innovations towards their transformative potential: for example, meat alternatives have the potential to keep people eating badly, or to help drive a mainstream shift to more plant-based, healthier diets. How can we influence this? Whose responsibility is it? Embedding innovation into strategies for greater food equity: The food industry has a big opportunity to improve many people's ability to afford good food, by ensuring all its own workers earn living incomes. It's difficult for any affordable innovation strategy to be credible if the organisation doesn't pay living wages. Who's doing this well and supporting this message, and what can be learnt or replicated from that? Ensuring a collaborative "ecosystem" of innovators: Whose responsibility is it to lead the transformation we need? How do we best combine top-down and bottom-up approaches? How can innovators, with different audiences, areas of expertise, scales, perspectives and visions, work alongside one another, and support one another to all move towards more transformative action? Who or what can facilitate this?[3330]

Establishing innovative and blended financing mechanisms and leveraging private sector funding to support high impact projects and making finance more accessible to farmers and other stakeholders[3331]

Harnessing and providing access to innovative technologies and digital solutions such as improved seed, mechanization, and ICT, that can allow farmers, policymakers, and practitioners to convert precise data into actionable knowledge and lead to better farming

[3328] 259:27 p 7 in 495_June_23_21_Forum for the Future

[3329] 259:28 p 9 in 495_June_23_21_Forum for the Future

[3330] 259:30 p 10 in 495_June_23_21_Forum for the Future

[3331] 271:2 p 8 in 507_June_30_21_AKADEMYA2_FANPRAN

and investment decisions and improve agricultural productivity, competitiveness, better address the effects of climate change, and transform food systems. In particular, artificial intelligence (AI) techniques such as machine learning, digital technologies, and big data including remotely sensed data are providing innovative ways to not only fill knowledge gaps but to also boost agricultural productivity and address the numerous threats facing food systems. In addition, there is need to ensure that technologies from outside Africa are contextualized.[3332]

…using innovations and technologies applied across the entire food system including labelling, traceability, food safety, use of risk based approaches, product quality, and e-commerce…[3333]

Facilitate evidence-based and guided experimentation and innovation of policies and accelerated science capacity for technical solutions supporting broad food systems change: There is neither one single policy nor a unique mix of strategies that can deliver change across all objectives of a food system. Rather, policymakers will be required to forge new pathways to build sustainable, resilient, and prosperous food systems that deliver healthy and nutritious diets, improve livelihoods, and protect the environment.[3334]

Research and innovation that enables us to sustainably deliver affordable, acceptable and nutritious meals every day for everyone is a massive challenge and a range of academic disciplines, the private sectors and other sectors must to come together to deliver this.[3335]

There is a need for innovative solutions to pull the industry "out of the Stone Age". Seaweed farming creates jobs for coastal communities, particularly women, advancing social, gender, and economic equality. A transparent seaweed production industry will protect the producer, consumer, and the environment.[3336]

Sustainable innovations/practices need to also be developed and presented to farmers in a way that adds value, rather than just adding costs.[3337]

A key area of focus for researchers and innovators should be increasing yield per hectare, as this would boost farmer incomes and production outputs without increasing land use.[3338]

Develop innovative technologies; expand knowledge and academic and applied research on establishing local sustainable agriculture, reduce water consumption in agriculture as well as in the food industry.[3339]

[3332] 271:3 p 8 in 507_June_30_21_AKADEMYA2_FANPRAN

[3333] 277:1 p 6 in 513_July_01_21_Weise S

[3334] 284:3 p 6 in 520_July_05_21_HE Sacko J_Multi

[3335] 285:4 p 15 in 521_July_05_21_BBSRC-UKRI

[3336] 292:1 p 6 in 528_July_07_21_Potin_Msuya

[3337] 295:1 p 6 in 531_July_07_21_Shaunak A

[3338] 295:12 p 11 in 531_July_07_21_Shaunak A

[3339] 297:5 p 5 in 533_July_07_21_Gazit GS

Technical innovation that is adapted to specific smallholder conditions is a precondition for sustainable and inclusive transformation of food systems.[3340]

Integrate inclusive, demand-driven, and adaptive agricultural research prioritization and technology development across all agricultural research and development efforts, including social sciences and policy research, ensuring R&D investments reflect choice and actively and meaningfully include smallholder farmers and innovators, women, and youth. Ensure that innovation systems are adaptive to environmental changes and local context.[3341]

Our Dialogue focused on the role technology and innovation can play to make sure safe, healthy, and nutritious foods is available and accessible to all people regardless of their economic status.[3342]

Innovation What are the key factors that help drive innovation? It takes more than one key factor for innovations to scale in an emerging economy like Rwanda. For innovations to be successful in LMIC's there needs to be the 3 C's. They are: 1. Creativity 2. Capacity Building 3. Collaboration.[3343]

Legalizing dumpster diving? Different business models: 1)taking produce from other companies and selling it to consumers e.g. a start-up that collects bread from bakeries and resells it at a discount the next day.; from a business perspective, this is "downgrading" i.e. selling the food items at a lower price 2) using "ugly" or discarded food (e.g. vegetables that do not fit the standards set by supermarkets) and preparing food with them, e.g. new dishes in a restaurant, or chutneys, jam etc.; from a business perspective, this is "upgrading" i.e. selling the food items at a higher price.; Both business models are valuable for reducing food waste at different stations of the supply chain.[3344]

Innovative technologies, such as green grain storage technology, cleaning drying technology and equipment, as well as grain logistics technology, play a key role in post-harvest loss practices.[3345]

Scaling up the availability of technologies, information and innovative solutions is significant to accelerating the transformation of food systems, while ensuring that possible trade-offs are minimized as a consequence of the transformative process.[3346]

Financial innovation and incentive mechanisms is one of the key actions in the food system to reduce food loss and facilitate the transformation of food system. With a loan system designed by policy banks to cover all segments of the food supply chain, a series of credit products could be harnessed to benefit small farmers and serve the whole industry of

[3340] 298:2 p 8 in 534_July_07_21_WBADB_ADI_Multi

[3341] 298:4 p 9 in 534_July_07_21_WBADB_ADI_Multi

[3342] 300:1 p 5 in 536_July_08_21_Musabyimana JC

[3343] 300:11 p 10 in 536_July_08_21_Musabyimana JC

[3344] 311:1 p 7 in 547_July_14_21_Heilinger K

[3345] 315:1 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[3346] 315:2 p 6 in 551_July_15_21_FAO_ESCAP_Multi

grains and oil in the processes of production, storage, purchase and sales, circulation, processing, supply etc.[3347]

Likewise, researchers and entrepreneurs noted the innovativeness of the initiatives presented, particularly the farmer-to-farmer technologies and how 'old' concepts such as permaculture, agroecology and respect for nature resurfaced in a creative way that needs to be integrated in subsequent UN FSS discussions about food systems…[3348]

Innovate methods and approaches making a case for non-traditional and creative ones. These may include developmental, participatory and other approaches, which are more suited to help understand the complexity around food systems, while ensuring that the focus on quality is preserved.[3349]

Grassroots level Knowledge: UNDP, India identifies grassroot innovations which could be potentially scaled across rural communities. While doing so, it has catalogued traditional ecological knowledge to develop community goals and policies. Grassroot innovations have great potential to solve hyperlocal cropping problems.[3350]

Therefore, State funded technology and innovation are essential particularly when it comes to helping small farmers grow more sustainable produce and/or reducing their food loss and waste.[3351]

In this era of climate change innovation in technology systems in the fields of agronomic and animal husbandry is key in ensuring that the nation produces adequate, safe and nutritious food. Innovation in information management through modern equipment such as ICT also plays a critical role in predicting future weather patterns and climatic conditions later on in future. Investing in early warning systems reduces the risk of crop and animal losses as a result of disasters.[3352]

Livelihood trainings on alternative marketing strategies including cooperatives, community supported agriculture (CSAs) strategies; high tunnels and innovative systems, agroecology- regenerative agriculture; and sustainable organic farming skills/farmer knowledges; entrepreneur training, are important to empower BIPOC small farmers and their communities and support resilient agroecology-organic livelihoods and wellbeing.[3353]

Innovative agroecology farming practices, regenerative-organic agriculture small farm models;[3354]

[3347] 315:3 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[3348] 317:1 p 6 in 554_July_15_21_Lopez DE

[3349] 320:2 p 6 in 557_July_15_21_EvalForward_FSRD

[3350] 321:1 p 7 in 558_July_16_21_RICH_ICRISAT

[3351] 323:9 p 9 in 560_July 19_21_Arbuthnott_Multi

[3352] 325:2 p 7 in 562_July_19_21_Zombe K

[3353] 356:44 p 6 in 409_June_13_21_Mone S

[3354] 356:56 p 7 in 409_June_13_21_Mone S

In order to increase food production in a sustainable and healthy manner, research and innovation is critical Research and University Engagement • Research and innovative technologies should target conservation of the food products/system:[3355]

Implications going forward • Need to be cautious that improving economic outcomes of FS seems to be the main driver of digitalization. Often ignoring aspects such as environmental aspects • Entrepreneurship innovation as a critical point for valorizing technology and innovation • Universities are supposed to be drivers of change and innovation but most of the innovations from universities have not been able to create startups but rather there has been a string emphasis on publications • Need to create entrepreneurship enabling environments at universities.[3356]

Adapt technologies and innovations to local context and need to adopt feasible technologies that make sense from the income perspective of farmers…[3357]

…it is not innovation for innovation sake, but improved varieties targeted to support the farmers in the day-to-day business, to help to achieve sustainable development goals…[3358]

It was highlighted the need to promote the best practices of the excellence of Italian agri-food production and fisheries by valorizing their high values in combining food cultures, technological and social innovation, efficiency, productivity and sustainability of the food chains, closed linked to territories, local producers, farmers and fishermen. Innovation, both technological and social, was pointed as a crucial key for the development of an effective green, blue and circular economy at the centre of a sustainable transformation of food systems. The important contribution of the marine resources and aquaculture was highlighted for building more sustainable food systems and revitalizing the MD.[3359]

In the summary on the dialogue "GOOD! The Good of the Mediterranean diet and Italian agrifood towards the Food System Summit ", the centrality of Italian agri-food enterprises in the transformation of food systems was highlighted. It was presented briefly the sharing path with them that gave life to the jointly document" United in Food " in which are identified 10 commitments of the Italian agri-food sector: i) sustainable production processes; ii) diets and healthy lifestyles, based on the principles of MD; iii) good corporate citizenship; iv) sustainable supply chains; v) corporate strategies and policies and profitability; vi) technological, organizational and social innovation; vii) evaluation mechanisms; viii) training and updating; ix) networks and alliances; x) alignment with international objectives.[3360]

As part of the development of the Flagships and the Community of Practice of the SFS-MED Platform, some initial priority actions were also pointed: collect and share data, lessons learned and best practices on SFS and MD; develop and implement methodologies for analyzing the sustainability of fisheries, agri-food products and Mediterranean diet

[3355] 358:12 p 6 in 402_June 10_21_Ekwamu_El Dukheri

[3356] 358:16 p 6 in 402_June 10_21_Ekwamu_El Dukheri

[3357] 358:19 p 7 in 402_June 10_21_Ekwamu_El Dukheri

[3358] 369:26 p 6 in 413_June_15_21_WFO_ISF

[3359] 386:13 p 6 in 429_July_05_21-CIHEAM Bari

[3360] 386:28 p 8 in 429_July_05_21-CIHEAM Bari

patterns; develop and implement self-assessment models of corporate sustainability; enhance research, innovation, training and education on SFS and MD; enhance green economy, blue growth, circular economy and One-Health approaches.[3361]

It is important to encourage innovation in the reuse of co-products in production chains, such as the use of cashew fiber to make hamburgers.[3362]

The expansion of access to technical assistance for small/medium producers, using innovative mechanisms;[3363]

It is important to encourage innovation in the reuse of co-products in production chains, such as the use of cashew fiber to make hamburgers.[3364]

Institutionalize national capacities to respond to and recover from shocks through building on existing systems (e.g., early warning) and introduction of new and innovative approaches (e.g. anticipatory actions, insurance schemes).[3365]

Harnessing technological innovations like drone system and precision farming.[3366]

INNOVATION can change not only the way how the food system works and make it much more efficient, but also, make consumers healthier. ECA however still faces significant digital divides and millions of people are disconnected. There are areas where there's no investment in the fast broadband and there is a challenge of exclusion of the end user. The emerging technologies offer great opportunities for the efficiency to the food systems. Innovation in all its forms is important, not only technological but social as well. Additionally innovation has many pathways, sometimes it can also mean going "back" to producing local heritage plants, such as Georgian wheats.[3367]

New, innovative technologies and research can be used to reach a wider audience and to help communicate research effectively.[3368]

Promote farmer-centric approach for better adoption of innovations.[3369]

Support to universities and research institution, but also for innovative and impact-oriented training model.[3370]

[3361] 386:30 p 8 in 429_July_05_21-CIHEAM Bari

[3362] 389:58 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[3363] 389:108 p 9 in 431_June_22_21_CEBOS_EMBRAPA

[3364] 389:155 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[3365] 392:13 p 9 in 434_June_02_21_Hanan_KA

[3366] 397:37 p 9 in 439_June_17_21_INAI

[3367] 403:18 p 7 in 444_May_25_21_FAO_UNICEF_Multi

[3368] 407:24 p 7 in 448_Feb_25_21_IFAD_Multi

[3369] 414:9 p 6 in 455_May_14_21_Ekwamu_A

[3370] 414:26 p 6 in 455_May_14_21_Ekwamu_A

Research and innovation to build resilience to shocks and stresses, for example development of drought tolerant varieties, establishing insurance schemes for drought based shocks.[3371]

…build capacity and work together with human capital development for research and innovation being central focus for sustained growth.[3372]

Strengthening Food Systems Research and Innovation;[3373]

The future transformation of food systems in Africa requires innovative research, education, and training approaches that are rooted in local contexts. Universities in Africa need to adapt and create knowledge to strengthen and transform the food systems through strengthening links and improving production, processing, storage, transport, food quality, and businesses that link them and consumers. Universities must play a crucial and more effective role in anticipating the skill-sets and knowledge demanded by rapidly changing food systems, and provide these skills and information in ways that trickle through the entire economy. In turn, the universities need to translate knowledge created into innovations that transform and develop potential to drive their own and Africa's food system transformation. Now is the time to reassess and redesign the African universities and assist them to build their capacity to deliver Africa's food system transformation.[3374]

Development of human capital for the flourishing the food systems needs to be undertaken through balancing the human resource pyramid for science technology & innovations and entrepreneurship ; and leveraging and convergence, rather than competition, in science technology and innovations development and human capital development.[3375]

The research-extension-farmer-nexus needs to be strengthened for high technology adoption; build and strengthen solidarity and collective actions through partnerships that mobilize research and innovation expertise; co-create technologies and innovations with farmers, to address farmer's challenges while providing local solutions; and, enhancing the capacity of farmers and consumers to contribute to research and innovation, and to policy formulation and implementation.[3376]

1. Government: Making available food waste focused funding streams (once it is clearly defined—…). 2. Business: Promote maintenance of profitability and innovation.[3377]

Involve young people. Make farming more appealing to young farmers, who are often in the best position to advance evidence-based scientific innovations and technologies for sustainable farming.[3378]

[3371] 414:38 p 8 in 455_May_14_21_Ekwamu_A

[3372] 415:9 p 6 in 456_May_17_21_Ekwamu_A

[3373] 415:31 p 8 in 456_May_17_21_Ekwamu_A

[3374] 416:6 p 6 in 457_May_20_21_Ekwamu_A

[3375] 416:9 p 7 in 457_May_20_21_Ekwamu_A

[3376] 425:6 p 6 in 466_June_17_21_Ekwamu A

[3377] 427:13 p 8 in 468_June_18_21_Mayne A

[3378] 429:121 p 7 in 470_June_17_21_Burian_Multi

Among older and younger farmers to better understand the need for innovation and changes occurring in agri-food systems. Older farmers can introduce younger farmers to farming and also learn from younger farmers how to use more efficient technologies to improve sustainability.[3379]

Recognize the roadblocks to innovation in the current system, especially for farmers.[3380]

Young farmers have a vital role in bringing innovative solutions to farmers; young farmers are the early adopters and change-makers. Young people as tech-conduits for both innovation and the application.[3381]

The research and academia should produce technologies, innovations, education programmes, and evidence which in turn can be applied by the food systems actors, used to train students, and used to enrich evidence-based advocacy.[3382]

Recommendation 2: Integrate social networks as an extension tool Who: UN, civil society, producer cooperatives and farmer organisations, private sector, and governments How: Make use of available tools such as social media; working through seed groups, incorporating the private sector, making use of digital technology to close knowledge gaps. Some best practice examples have been cited in Ghana and Nigeria.[3383]

How: higher levels of productivity and profitability for farmers will be achieved by establishing an enabling context (water, electricity, infrastructure including innovative technology), expanding contract farming, supporting trade fairs and marketing to advertise local foods, leveraging the potential of new tech to communicate on innovative farming techniques, and capacity building for youth wanting to start agribusinesses. Governments should help set up and/or strengthen the functioning of traditional (so-called informal) markets, short marketing circuits or EcoFairs in different places in peri-urban and urban cities on a massive scale (without many restrictions on agro-ecological products).[3384]

GI initiatives can feed trust among actors, but sometimes distrust can remain an important barrier to overcome; in this respect, innovative platforms, including social media, represent interesting tools to build trust between producers as well as with consumers.[3385]

Secondly, in relation to the above point, there are challenges in the adoption of innovation among farmers. This is why providing farmers with clear information on risks and opportunities associated with innovation is important to allow farmers to make informed decisions. Beyond enabling greater access to information, it is also key to keep innovations within farmers' reach and to ensure equal access to innovations, making them both physically and financially accessible. Focusing on local, context-specific innovation

[3379] 429:227 p 15 in 470_June_17_21_Burian_Multi

[3380] 429:232 p 16 in 470_June_17_21_Burian_Multi

[3381] 429:279 p 20 in 470_June_17_21_Burian_Multi

[3382] 448:18 p 6 in 388_May_03_21_Kambewa_D

[3383] 458:57 p 12 in 123_May_04_21_Mauderli U

[3384] 459:54 p 10 in 125_May_11_21_Mauderli_COSUDE

[3385] 462:16 p 7 in 133_May_27_21_CIRAD_Multi

approaches tailored to the needs of farmers is indeed essential to achieving global goals, hence showing the need for more context-specific conversations.[3386]

The participants in this breakout room pinpointed to several areas that need urgent action. First, there needs to be better engagement between farmers, research, and innovation development. In addition, demand-driven innovation, tailored to the needs of farmers and adapted to local challenges, must be supported.[3387]

Innovative solutions to biodiversity, seed development, and decentralized ways of measuring soil carbon should be explored. We need to better manage externalities, and create a fair playing field so that organic can grow and create a larger impact.[3388]

Innovation: Chile has put a lot of resources and technology into the fruit exports. Technological solutions are needed for food produced and sold in Chile; such as technology transfer, training, research and development of technologies; including environmentally friendly technological advances.[3389]

Digitize the innovation finance ecosystem to make access to opportunities to obtain seed or innovation testing funding easier for farmers and small entrepreneurs who would otherwise either not know about these opportunities or find the processes associated with them too costly/long.[3390]

Make innovation labs available to small entrepreneurs to test their products or technologies, considering that for most of them it is impossible to develop internally or at their own expense this type of infrastructure.[3391]

With respect to technological advancement in addressing key cocoa production bottlenecks, the Ghana Cocoa Board is using digital technologies and innovations such as GPS to collect and manage farmers bio data.[3392]

However, the Ghana Cocoa Board express the need for bridging the gap between the cocoa industry and academia so as to increase the opportunities for research, innovation and development that are key to improving and strengthening Ghana's cocoa sector.[3393]

For research and innovation-the cocoa research institute of Ghana and other universities and crop based research institutes were called upon to up their game in developing new seed varieties, protectants and cocoa products.[3394]

[3386] 463:30 p 6 in 155_Apr_27_21_FCDO_Multi

[3387] 463:35 p 7 in 155_Apr_27_21_FCDO_Multi

[3388] 468:49 p 7 in 219_May_10_21_OTA

[3389] 474:23 p 6 in 246_June_09_21_Boza_Kanter

[3390] 494:25 p 7 in 308_June_09_21_FAO_Pinduoduo_Multi

[3391] 494:26 p 7 in 308_June_09_21_FAO_Pinduoduo_Multi

[3392] 499:19 p 6 in 394_June_01_21_Egyir I

[3393] 499:20 p 6 in 394_June_01_21_Egyir I

[3394] 499:23 p 6 in 394_June_01_21_Egyir I

...working across silos to create a common platform that fosters collaboration and innovation on a holistic, integrated approach.[3395]

Application of technology to tackle complex problem. Innovation in technology to scale-up agricultural productivity and accelerate food security such as solar, wind, water energy and agro-processing. Digital innovation.[3396]

Practical solutions for more diverse, healthy, affordable and sustainable diets must include innovations and improvements in food processing. Solutions that denigrate specific foods or seek to limit production, consumption, or consumer choice will not contribute to implementation of real, urgently needed solutions based on evidence and proven impacts.[3397]

Resiliency is boosted by mutual understanding and enhanced communication between stakeholders, governments, technical experts, and consumers. Youth voices agreed with farmers about the need to embrace technology and innovation and not block farmers' access to new tools. Youth voices were also particularly focused on improving ag and food stakeholders' connectivity through digital media.[3398]

The strategy for nature-positive production should focus on innovation by farmers, as opposed to a prescriptive plan by others.[3399]

Plant breeding innovations must continue their progress in reducing soil loss, water use, and herbicide use.[3400]

Innovation and creativity in processing local food source…[3401]

The crucial role of innovation, sustainable technologies, digitalization and data, both quantitative and qualitative. These need to be inclusive and accessible especially to small-scale farmers, fishers and small-holders. Education, training and awareness raising as potential game changers in transforming both production and consumption patterns.[3402]

Technology and innovation are key to helping farmers be more productive and also to reduce food loss and waste.[3403]

Encourage innovation in the field of green biotech crops.[3404]

[3395] 501:53 p 10 in 397_June_04_21_WHO_Multi

[3396] 1:30 p 12 in 072_Mar_09_21_Sibanda L

[3397] 4:18 p 9 in 104_Apr_8_21_Animal Agriculture Alliance

[3398] 4:29 p 12 in 104_Apr_8_21_Animal Agriculture Alliance

[3399] 8:23 p 10 in 169_Apr_6_21_Shea E

[3400] 8:43 p 9 in 169_Apr_6_21_Shea E

[3401] 10:13 p 10 in 181_Apr_8_21_Miranda

[3402] 23:22 p 6 in 205_Apr_27_21_CIHEAM_Multi

[3403] 28:12 p 7 in 064_Mar_4_21_Farming First

[3404] 30:27 p 6 in 071_Mar_11_21_ESCWA_FAO

Promote research, use of technology and renewable energy, use climate resilient crops that require less amount of water and save local seeds and improve agro-diversity.[3405]

Institutions – invest in the institutions that we have set up for innovation, even national institutions or international institutions, or set up to facilitate those innovation processes. We need to rethink the institutions, what they set up to achieve the SDGs, how they can be realigned, do we need new institutions, and think about coming together to create them.[3406]

The session explored innovative food system solutions that can be replicated and scaled, such as: Innovative market mechanisms to enable farming practices that regenerate soil health; A pioneering farmworker-driven labor standards program in the U.S. dairy industry; Research programs on the social dimensions of food systems that show how and why farmers adapt to environmental change.[3407]

Rolling out a nation-wide scheme on improving protein intake in Nigeria by exploiting innovative mechanisms such as developing both animal and plant protein through partnerships with the private sector, to tackle protein deficiency.[3408]

Most farmers lack machineries for effective farming and this accounts for low productivity and high cost of labor. There is great need to establish functional farming equipment hiring services where these equipment can be leased and hired by the government or organizations whose duty is to assist marginalized farmers.[3409]

Agro input challenges as faced by farmers ; Mr Chukwuemeka Ogbuagu opined that the lack of farm machineries (as agro inputs) which makes farming easier and faster can be addressed by possibly finding or establishing functional farming equipment hiring services where these equipment can be leased and hired. Such hiring services can be conducted online with the use of ICT for efficiency and ease of access. He further suggested that there is need for advisory services to go virtual. A good example is virtual adverts on sourcing farm input materials. Role of Agro input Dealers Associations/ Cooperatives in improving the use of ICT in Food system value chain.[3410]

There is need to find innovative ways to manage the supply, add value and extend the shelf life. Greater investments into the processing capability, capacity and competence would go a long way in improving supply. there is also Need for added value and providing support for sustainable manufacturing.[3411]

Innovation should be brought to scale in order to reach the SDGs. To empower actions at scale, place policies, regulations and incentives are needed which enable a sustainable

[3405] 31:16 p 7 in 077_Mar_09_21_ESCWA_FAO

[3406] 32:3 p 8 in 082_Mar_15_21_Yoovatana M

[3407] 43:2 p 6 in 003_Nov_23_21_Posner S

[3408] 44:37 p 13 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[3409] 51:3 p 6 in 137_Mar_24_21_Ejezie J

[3410] 51:4 p 7 in 137_Mar_24_21_Ejezie J

[3411] 52:14 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

recovery at regional level. Innovative solutions and technical assistance should be able to reach farmers and be delivered in partnership with the private sector.[3412]

To achieve 50% reductions in food loss, improving and increasing technologies, logistics and innovation are found essential.[3413]

Support innovation in digital technology and in business models applying digital solutions to agri-SME finance, b) address barriers to scale for business models with scale potential, c) roll out digital solutions among a broad community of financial institutions serving agri-SMEs.[3414]

Innovation at serving lower-income consumers – rather than just medium and higher-income consumers • Linking nutrition goal to poverty alleviation role • Designing blended structures with a deliberate agenda of data generation, financing innovation, learning, and informing policy, rather than just with an agenda of mobilizing capital on a time-bound basis.[3415]

Innovate in the product offering space, e.g. in designing and issuing large bonds that combine nutrition and other dimensions of sustainable food system impact.[3416]

Young people should be encouraged to develop innovative approaches to shaping future food systems.[3417]

Use the momentum, employ innovation & creativity, reconnect people with their food![3418]

Government/private sector/ Academia and Research/ private entities (such as YES Malawi): Work collaboratively to develop, market and make available low cost technologies or the mechanization of agriculture and other processes within he food system. this will make engagement tin food systems attractive for youth and less tedious for all including women (involved in the primary production stage).[3419]

The prospects for large-scale production will come from innovative growing techniques.[3420]

This is why some participants in discussions proposed solutions such as finding growing techniques that could increase the production of local products on both the little arable land available and land used for cash crops like rubber trees. However, other participants remained skeptical about the idea of large-scale production on the little arable land

[3412] 53:10 p 5 in 001_Nov_5_20_CGIAR

[3413] 53:20 p 6 in 001_Nov_5_20_CGIAR

[3414] 58:11 p 5 in 011_Jan_11_21_SAFIN

[3415] 63:21 p 7 in 037_Feb_12_21_Food Systems for the Future_Multi

[3416] 63:29 p 8 in 037_Feb_12_21_Food Systems for the Future_Multi

[3417] 65:16 p 8 in 050_Feb_23_21_World Vision Ireland

[3418] 66:27 p 8 in 052_Feb_25_21_EUFIC

[3419] 68:23 p 8 in 057_Feb_26_21_YES

[3420] 71:14 p25 in 033a_Feb_6_21_Serge BDS_ENG

available because they have not yet been introduced to these innovative, environmentally friendly techniques.[3421]

Dr Larry N. Digal, the Chancellor of UP Mindanao, started his presentation by confirming the reality of the existence of inequality and power imbalance in agriculture value chains, putting small-scale producers at a disadvantaged position. As such, innovation is an important dimension in advancing equitable livelihoods and value distribution.[3422]

Promote innovation projects for all stages of the agri-food chain. Connect young people, universities, and research centers with all Mérida food system shareholders in developing innovations.[3423]

As for the intersection of food security and sustainability, it was noted that the two are not mutually exclusive. Both can be addressed by technologies and innovations to reduce resource use and decrease price.[3424]

Innovations should emphasize ways of maintaining healthy traditional diets (vs highly processed versions of various traditional foods) and reducing the cooking footprint while relieving the burden on low-income communities.[3425]

Changes in livestock systems can best be achieved by mobilizing diverse groups of stakeholders to a more positive common narrative, recognizing that incremental transitions, innovation, and continuous learning are needed.[3426]

All of the above led to the conclusion about the need to create a new integration platform and an intellectual environment that will allow implementing new initiatives.[3427]

There are a number of opportunities for investment and innovation to the Quelimane food system; the group commented that promotion of effective fishing, creation of clean energy, mechanising production and irrigation systems may enhance innovative and sustainable development.[3428]

Tailor technology and innovations in mountain food systems to all people, including women and youth, and develop the capacity of local people on best agricultural practices in mountains. Promote participatory approaches to develop technology and innovations that accommodate traditional and indigenous food culture and knowledge.[3429]

The media (traditional press or social media) has an important role as it will portray an innovation as good or bad, regardless of the science. Bringing scale: There is a challenge to take an innovation from niche to mass market – for that, regulatory support is needed.

[3421] 71:25 p. 35 in 033a_Feb_6_21_Serge BDS_ENG

[3422] 74:23 p 21 in 189a_April_16_21_Ateneo de Manila

[3423] 75:10 p 66 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[3424] 90:15 p 9 in 206_Apr_27_21_CCANCC

[3425] 91:19 p 6 in 217_May_6_21_Schwartz A

[3426] 93:32 p 11 in 227_May_18_21_Tarawali S

[3427] 94:16 p 6 in 228_May_18_21_Kovnat K

[3428] 96:3 p 6 in 255_Apr_27_21_ICLEI Africa_Multi

[3429] 98:29 p 10 in 282_May_18_21_Romeo R

Making it pay: It costs a lot to bring innovation to market – innovators need regulatory certainty to give them confidence to invest. If farmers are to try new methods or diversify their crops, they need certainty that they will make a profit. Intellectual property rights: Start-ups need access to IP, and large MNCs should not guard IP when they are slowing down new innovation.[3430]

Enablers to innovation: Who: Entrepreneurs and innovators; farmers; agile players; consumers; private companies; regulators/policymakers; scientists/academics; NGOs; young people; retailers. What: Technologies; transparent frameworks; multi-stakeholder approaches; co-creation; an open-mind; funding (public and private); decentralized autonomous organisations; open-source solutions; public procurement processes; multinational agreements impact framed, education; openness to change.[3431]

As such, innovation is an important dimension in advancing equitable livelihoods and value distribution.[3432]

Effective partnership facilitation is crucial in implementing projects and programs to develop these chains. Innovation is needed in doing all these.[3433]

…the speaker emphasized that in achieving the vision of equitable livelihoods for small-scale producers, rural connectivity has to be improved, the basics are in place, and effective partnership facilitation is ensured in implementing programs. Innovation is needed in doing all these and that the benefits produced from bundling these innovations are shared equitably in the chain.[3434]

(a) To deepen understanding by local grassroots communities on challenges based on a food systems framework; (b) To raise awareness on food security issues, particularly brainstorming on possible solutions that are sustainable and linking elements in the food systems at different levels and sectors; (c) To share information on innovative practices that can contribute to achieving SDGs; and (d) To promote continuing dialogue and reflection for collective action and greater collaboration among different sectors.[3435]

A full contribution of the linkages of climate change in agriculture to food systems, markets and energy should also be explored. Naturally, nature-positive solutions are context-specific and based on bottom-up and territorial processes, and can be strengthened by science, technology, and innovation as well as by enabling policy environments and improved governance systems.[3436]

Concerning AR4D, Innovation platforms that bring together stakeholders with a common interest to leverage skills, research technologies, competencies, markets, financing, social

[3430] 99:29 p 9 in 285_May_20_21_TFFF_Multi

[3431] 99:36 p 11 in 285_May_20_21_TFFF_Multi

[3432] 103:23 p 21 in 007a_Dec_18_20_NAAGD

[3433] 103:30 p 25 in 007a_Dec_18_20_NAAGD

[3434] 103:31 p 26 in 007a_Dec_18_20_NAAGD

[3435] 103:70 p 38 in 007a_Dec_18_20_NAAGD

[3436] 111:25 p 6 in 070_Mar_09_21_Akinbamijo,O

capital, and other resources are critical for economies of scale in the deployment of technologies and innovations.[3437]

The discussions on the first topic yielded recommendations including strengthened advocacy through the preparation and presentation to policy makers evidence on returns to investment in research and innovation. Also, getting beneficiaries and users of AR4D products to contribute towards research and innovation was recommended…[3438]

Support for the diversity of emerging sustainable livelihood strategies will be critical, including education and training, as well as demonstration and scaling up of innovative approaches.[3439]

Greater diversification opportunities for livestock farmers will be critical, including enterprise change, innovation and adaption, as well as value-added farm processing and direct selling. Market development support is needed for the latter to be realised. Greater support for vulnerable farm families has to be provided, and more support for women in agriculture (access to land/capital, more options for retirement/partnership).[3440]

Training and development agencies can support capacity development through knowledge exchange, training and upskilling/reskilling. The development of community ecosystems' were seen as an important step, as well as the promotion of innovation and good practice through case studies.[3441]

Finally, citizen science, as a growing field of study, can be utilised to enhance buy-in and co-develop innovative solutions.[3442]

Innovation hubs: Public and private sectors need to create an enabling ecosystem for innovation to thrive.[3443]

In order to advance data and digital systems innovation, there is a need first of all for user-centered innovation – innovation generated from the ordinary man's needs and then developed by the technical person for the market. This means that at the interim stages of innovation development, the potential users must be involved directly so it is better placed to meet reality and offers a human-centered design. Such innovations must be adapted to the local user's language, but end users must also have some capacity development to understand the technologies available.[3444]

There is significant scope for PDBs to mobilize additional finance to invest in agriculture and food economies, to channel it in ways that incentivize sustainable practices, and to

[3437] 111:31 p 6 in 070_Mar_09_21_Akinbamijo,O

[3438] 111:40 p 7 in 070_Mar_09_21_Akinbamijo,O

[3439] 112:9 p 6 in 074_May_18_21_O'Mara_Teagasc

[3440] 112:39 p 9 in 074_May_18_21_O'Mara_Teagasc

[3441] 112:44 p 9 in 074_May_18_21_O'Mara_Teagasc

[3442] 112:79 p 13 in 074_May_18_21_O'Mara_Teagasc

[3443] 113:4 p 5 in 075_Mar_10_21_IFAN

[3444] 113:24 p 8 in 075_Mar_10_21_IFAN

invest in and promote innovations that accelerate sustainable practices and help more efficiently reach 'last mile' rural clients.[3445]

The objective would be to design, deliver and trigger innovation, help rural financial institutions learn from one another, and improve access to value chain specific information and funds to de-risk and increase investments in 'last mile' agricultural actors.[3446]

A fund to accelerate development of early-stage digital innovations in agriculture, in partnership with leading venture funders to provide required expertise.[3447]

Increasing research and innovations and delivering it in the indigenous languages.[3448]

Innovations that could reduce energy use in food production/value chains over the next decade include: - Agroecology and better farming practices - Using balanced feeds in livestock rearing - Low pack/no pack solutions : shops using no packaging and customers using own recycled materials when shopping in stores. Irrigation using gravity feed systems. Using wastewater for energy: methane could be used to produce gas for other things such as cooking and heating. Solar PV for pumping water - Intensive farming rather than extensive - Internet purchasing: small scale farmers chain to market is long, therefore using online shopping small scale famers can shorten this and improve their on farm economics.[3449]

To overcome the lack of bankable projects, we discussed that science and innovation can be used for de-risking blended finance structures and delivering efficient, effective and transformative technical assistance at a pre-investment stage. This is needed to prioritize deal flow to help investors understand the risks and implement those strategies needed in terms of adaptation.[3450]

Secondly, the package of solutions to farmers may be too difficult to adopt. Solutions do not come as silver bullets, but as a package. There is a need to assess if these solutions are not too difficult for the famer to adapt to local environments, by using applied research and testing together with agricultural innovation and putting knowledge in hands of farmers.[3451]

The participants all agreed that a primary issue the seaweed industry faces is under exploration of the various ways in which seaweed can be used in the food industry. In order to overcome this challenge, participants suggested the creation of institutions which would support innovations and exploration of seaweed food applications.[3452]

[3445] 115:4 p 6 in 085_Mar_17_21_IFAD_FSFS

[3446] 115:15 p 8 in 085_Mar_17_21_IFAD_FSFS

[3447] 115:19 p 9 in 085_Mar_17_21_IFAD_FSFS

[3448] 116:10 p 7 in 093_Mar_25_21_Adeboye_T

[3449] 117:13 p 8 in 109_Apr_13_21_Jacobs-Mata I

[3450] 118:35 p 10 in 117_Apr_22_21_Dinesh D_Multi

[3451] 118:48 p 11 in 117_Apr_22_21_Dinesh D_Multi

[3452] 119:35 p 11 in 121_Apr_28_21_Doumeizel V

In the end, the participants agreed that focusing on innovations in seaweed as an additive was a more achievable short-term goal, whereas popularizing seaweed in the west as a staple would be a more long-term goal.[3453]

Tools/Innovation: Programs and initiatives need to provide the necessary tools to enable access. This includes investing in digital tools and emerging ag technologies.[3454]

Identification of drivers influencing resilience of Food Systems and sustainability. This should include Research and Innovation for contextual recommendations for ensuring the resilience of Food Systems and the importance of Trade-offs related to ensuring Food Systems Resilience[3455]

The speaker from GOAL Global based in Niger showed innovative methods to addressing malnutrition through mass awareness by using digital technologies to spread information. Reaching communities that were further away from the sample site.[3456]

Innovation i. Facilitation and the application of science, technology and innovation in African agriculture while tightening the loop between technology generation, adoption, refinement, use of technologies and its commercialization. ii. Deploy innovative solutions to addressing critical issues on issues on climate change, cultural, political and economic environment, and agricultural systems in particular.[3457]

Promoting innovation and knowledge on risk-sharing to minimize losses and build resilience.[3458]

From the perspective of the supplier, it begins with product innovation, offering the public an opportunity for lifestyle changes, and ensuring quality of products and users experience.[3459]

Innovation: doing so having humanity at the core and bring up new skills into Guatemalan to advance forward in technology from food.[3460]

Policies that promote the emergence of a local private sector, which in turn will produce employment opportunities and innovation.[3461]

Innovation to advance system transformations Innovation throughout the supply chain from farm to consumers will drive transformations related to nature positive agriculture, sustainable consumption, food safety and food waste.[3462]

[3453] 119:37 p 11 in 121_Apr_28_21_Doumeizel V

[3454] 120:9 p 5 in 127_May_13_21_IAFN_CWFS

[3455] 133:22 p 9 in 196_Apr_20_21_Attah-Krah K

[3456] 136:14 p 9 in 211_Apr_30_21_Chisholm N_Multi

[3457] 137:29 p 8 in 212_May_04_21_Akinbamijo Y

[3458] 139:4 p 6 in 216_May_06_21_Ben_Aniabi

[3459] 145:11 p 7 in 233_May_22_21_CVS_Multi

[3460] 146:7 p 6 in 235_May_25_21_Gonzalez B_Multi

[3461] 150:21 p 7 in 253_Apr_29_21_AFDB_Multi

[3462] 153:6 p 6 in 263_May_06_21_CCGA

Various examples throughout the supply chain on how innovation can drive solutions were provided.[3463]

For value-added, innovation can drive increased productivity in Canada's food supply (robotics) and address labour shortages.[3464]

Policy approaches should look at how to de-risk access to different markets, to create an enabling environment for innovation, and to attract more value-added processing nationally (food production in Canada).[3465]

Policy levers should focus on incentivizing and not regulating changes in behaviour. Alternatives options or innovations need to be available before regulation or policies are set if widespread change is expected. Selecting appropriate baselines and recognizing local and regional context also strengthens policy development.[3466]

...promote sustainable prices that can benefit farmers to sell producing should promote technology farming and innovation…[3467]

Strengthening agriculture through the inclusion of multi-, inter-, and transdisciplinary perspectives and approaches in the curriculum so that the students can learn from other disciplines and innovations in ICT and the environment.[3468]

Strengthening of major food systems in each country of the Southeast Asian region should be operationalized by integrated innovations in: Plate, Pocket and Policy + People and Partnerships.[3469]

If innovations are not picked up by the industry, then these will not work. There is a need to commercialize the technologies developed to benefit the people.[3470]

Jackfruit can be a replacement for meat. This is an innovation that Thailand would like to promote in ASEAN plant-based food hub.[3471]

There is a gap between technology, the situation and the farmers - innovations should be patent-free and easy access to the farmers.[3472]

Incrementally build an appropriate innovation capacity (infrastructure, equipment and expertise)[3473]

[3463] 153:15 p 7 in 263_May_06_21_CCGA

[3464] 153:16 p 7 in 263_May_06_21_CCGA

[3465] 153:21 p 9 in 263_May_06_21_CCGA

[3466] 153:23 p 9 in 263_May_06_21_CCGA

[3467] 154:15 p 7 in 265_May_07_21_CSONA

[3468] 157:34 p 8 in 278_May_18_21_Gregorio B

[3469] 157:69 p 11 in 278_May_18_21_Gregorio B

[3470] 157:82 p 12 in 278_May_18_21_Gregorio B

[3471] 158:31 p 8 in 279_May_18_21_Yoovatana M_Multi

[3472] 158:37 p 9 in 279_May_18_21_Yoovatana M_Multi

[3473] 159:2 p 6 in 287_May 20_21_Akinbamijo_Y

Building the systemic capacity for innovation.[3474]

Refrigerators in Liberty City- allowing the community to come in and take what they wish- donator can put into the refrigerator what they wish. This is innovative and will become more larger and mainstream.[3475]

Initiatives to stimulate creativity and innovation.[3476]

Support processors in new technologies, innovations, training, more organic production, production quality.[3477]

Food systems are not a zero sum game: Innovation can create win-win opportunities for people and planet.[3478]

There is an urgent need for more innovation to help future food systems meet the ever more complex set of expectations that society places on them – from food security and nutrition to livelihoods, ecosystem services and climate mitigation.[3479]

Innovation can take many forms – from researching new technologies, to scaling up of existing approaches and applying new ways of working, partnerships and practices.[3480]

Scaling existing innovation is as important and will require better communication with farmers and other agri-food chain actors to accomplish, for instance conservation agriculture to improve soil fertility and capture carbon.[3481]

Innovation needs to reach the whole agri-food chain.[3482]

Innovations will prosper where a benefit is achieved. Benefits are often not exclusively monetary (price rise, cost reduction), as other benefits such as more efficiency, work/life balance, etc., are also important.[3483]

Early support is important; waiting until an innovation is proven will mean many will be abandoned too soon. Innovations are learning opportunities even where they fail in the short term. This applies to originators and also first-time implementers.[3484]

[3474] 159:19 p 7 in 287_May 20_21_Akinbamijo_Y

[3475] 163:61 p 8 in 300_May_27_21_Alesso_Pommeret

[3476] 164:8 p 8 in 304_June_02_21_FAO_Multi

[3477] 164:25 p 10 in 304_June_02_21_FAO_Multi

[3478] 169:13 p 6 in 327_May_18_21_CropLife

[3479] 169:14 p 6 in 327_May_18_21_CropLife

[3480] 169:16 p 6 in 327_May_18_21_CropLife

[3481] 169:19 p 6 in 327_May_18_21_CropLife

[3482] 169:20 p 7 in 327_May_18_21_CropLife

[3483] 170:63 p 14 in 328_May_19_21_Lalor_Teagasc

[3484] 170:64 p 14 in 328_May_19_21_Lalor_Teagasc

Innovations should resonate right along the Food Innovation System chain. Currently there are innovation 'silos', with little communication to others in the chain. Fairness is important. Innovations should yield benefits for farmers, processors and consumers.[3485]

However, technology and innovation can be a double-edged sword. Indeed, it is not always optimally used.[3486]

Investing in innovation to develop ways to cope with adverse weather conditions is important.[3487]

Design opportunities for youth to innovate - think and learn about creative ways to farm - move from thinking that farming is not cool - just for old people - make involvement fun.[3488]

Innovation and Technology: - Adoption and access to technology; agriculture today is becoming more sophisticated and technology is bringing a lot of change and necessary solutions.[3489]

Youth also need to appreciate that they can only be useful in the value chains if they are adding value to the value chains. They can contribute to this through innovation. and then see the opportunities.[3490]

Agricultural innovation and innovation led entrepreneurship is strongly required among African youth if they are to harness the diverse opportunities that the food systems offer.[3491]

Farmers should be organized and equipped with innovative techniques.[3492]

Identify innovations and/or new food vehicles to increase the reach of micronutrients through mandatory fortification.[3493]

Technological innovation to increase the output of farming[3494]

Innovation in farming technology and practices have huge potential to mitigate climate change and protect farmers against the effects of the ever changing environment.[3495]

Preventable equipment for climate change needs to be increased and invested in these innovative technologies. Effective data collection is very important in this development

[3485] 170:65 p 14 in 328_May_19_21_Lalor_Teagasc

[3486] 171:15 p 8 in 329_May_19_21_CI_WFO

[3487] 180:30 p 10 in 338_May_27_21_UNHCR

[3488] 180:39 p 10 in 338_May_27_21_UNHCR

[3489] 182:39 p 9 in 340_May_27_21_Mamba_L

[3490] 189:14 p 6 in 347_June_01_21_Ekwamu A

[3491] 189:19 p 7 in 347_June_01_21_Ekwamu A

[3492] 190:5 p 6 in 348_June_02_21_ASF Pakistan

[3493] 193:31 p 9 in 351_June_03_21_CIF_Multi

[3494] 196:29 p 7 in 354_June_07_21_NAMAC

[3495] 202:13 p 6 in 361_May_19_21_Cadogan_Hincks

research process. Technology for example Grasshopper, can be used to increase and utilise grass and analyse farm data to use the land meat effectively and sustainably.[3496]

The second session was centred around how to apply emerging technologies and innovations to transform food systems in a way that benefits all and leaves no one behind.[3497]

Need for a global research and innovation pact between the world's largest economies to conduct research and innovate so as to improve conditions in Global South and promote sustainable practices in the Global North.[3498]

There is urgent need to promote research on small scale or artisanal fisheries to promote low-trophic, diversified, environmental-friendly, economically viable, and socially acceptable aquatic foods. This would involve technology/innovation generation, capacity building from production and throughout the value chain (small storage facilities, insulated transport vans to minimise post-harvest loses, small landing sites in inland water areas, and quality control along the entire value chain).[3499]

Engagement of youth and technological innovations is crucial in revitalizing ethnic cuisines: It is vital to involve the youth through programmes such as fellowships to promote local cuisines, and ensure conservation of traditional knowledge and agrobiodiversity. Likewise, use of appropriate technology across all food system actions can enhance the volume, quality, and branding of ethnic cuisines.[3500]

Funding international schemes. Innovation helps better manage water, but there is a need to fund innovation also in poorer countries. One of the obstacles to this solution is to find ways to convince wealthier countries to act internationally even in a situation where the emergency could be still hard to grasp within their own national borders.[3501]

Developing and scaling up new agricultural technologies and innovations to enhance the resilience of family farming systems, as well as to preserve the health of agro-ecosystems, animals, humans and biodiversity, and to reduce post-harvest losses.[3502]

Relevant action with measurable results that help achieve the 2030 SDGs. This includes highlighting existing solutions, celebrating and recognizing leaders in food processing systems, and calling for new actions from all sectors.[3503]

New technologies and innovations in food safety and security were discussed. Their importance in processes was highlighted, but the need for further studies on their viability

[3496] 202:15 p 6 in 361_May_19_21_Cadogan_Hincks

[3497] 205:5 p 6 in 364_May_26_21_DPIHD

[3498] 205:16 p 9 in 364_May_26_21_DPIHD

[3499] 208:24 p 10 in 367_May_27_21_Kachulu_Thilsted

[3500] 219:6 p 7 in 380_June_08_21_Shakya_Chettri

[3501] 224:15 p 9 in 385_June_09_21_Lazzaris S

[3502] 229:4 p 6 in 226a_May_17_21_Oteyami O_English

[3503] 235:3 p 6 in 276a_May_13_21_CCIE_English

and actual effects was discussed. At the same time, the need to analyze how these innovations have been adapted and their impact in some sectors was highlighted.[3504]

Overall, the group identified three possible solutions to promote the development and adoption of more sustainable aquaculture products and practices: 1. Develop innovations that add value to producers: Adoption and implementation of sustainability oriented innovation could be improved by placing greater emphasis on producing solutions that add value to producers, not only environment or animal welfare.[3505]

The group noted that aquaculture is incredibly diverse in both product and practice, and thus requires a locally tailored approach regarding research and innovation. Research and innovation has to be developed according to local needs and also more closely account for locally available resources (financial, personal, etc). Local producers must have the capacity to implement the innovation and also provide maintenance.[3506]

The speakers also highlighted some of the elements needed to enable food systems transformation. These include the need to: foster multi-stakeholder partnerships at national and regional level to build trust and commitments based on shared understanding and inclusion; mobilize resources to implement actions at scale, through sustainable investments (public, private, blended) and other instruments such as public incentives (subsidies, taxes); harness the potential of innovation and technology, making them accessible to farmers/fishers/foresters; identify trade-offs between actions/sectors and strategies to minimize them; foster behavioural change across food systems actors through education and awareness building.[3507]

The practice of incremental innovation to make existing systems better as well as transformational was raised as a solution.[3508]

Innovation: Exploring various types of innovation in transforming meat production and identifying potential conflicts and synergies. Two types of innovation were discussed as important for driving the agricultural transition - Incremental innovation that works alongside existing practices; and transformational innovation that brings new technologies to innovate new ways of doing agriculture. These are both felt to be key for an inclusive approach that allows all stakeholders to participate and be part of innovation. Innovation should not work in a way that leaves behind certain stakeholders. Major specific innovations that were highlighted was animal feed innovation to drive decarbonisation.[3509]

The growth of the idea of food as medicine and the immediate opportunity to expand this on a societal level lies with businesses and innovation to make changes as the medical community and public policy moves more slowly.[3510]

[3504] 235:12 p 9 in 276a_May_13_21_CCIE_English

[3505] 240:20 p 9 in 319_June_30_21_Fredriksson O

[3506] 240:28 p 10 in 319_June_30_21_Fredriksson O

[3507] 244:16 p 8 in 480_June_21_21_CIHEAM_Multi

[3508] 245:12 p 7 in 481_June_23_21_Global Counsel

[3509] 245:13 p 8 in 481_June_23_21_Global Counsel

[3510] 249:4 p 6 in 485_June_22_21_Levesque_SD

It was broadly agreed that the key factors that impede women agri-preneurs' access to finance and capital are lack of collateral, high interest rates and poor collaboration between stakeholders, therefore developing gender responsive financial and business support services coupled with diverse financial schemes, interest free loans and grant to small enterprises, incentives to financial institutions to accept alternative forms of forms of collateral. Finally, it was concluded that there is need to support innovation and research addressing gender and business success.[3511]

a. Tipping current innovations beyond incremental and towards their transformative potential b. Embedding innovation into strategies for greater food equity c. Ensuring a collaborative "ecosystem" of innovators.[3512]

Also, there should be more collaboration between universities and research institutions to do basic research on new innovations. Also, strengthen collaboration with advance research institutions.[3513]

Strengthen research extension farmer linkages. Extension agents should be aware of new innovation developed by researchers and disseminate innovations to farmers. Private extension has role to play in spearheading the transfer of information from the researcher to the farmers.[3514]

Provide adequate access to natural bodies of waters, productive resources, markets, technology, and innovation.[3515]

Strengthen fishers' organisations and access to productive resources, markets, technology and innovation.[3516]

Agricultural innovations and practices driving positive change in the agri-food production systems (crop and livestock systems) that can be adapted or scaled in different contexts.[3517]

…improve access to innovative technologies and digital solutions such as improved seed, mechanization, irrigation, and ICT to boost agricultural productivity, increase competitiveness, address the effects of climate change, and more generally help transform food systems.[3518]

Establish knowledge platforms where policy, institutional, and technological innovations, best practices and lessons in successfully transforming food systems can be made available to different stakeholders so as to learn from the past and avoid past mistakes. For example, it is important to learn from what has worked well in other countries, like mechanization

[3511] 255:4 p 6 in 491_June_23_21_Dido_Otieno

[3512] 259:5 p 6 in 495_June_23_21_Forum for the Future

[3513] 262:40 p 7 in 498_June_24_21_Danquah E

[3514] 262:42 p 7 in 498_June_24_21_Danquah E

[3515] 263:10 p 6 in 499_June_25_21_GANSF

[3516] 263:24 p 7 in 499_June_25_21_GANSF

[3517] 268:10 p 7 in 504_June_30_21_Susumu_Leiva

[3518] 271:7 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

programs in Ghana and the need for governments to create enabling an environment for mechanization and private sector players.[3519]

Stimulate innovation (products, processes, systems).[3520]

For Africa to realize its full agricultural potential to bolster its food systems, there is need for significant investments in key productivity enhancing innovations to harness science-based solutions for growth.[3521]

Science solutions for growth: For Africa, especially Sub-Saharan Africa, to realize its full agricultural potential to bolder its food systems there is need for significant investments in key productivity enhancing innovations. Science solutions must make sense to indigenous people and have the capacity to increase the 'bottom line' for small holder farmers. Harnessing competitive advantage, improving markets and eliminating trade and non-trade barriers have potential to support agri -food systems on the continent.[3522]

Improving the labour productivity is critical for African agriculture to play a greater role in meeting local to global food demand, in a competitive and a cost-effective and competitive manner, as Sub-Saharan Africa harnesses science solutions for growth. A proportionately balanced workforce will enhance labour productivity, especially when coupled with agri-innovations creating opportunity to increase rural incomes and participation in cash economy.[3523]

…using innovations and technologies applied across the entire food system including labelling, traceability, food safety, use of risk based approaches, product quality, and e-commerce…[3524]

Develop and apply advanced technologies and innovations to cope up with climate change and improve soil health.[3525]

The 17 SDGs have given us a common language and a common goal which is important for setting the base for co-creation. Incubator spaces are therefore helpful, and they create innovation spaces which are helpful in reaching these common goals.[3526]

Making sure the current engagement programme has data science implemented by having incubation spaces for innovation and co-creation which will take longer term commitments.[3527]

Additionally, emerging from conversations during the planning of this event and from comments shared by at least one panelist and one participant, there was discussion about

[3519] 271:16 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[3520] 273:69 p 11 in 509_June_30_21_FFA_Nestlé

[3521] 276:6 p 6 in 512_July_01_21_Malawi President_Ekwamu

[3522] 276:9 p 7 in 512_July_01_21_Malawi President_Ekwamu

[3523] 276:10 p 7 in 512_July_01_21_Malawi President_Ekwamu

[3524] 277:12 p 6 in 513_July_01_21_Weise S

[3525] 277:69 p 9 in 513_July_01_21_Weise S

[3526] 278:31 p 9 in 514_July_01_21_Bolling_Multi

[3527] 278:38 p 9 in 514_July_01_21_Bolling_Multi

the importance of inclusivity and ideas on creating space for all kinds of knowledge, both modern and traditional. Views were expressed that technical innovation should not be limited to lab-based science, but also incorporate indigenous technologies and knowledge. Recommendations were made for future discussion with invitation to a broader panel, including agroecologists, to speak to the places of collaboration and overlap to avoid foreclosing on views, disciplines, or stakeholder groups.[3528]

…what innovations are needed for smallholder farmers and small and medium enterprises to sustainably nourish Rwanda now and in the future? Aggregation is the answer identified for small-scale farmers and SMEs. Individual small food system actors confront far too many challenges, such as financial access and insurance. These issues can be mitigated when individual SMEs or farmers are brought together. Indeed, policymakers will be more aware of cooperation, and banks will be more willing to invest in innovative ventures.[3529]

The second question was, what innovations make nutritious food accessible, affordable and desirable to all Rwandans? The answer to the second question focuses on the necessity to find out an innovation that makes healthy and nutritious food aspirational for consumers. This will lead to opportunities to market healthy food and guide consumers towards healthy foods. Overall, the FSIH will play a critical role in addressing all of these issues.[3530]

Grain losses due to aflatoxins are between 14 to 35% annually. How can we reduce losses and rejects? We need innovation but must be affordable for smallholder farmers otherwise it will not be successful.[3531]

Invest in innovation for precision animal feed and improved animal digestibility (science-based).[3532]

Support innovation in urban agriculture through dedicated funds and programmes, which would contribute to higher social cohesion among community members, promotion of green, low-carbon intensity products and better inclusivity of all members of society to leave no one behind.[3533]

Leverage the power of innovation and digital technologies to switch agricultural production from input-intensive to knowledge-intensive systems and expanding employment opportunities effectively.[3534]

Identified priority areas for research and development are dependent on landscape and climatic conditions. These include the development of lower cost and scale-neutral stress tolerant rice varieties, improving rice-fish systems and polder farming, and the

[3528] 298:27 p 10 in 534_July_07_21_WBADB_ADI_Multi

[3529] 300:12 p 6 in 536_July_08_21_Musabyimana JC

[3530] 300:13 p 6 in 536_July_08_21_Musabyimana JC

[3531] 300:42 p 11 in 536_July_08_21_Musabyimana JC

[3532] 301:40 p 8 in 537_July_08_21_ANP_WWF

[3533] 310:29 p 8 in 546_July_13_21_INDEP

[3534] 310:39 p 9 in 546_July_13_21_INDEP

establishment of climate smart villages. It was also suggested that promising new technologies must be made readily available in the public domain.[3535]

Behaviour change and communication programs are critical in enabling the participation of women and youth in the value chain. Increasing job creation in the agricultural sector can minimize the economic and social impact of male out migration. Digital tools for market linkages, advisory services and weather data can help in creating accessible pathways for underserved sectors. Aggregating farmers through formal organisations such as farmer producer companies (FPCs) can help develop linkages between farmers and other value chain/industry actors, including academia, for knowledge exchange and capacity building. Such linkages can increase their bargaining power as value chain actors and also help producers develop demand-based products that meet consumer needs and preferences. Multi-stakeholder cooperation and participatory monitoring and evaluation contribute to making value chains more inclusive.[3536]

There is an urgent need to increase the number and effectiveness of agriculture innovation hubs and research centers across the nation.[3537]

Some ideas on using technologies to truly benefit farmers and increase productivity as follow: 1.Training younger generation at school and university levels on design, software, marketing etc that build capacity for the agriculture sector. 2. Technology start-up competition focused on the food system. 3.Increase transparency on the food system, including on genetically modified feeds etc. 4. Modernising aquaculture and agriculture.[3538]

New approaches and innovations are required to transform food systems, for a more equitable and sustainable world. Evaluation has a key role to play in supporting this, by shedding light on the complexities and interdependencies of food systems and identifying actionable and timely solutions, and ultimately contributing to the 2030 Agenda for Sustainable Development.[3539]

The following points were raised and considered necessary for evaluation and the evaluation community to support transformation of food systems: Promote an evaluation culture, in order to enhance the learning value of evaluation, in balance with accountability objectives, and for evaluation to become everyone's business, including donors, commissioners, decision-makers, civil society and others involved in food systems. Embrace the complexity of food systems transformation and other global challenges – such as climate change and its impact, which require integrating systems thinking and dealing with uncertainties. Promote the role of evaluators as engaged participants: evaluators should position themselves in a more dialogic and partnership role in order to facilitate support decision-making, and engage in open communication to help form solutions and stimulate transformative change. Innovate methods and approaches making a case for

[3535] 313:18 p 7 in 549_July_14_21_Meah N

[3536] 313:21 p 8 in 549_July_14_21_Meah N

[3537] 318:5 p 6 in 555_July_15_21_Zombe K

[3538] 319:12 p 9 in 556_July_15_21_Von Goh_GenTan

[3539] 320:5 p 6 in 557_July_15_21_EvalForward_FSRD

non-traditional and creative ones. These may include developmental, participatory and other approaches, which are more suited to help understand the complexity around food systems, while ensuring that the focus on quality is preserved. Continue to develop capacities of evaluators so that they are equipped with the necessary skills and confidence in making the right choices on methods and approaches. Ensure more inclusive and equitable evaluations: cross fertilize research and evaluation with local and indigenous food systems and practices and involve different stakeholders in the process- leave no one behind[3540]

The Covid crisis has shown that gaps in income and food insecurity are increasing. The coping mechanisms that people are putting in place can be leveraged as opportunities to innovate food systems interventions. The group also noted that resilience is a key aspect to support as it translates into improved preparedness during crisis.[3541]

Grassroots level Knowledge: UNDP, India identifies grassroot innovations which could be potentially scaled across rural communities. While doing so, it has catalogued traditional ecological knowledge to develop community goals and policies. Grassroot innovations have great potential to solve hyperlocal cropping problems.[3542]

Policy Advocacy: Policy advocacy on use of emerging technologies is essential to address problems of dryland food systems. Policy advocacy should follow bottom-up approaches. The Government of Telangana and the International Finance Corporation (IFC) are joining hands to develop policies on agricultural data standardisation, ownership and sharing/utility. It is also planned to develop policies governing the use of government owned data by start-ups, industries and researchers.[3543]

Farmers are unable to adopt accessible technology due to financial limitations. A subsidy approach if taken by the Government, can help.[3544]

The participants noted that small farmers need financial and technical support to grow and sell more nutritious varieties of crops. Primarily, as it is a big risk for many farmers to change what they are currently growing without any financial support or incentive. In other words, it might not always be profitable or comparably profitable for them to grow more sustainable and environmentally friendly crops. Furthermore, different regions experience difference realities, both in terms of the agroecological and the socioeconomic conditions in which they operate. Therefore, State funded technology and innovation are essential particularly when it comes to helping small farmers grow more sustainable produce and/or reducing their food loss and waste.[3545]

It is an indisputable fact that farmers need increased access to markets, innovation, trading and finance in order to survive the next 20 years. However, this can only be achieved by every member of our global society taking ownership of our shared food

[3540] 320:6 p 6 in 557_July_15_21_EvalForward_FSRD

[3541] 320:9 p 7 in 557_July_15_21_EvalForward_FSRD

[3542] 321:8 p 7 in 558_July_16_21_RICH_ICRISAT

[3543] 321:9 p 7 in 558_July_16_21_RICH_ICRISAT

[3544] 321:14 p 11 in 558_July_16_21_RICH_ICRISAT

[3545] 323:24 p 9 in 560_July 19_21_Arbuthnott_Multi

systems and/or moving away from what is currently found under the prevailing 'get big or get out' mentality that seems to be dominating our global food systems and the manner in which we theorise them.[3546]

Training and capacity building are seen as core elements to the overall success of improved Food Systems in Sub-Saharan Africa. Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider training farmers on how to innovate and be competitive on the market and on how to link agricultural production to food and nutritional requirements. Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. Moreover, not only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge, favouring low-cost technologies and strategies, and adaptability to local farmers who do not have many practical tools.[3547]

Subsequently, participants identified indicators and best practices that could effectively measure the successfulness of these technologies and practices: • Time, in addition to quality and quantity, could be an indicator to measure technologies successfulness. Example: It is important to respect yields rotation/irrigation time and technologies could help in simplifying this process. In general, when we assess successfulness of technologies and practices, endogenous aspects, including geographic position, quality of soil, presence of water, general region characteristics should be considered too.[3548]

In some contexts, informal education and innovative ways of raising awareness among farmers towards innovation can be more important and effective than formal education. Some examples of informal education: • Extension services: decentralization policies and focus on infrastructure are undermining the governmental extensions services that lack resources in Sub-Saharan Africa. Other actors such as NGOs or non-academic research centers are playing an important role for fostering informal education. Promoting "modern farm models" as platforms where other farmers can learn how to implement technologies and where they can cooperate to share inputs to implement solutions. New ways of promoting capacity building and awareness are based on the co-construction of knowledge and dialogue and communication among different categories of stakeholders through a multi actor approach. An example of this kind of practices is the case of the "Theatre Forum" on climate change adaptation strategies (see https://futureclimateafrica.org/coproduction-manual/).[3549]

Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider: • Training farmers on how to innovate and be competitive on the market. • Training on how to link agricultural production to food and nutritional requirements. • Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. In this respect, the active engagement of leaders in the rural communities is crucial. • Not

[3546] 323:34 p 12 in 560_July 19_21_Arbuthnott_Multi

[3547] 324:7 p 7 in 561_July_19_21_OCCAM

[3548] 324:23 p 9 in 561_July_19_21_OCCAM

[3549] 324:45 p 11 in 561_July_19_21_OCCAM

only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge (e.g. Traditional crops vs GMO; certification of local seeds, allowing and promoting locally-adapted, cheap and good quality seeds).[3550]

Mitigate against huge post-harvest losses by adopting modern methods of food preservation.[3551]

Devise innovative ways of ensuring that left over food is not thrown away.[3552]

Their previous research also suggested that new innovations, such as vertical farming, could be a solution to the increasing populations and food demand.[3553]

The key to success is for farmers and ranchers to remain adaptable and innovative.[3554]

Consumer choice should be thought of and understood differently than cost of production. Technological and scientific innovation are directly linked to a nation's average household food budget: The more advanced the systems (e.g., use of irrigation, tractors, fertilizer), the lower the average cost of food per household.[3555]

Innovation and technology as great allies. All participants stressed its importance during the discussion, and indeed, innovation will be key in the future to ensure more efficient, productive, resilient, and safer crops. Therefore, it is essential to promote R&D initiatives to develop this type of crop at an affordable price for small producers. On the other hand, the digitization and scalability of technological solutions along the supply chain represent a great opportunity, both in terms of natural resources optimization and traceability, data reliability, and collaboration.[3556]

Non-returnable financial support for the development of co-innovations by AFCI organizations and research institutes to expand biologically, environmentally and economically sustainable agroecological production systems. Reward nature-friendly production (as is done with mega ventures) - Access to land is very important in systems and farms that have this limitation or that most of their farmers are on leased land with the instability that this entails when it comes to innovation and development. Waiver of taxes as a tool for promotion and incentivization.[3557]

By rethinking food sovereignty, progress could be made in the work of resilience and mitigation in the face of the pandemic, guaranteeing a supply of healthy food to the population throughout chain. This in turn involves the creation of a comprehensive plan that boosts the resilience of small producers for recovery, prevention of future crises and transformation to sustainable and healthy food systems. This implies support for countries

[3550] 324:46 p 11 in 561_July_19_21_OCCAM

[3551] 325:8 p 6 in 562_July_19_21_Zombe K

[3552] 325:11 p 6 in 562_July_19_21_Zombe K

[3553] 332:7 p 4 in 156a_Apr_27_21_Dong_Quyang

[3554] 336:3 p 3 in 494a_June_23_21_US Farmers

[3555] 336:10 p 3 in 494a_June_23_21_US Farmers

[3556] 337:8 p 9 in 132a_May_27_21_Forética_Eng

[3557] 340:27 p 12 in 406a_June_10_21_COPROFAM_CLOC_Eng

to adopt innovative, inclusive and sustainable approaches that contribute to bridging the digital gaps of the rural population; for women, indigenous people and Afro-descendants equally.[3558]

Invest in co-innovations of FAOs and research institutes. • Investigate "natives" and their nutritional value. • Contribute 10% of what the sector contributes to the GDP.[3559]

Technology and innovation are essential for promoting agricultural development. Better-quality inputs (molecules) that can boost production and take care of our environment should be promoted.[3560]

It is essential that farming in the north be done in innovative ways that protect environmental quality. This means new farmers must have proper training (e.g. agricultural schools, internships, clear guidelines, etc.).[3561]

Link tradition and innovation

Participants agreed that optimizing animal agriculture's environmental impact is an ambitious but attainable goal, which can only be achieved via sustained, long-term active participation of all stakeholders with a goal of constant innovation and improvement.[3562]

There is an urgent and continued need for robust data and innovation, and for food systems policies to be informed by and formulated based on science. [3563]

First, about renewed traditions, the group underlined the importance of taking the best out of both traditions and innovations, as it would reduce the fear of losing something. It highlighted that while intergenerational dialogues are key, the voice of the youth should be strengthened in decision-making arenas, in a real and honest manner, in particular when it comes to taking actions with a sense of urgency.[3564]

Development of traditional and innovative sources of finance, (such as, crowdfunding, diaspora investment, franchising, fintech, etc) and tailored risk-management products such as farmer-centric insurance products for each value chain.[3565]

Acceptance and adoption of genetically modified varieties by rural farming households.[3566]

One way to get there might profit from initiatives aiming at setting up a new tradition pattern, where our natural need for a sense of belonging couples with the revaluation of

[3558] 344:2 p 6 in 418a_June_18_21_CLOC_Eng

[3559] 347:18 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[3560] 351:33 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

[3561] 353:24 p 3 in 505a_June_29_21_Borchard_UNC

[3562] 4:2 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

[3563] 28:8 p 6 in 064_Mar_4_21_Farming First

[3564] 39:17 p 9 in 175_Mar_16_21_Donati L

[3565] 44:27 p 10 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[3566] 44:42 p 13 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

ancient know-how blended with innovative approaches. Often this can happen with an initial incentive, thus with a political will.[3567]

In order to link tradition and innovation to create a better future in terms of food production and consumption, cooperation between the different generations is necessary as much as the reform of the education system.[3568]

This includes balancing the use of new technologies with the best use of traditional technologies.[3569]

Other solutions discussed involved integrating technology and indigenous knowledge, educating local producers on the implications of unsustainable practices, and putting human rights at the heart of community based food systems with land and territory acknowledgement.[3570]

Shifting from Teacher-Centered Learning (TCL) to Student-Centered Learning (SCL) and Community & Student-Centered Learning (CSCL) will help contextualize the food value chain and food security, discuss the participatory model of sharing localized and contextualized best practices, contextualize the role of food justice, integration of traditional knowledge, and the development of place-based learning projects that promote community well-being.[3571]

A cultural shift in what foods connotate wealth and progress, from the "meat for every meal" as the rich man's diet, to "healthy foods" as the baseline of wealth.[3572]

The gap between innovation and regulation needs to be bridged.[3573]

Innovations must also reflect both the socioeconomic and agroecological contexts of the food system to which they are being applied. "As a farmer, what I need is a motorcycle but you give me an airplane.[3574]

There are two key drivers of technological innovations, the recent advances in earth observation systems and the increased use of mobile phones –90% of the precision decision making data comes from these two technologies. The transformation requires an "Inclusive Agroecosystems" where use of science, technology help to rich the producers-farmers, connect them to consumers through an institutional framework that uses the digital technologies, enormous agricultural research with the ecological framework - diversification of agriculture with indigenous knowledge and wisdom of the right mixer of

[3567] 60:8 p 6 in 021_Jan_27_21_Donati L

[3568] 60:20 p 8 in 021_Jan_27_21_Donati L

[3569] 93:60 p 13 in 227_May_18_21_Tarawali S

[3570] 143:31 p 10 in 231_May_19_21_MCD

[3571] 157:39 p 8 in 278_May_18_21_Gregorio B

[3572] 160:21 p 8 in 292_May_21_21_ProVeg_Multi

[3573] 169:21 p 7 in 327_May_18_21_CropLife

[3574] 169:46 p 13 in 327_May_18_21_CropLife

crops, varieties, multi-purpose trees, livestock, and people to preserve soil health and biodiversity.[3575]

Technology innovation —driven by geotagging, agrotagging, Earth observation, machine learning, and ICT-enabled citizen science, mapping new consumerism —which provides essential entry points for integrating the local knowledge and indigenous knowledge (I am not comfortable with the world intelligence, could you explain what do you mean?) for site-specific advisory, access to services/information that benefits the remote and smallholder farmers and consumers while safeguarding the environmental flows.[3576]

Through these spaces of dialogue, our aim was to listen openly about what indigenous peoples have to say; which builds the necessary complementarity and synergy between technological innovations and traditional practices, to face the current situation that indigenous peoples experience due to the weakening of their food systems.[3577]

First of all, no action track will achieve its goals and objectives as far as the right to self-determination of Indigenous Peoples is not guaranteed as well their rights to their lands and waters. Many of the technologies and indigenous knowledge is preserved within Indigenous Peoples territories and with the daily use of their language and this is how they pass the knowledge from one generation to other. Thus, it becomes imperative to respect their right to self-determination, lands and waters.[3578]

It is of crucial importance to open dialogues about the transmission of knowledge among young peoples of indigenous communities. There is a key role of carrying out the analysis work from their ancestral knowledge but at the same time under the lens of the recovery of this knowledge by the indigenous peoples themselves, especially from the oldest wise peoples to the youth, under their praxis and their own cosmovision.[3579]

It advocated the use of innovations to integrate indigenous knowledge and wisdom for better diet diversity, farming systems and planetary health, and use of Earth Observation and frontier technologies to investigate and integrate Indigenous knowledge for food and nutritional security.[3580]

A bridge must be made between rural and urban, young and old, and indigenous and settler communities to co-create equitable solutions that prioritize human rights- especially the right to nature.[3581]

Engaging youth in farming, Embracing technology, & Preserving Culture: Farmers are aging, and it's a problem. In order to move forward with agriculture and allow for more

[3575] 188:28 p 7 in 346_May_31_21_CANEUS_Multi

[3576] 188:34 p 9 in 346_May_31_21_CANEUS_Multi

[3577] 188:41 p 9 in 346_May_31_21_CANEUS_Multi

[3578] 188:44 p 10 in 346_May_31_21_CANEUS_Multi

[3579] 188:46 p 10 in 346_May_31_21_CANEUS_Multi

[3580] 188:47 p 10 in 346_May_31_21_CANEUS_Multi

[3581] 204:3 p 7 in 363_May_26_21_Mehta_Bautista

innovation, we must engage youth in farming. In doing so we can embrace technology and promote cultural and ancestral knowledge- blending the old and the new.[3582]

Preservation of ethnic cuisines also helps reinforce cultural identities, empowering these communities to create resilient food systems. The nutritional and health benefits of ethnic fermented foods provides good prospects for future foods. Strengthening the food value chain is key in bringing mountain food products to the market, which can ultimately enhance livelihoods of mountain farmers and producers. By buying directly and locally, we can also help build the resilience of women, small farmers, and vulnerable populations. Youth who have gained experience and skills from working abroad and returned due to COVID-19 could be engaged in revitalizing ethnic cuisines and addressing issues of hygiene and food safety.[3583]

There is also need for targeted investment in key productivity enhancing innovations to harness scientific solutions for the targeted growth.[3584]

Member States have to strengthen production fundamentals including research and innovation that direct how we leverage production resources to generate relevant technologies; guide threat surveillances and inform policy design and accountability.[3585]

Need for mechanization, irrigation, improved varieties that are adapted locally.[3586]

We saw that further conversations in innovation need to be guided by science as one may not want to get into a market where a rare seaweed is required, or a species is overharvested.[3587]

Capitalize on local resources and traditional knowledge to understand and build our own Pacific resilience in the face of Climate change, food security, and the current COVID-19 pandemic.[3588]

… ensure that technologies used in African are well-adapted to the African context and specificities.[3589]

Likewise, researchers and entrepreneurs noted the innovativeness of the initiatives presented, particularly the farmer-to-farmer technologies and how 'old' concepts such as permaculture, agroecology and respect for nature resurfaced in a creative way that needs to be integrated in subsequent UN FSS discussions about food systems.[3590]

Adaptive technologies: Increasing yield gaps and climate change are pushing researchers to develop high yielding and climate resilient crop varieties and hybrids. GMO technology

[3582] 204:11 p 9 in 363_May_26_21_Mehta_Bautista

[3583] 219:23 p 12 in 380_June_08_21_Shakya_Chettri

[3584] 223:5 p 6 in 384_June_09_21_Ekwamu A

[3585] 223:7 p 6 in 384_June_09_21_Ekwamu A

[3586] 262:44 p 7 in 498_June_24_21_Danquah E

[3587] 264:15 p 7 in 500_June_26_21_Edible Issues

[3588] 268:9 p 6 in 504_June_30_21_Susumu_Leiva

[3589] 271:9 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[3590] 317:6 p 6 in 554_July_15_21_Lopez DE

is also facing regulatory hurdles in India. Hence, its necessary to look at alternative adaptive technologies. Smart Nanomolecule Induced Physiological Response(SNIPR) is an alternative technology developed by the RICH supported company-Bioprime Agri Solutions (https://www.bioprimeagri.com/snipr/) which developed biomolecules that modifies crop physiological responses. Adaptive crop varieties which are biofortified and suitable for India and Africa, could be potentially used to replace current varieties.[3591]

The valorisation of traditional knowledge by discovering local and ecological resources, and the use of local, accessible and already existing materials to reduce the use of chemical fertilizers, to increase nutrient cycling at farm and household level and recycling of crop residues, are important.[3592]

Training on traditional knowledge is crucial, feasible and applicable, favouring low-cost technologies and strategies. It is also adaptable to local farmers who do not have many practical tools.[3593]

Without a market for things like manure by-products or carbon credits farmers and ranchers operating on thin margins will not be able to implement mitigation strategies which inevitably will raise their costs. It is incumbent on the developed world to bring climate-smart solutions to the developing world, which is seeing the largest increases in meat and dairy production, if we are to meaningfully reduce greenhouse gas emissions from this sector.[3594]

The Food Education group agreed that science and cultural norms need to work together and not against each other to properly educate others about food and create a community that strives for a better for system.[3595]

The imposition of foreign food programs has encouraged the substitution of own community farming practices. To counteract its effect, they propose the preparation of recipe books for traditional dishes for the recovery of techniques for the conservation of native seeds such as chigo, kupe, guapo, healthy food and traditional gastronomy, taking advantage of the communities' existing collective memory. Apply ancestral knowledge and own technology to generate greater production and benefit of food.[3596]

Women advocate the creation of policies that respect the food autonomy of indigenous peoples, based on the production, consumption, distribution and bartering of the items produced by indigenous communities, as a strategy for food sustainability in emergency situations, innovating exchange and commercialization.[3597]

Likewise, we women have insisted that our own economic systems be strengthened and these are firmly linked to the territory and the land. International and national entities

[3591] 321:7 p 7 in 558_July_16_21_RICH_ICRISAT

[3592] 324:16 p 7 in 561_July_19_21_OCCAM

[3593] 324:38 p 10 in 561_July_19_21_OCCAM

[3594] 328:2 p 6 in 565_July_20_21_Mitloehner_Kebreab

[3595] 332:8 p 4 in 156a_Apr_27_21_Dong_Quyang

[3596] 343:5 p 6 in 417a_June_18_21_Fernandez L_Eng

[3597] 343:6 p 6 in 417a_June_18_21_Fernandez L_Eng

must adapt their technical assistance within the expectations and needs of women in each of the territories, listening to their experiences and making possible a work of inclusive participation of women in each and every one of its phases.[3598]

Scale up

Fairer food systems start with local changes, then scale regionally, nationally to eventually build global changes. Also, establish new local models of more sustainable production and scale up so that it can be available to all consumers (not just a small group with greater purchasing power). Develop short production circuits that feed the cities.[3599]

Group 2: A large number of producers are not aware of the digital solutions available. To make these solutions better known, we must launch an analysis of the various contexts in which they are applied, as some technologies focus on specific contexts and are not applicable in others. It is important to objectively evaluate and document the specific impact generated by each of these…[3600]

Assist women farmers to scale up to larger production and not just subsidiary activities.[3601]

Scaling opportunities aligned with the circular economy for food systems. Therefore, it is essential to implement circularity principles from the farm to the consumer level to foster the development of upcycled products, use of byproducts, valorization of biodegradable packaging, and reduction of waste sent to landfills.[3602]

Finally, to scale innovative solutions, capturing investments from venture capital and angel investors was suggested, by involving more startups.[3603]

Boosting nature-positive production at scale: Sacred Relationship to Environment and the Critical Role of Lands, Territories, and Resources of Indigenous Peoples.[3604]

Need to scale up innovative practices, such as the use of wastewater and fecal sludge in the growing system, which could assist in the affordability of fertilizer; could also learn from other regions with water scarcity.[3605]

We ask all parties to support scaling up agroecological and traditional systems with the same focus and resources allocated for industrial production systems.[3606]

[3598] 343:9 p 7 in 417a_June_18_21_Fernandez L_Eng

[3599] 364:32 p 10 in 415_June_16_21_van Schoonhoven M

[3600] 509:3 pp 3 – 4 in 073a_May_18_21_IICA_Eng

[3601] 520:9 p 8 in 107a_June_22_21_Trimarchi A_Eng

[3602] 389:27 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[3603] 389:67 p 11 in 431_June_22_21_CEBOS_EMBRAPA

[3604] 390:25 p 10 in 432_Dec_15_20_UNPFII_FAO

[3605] 424:16 p 7 in 465_June_16_21_Congressional Hunger

[3606] 449:29 p 10 in 390_May_28_21_UNPFII_FAO

Promote, Scale and Replicate existing successful models of women owned and managed food value chains.[3607]

Where trade is involved, build capacity for border staff so they know which laws exist and understand them. Information on healthy and sustainable diets, agroecological management must be disseminated on a large scale while valuing local knowledge and know-how. Also, disseminating good consumption criteria, reducing huge post-harvest losses, incentives and scaling up certain practices that facilitate access to food such as e-commerce will help make the transition. Provide regular information on product prices, taking advantage of social networks so that small producers know where to take their products and not sell at below-market prices.[3608]

To this end, empowerment of local producers is crucial. The role of neutral facilitators, especially grassroots organizations, was emphasized to accompany producers in the long term, provide technical support for the product differentiation, support the development of alliances and a territorial governance, enhance the scalability of the project and equilibrate forces between the various operators in a given value chain, to the advantage of small economic actors.[3609]

As a summary of this discussion, the closing speaker reminded the need to support civil society organizations and farmers – who are key stakeholders driving change – as well as the need to unlock capacity and finance to scale up new innovation business models. In conclusion, this Dialogue and the broader campaign on agricultural innovation provided further evidence of the need to scale up agricultural innovation to enable food system transformation, and helped build momentum around the innovation agenda in the lead up to the UN Food Systems Summit and COP26.[3610]

Stakeholders noted the need for a shift in current dietary habits, together with the scaling up and sharing of knowledge and evidence on practices that support ecosystem services, as well as increased diversification strategies (within fields and across fields and landscapes) that support ecosystem functions and resilience.[3611]

Goals must clearly incorporate and build on significant progress thus far, which is often not well understood by key audiences (including governments and consumers). The substantial contributions and commitments across the food and agriculture supply chain represent huge improvements and also offer the greatest potential as pilots to scale for further gain.[3612]

Participants agreed that progress is being made every day across the food and agriculture supply chain, including to reduce emissions, improve efficiencies and provide the best

[3607] 455:41 p 11 in 063_Mar_04_21_Nanavaty_Multi

[3608] 459:44 p 8 in 125_May_11_21_Mauderli_COSUDE

[3609] 462:13 p 7 in 133_May_27_21_CIRAD_Multi

[3610] 463:34 p 6 in 155_Apr_27_21_FCDO_Multi

[3611] 463:44 p 8 in 155_Apr_27_21_FCDO_Multi

[3612] 4:3 p 6 in 104_Apr_8_21_Animal Agriculture Alliance

products to consumers. Participants cited numerous examples of innovations that have reduced energy, land, and water use all while producing more food for a growing population. Participants urged that all stakeholders embrace and amplify these gains to reach our shared goals and to convince the public of the value and impact of practical improvements that must be continued.[3613]

Participants expressed concern that stakeholders' significant resources, time, and commitment invested in increased efficiency, productivity, quality, etc. are frequently discounted or even denigrated, discouraging efforts that should instead be praised, encouraged, and scaled up. Farmers and ranchers are particularly impacted by this vicious cycle and should be front and center in developing and implementing all solutions for more sustainable food systems.[3614]

Regulations are essential, but the practices and tactics are best devised at local levels by farmers who already are seeking and crafting solutions that fit their geography and climate. Different farms have different types of innovation, depending on the contexts. It could be running the farmhouse stove from a methane digester fed by only eight cows, or it could be an international conglomerate bearing the expense of methane pipelines from hog lagoons to a gas plant. Small farms can adapt some of the efficiencies from integrated operations with economies of scale.[3615]

Collective effort. Identify the gaps, they identify common resources that the companies can work on, and collaborate in building, scaling, and leveraging on these resources to help farmers have access to market, financing, training, and capacity building.[3616]

Use of drought resistant crops in pilots and scaling up its use in arid areas.[3617]

Importance of Transfer of technology importance to empower small and to better empower entrepreneurs to come up with new initiatives, piloting them, recording their work modality and benefits so that farmers are encouraged to scale them up.[3618]

Scaling up innovation - when we talk about innovation, is it something new and useful? It can be a new idea, or it can be a new way of doing things. There are lots of excellent ideas out there, but why are they not being scaled? And this could be because there is no conducive policy environment and sufficient investment.[3619]

There is also a need to increase access to sustainable finance to support scaling indigenous approaches and practices…[3620]

[3613] 4:19 p 9 in 104_Apr_8_21_Animal Agriculture Alliance

[3614] 4:21 p 10 in 104_Apr_8_21_Animal Agriculture Alliance

[3615] 8:24 p 10 in 169_Apr_6_21_Shea E

[3616] 9:20 p 8 in 171_Mar_31_21_Atilano C

[3617] 30:34 p 6 in 071_Mar_11_21_ESCWA_FAO

[3618] 30:50 p 7 in 071_Mar_11_21_ESCWA_FAO

[3619] 32:4 p 9 in 082_Mar_15_21_Yoovatana M

[3620] 35:69 p 10 in 095_Mar_27_21_Chinapoo C_Multi

…there is need to invest in taking initiatives to scale…[3621]

Scale innovative solutions. To advance progress in achieving the SDGs, stakeholders will need to measure, evaluate, and report the data and evidence that is required to iteratively improve food systems. This will include ongoing assessments to balance food security, public health, the environment and climate change, farmer livelihoods, and the needs of women, youth, and underserved groups…[3622]

There should be efforts driven towards scaling up local production to regional, national, and international terrains. On the long term, this will ease the importation burden that seats on our head as a nation.[3623]

The group believes that Fairtrade has managed to support local, social sustainability and thus they were wondering if similar systems would have the potential to support environmental sustainability as well?[3624]

Farmers noted that dairy community members pioneered and continue to be receptive to adopting new sustainability technologies and practices, but they must be economically and ecologically feasible. Anerobic digesters are one example of a proven technology that could be scaled.[3625]

Participants also pointed to the use of anerobic digesters as a unique opportunity to share the story of how the food system can provide alternative energy sources. Digesters are closed tanks which are used to break down organic matter such as cow manure and/or food waste through anaerobic digestion, creating biogas, which can be used to power the farm and communities, as well as to produce other materials. Participants believed it should be a priority to scale up the use of digesters and introduce them across the country for farms of all sizes and to look to community digesters.[3626]

In the US, people do not engage in food production and preparation as in countries with lower rates of obesity and diabetes.As in those other countries, Americans should be more involved with food production through community gardens to reduce distance from production to consumption. This includes participation by schools and universities to engage students, since significant lifetime consequences of poor nutrition emerge at a young age, and local governments/organizations should find ways to compensate individuals for working in these gardens. Involving schools and afterschool programs would have the added benefit of teaching children about nutrition. Community gardens place food agency for improved nutrition in the hands of those who are food insecure or cannot access preferred foods like fresh fruits and vegetables. These efforts draw on

[3621] 52:11 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[3622] 54:17 p 5 in 002_Nov_19_20_CGIAR

[3623] 73:14 p 10 in 204_Apr_27_21_YASIF_UYSG

[3624] 79:38 p 9 in 118_Apr_21_21_Huvio T

[3625] 84:22 p 10 in 153_Apr_28_21_GCNF_Multi

[3626] 84:30 p 11 in 153_Apr_28_21_GCNF_Multi

existing community and nonprofit institutions and promote ownership and pride in work through cultivation.[3627]

Communities on the ground have been doing pilots for some time – they know what works in their ecosystem. They can scale and are ready to go![3628]

But there is no pathway to the next point, no support or funding to get there

The consensus position was to scale out game-changing policies, technologies and business models that equip existing small-holders, pastoralist communities and agripreneurs.[3629]

Bringing scale: There is a challenge to take an innovation from niche to mass market – for that, regulatory support is needed.[3630]

Support for the diversity of emerging sustainable livelihood strategies will be critical, including education and training, as well as demonstration and scaling up of innovative approaches.[3631]

To maximise the potential of technologies in enabling fair, safe and sustainable supply chains, concerted efforts will be required to scale up and provide targeted education, including incentives & supports.[3632]

Some challenges explored include: • Scaling the technology adoption curve especially on last mile delivery for farmers and consumers, to positively impact food systems. • Building innovation ecosystems to incentivize, adapt and scale opportunities to enable food systems transformation, bring about systemic unlocks and mitigate against unintended consequences.[3633]

Societal and Institutional Innovations to build Leadership and Improve Scale Learning and sharing best practices will contribute to scalability.[3634]

Other outcomes from the discussions included the need for data sharing across sectors and across countries; integrated scaling pathways and even the pull through of WEF nexus tools and products to scaling.[3635]

Incubate business models and scale-up successful experiences through technical assistance, with emphasis on the youth and on innovation, and with a geographical focus.[3636]

[3627] 86:5 p 12 in 162_Apr_16_21_Fountain G

[3628] 87:1 p 10 in 173_Mar_25_21_Mayne A

[3629] 93:11 p 8 in 227_May_18_21_Tarawali S

[3630] 99:28 p 9 in 285_May_20_21_TFFF_Multi

[3631] 112:9 p 6 in 074_May_18_21_O'Mara_Teagasc

[3632] 112:82 p 13 in 074_May_18_21_O'Mara_Teagasc

[3633] 113:1 p 5 in 075_Mar_10_21_IFAN

[3634] 113:21 p 6 in 075_Mar_10_21_IFAN

[3635] 117:2 p 7 in 109_Apr_13_21_Jacobs-Mata I

[3636] 118:12 p 6 in 117_Apr_22_21_Dinesh D_Multi

Thirdly, in order to get these solutions to scale, we have to tailor blueprints which might require more work. Ideally, we would want blueprints at scale, noting that there are local realities for implementation. Sufficient investments needed in the 5 key drivers of change, like the Sustainable Rice Platform, noting local differences, to stimulate uptake and scale.[3637]

Lastly, the participants discussed how to scale up seaweed production to provide adequate sourcing for agricultural uses since one of the challenges at the moment is the small amounts of seaweed for use in agriculture. One participant felt it would be difficult to grow one aquatic product on a massive scale without having large environmental impacts. This led the group to agree that seaweed production has to be diversified and done sustainably by adding to aquatic ecosystems in a regenerative way rather than growing, harvesting, and polluting ecosystems. They concluded that integrated multi-trophic aquaculture is a solution to this problem and will allow the industry to scale up in a sustainable manner.[3638]

Cash transfer program – there are good examples of cash transfer programmes that can be scaled up. For example, in the Philippines, women receive monetary support of 500 pesos (10 USD) per month per household and 300 pesos per school child. Beneficiaries must fulfil two conditions: 1) pregnant women have access to pre- and post-natal care and be attended during childbirth by a trained professional; 2) Parents must attend family development sessions which include topics on responsible parenting, health and nutrition.[3639]

Tools and infrastructure to aid access to financial services should be scaled to reach more women. These include digital savings, digital financial platforms emphasizing women inclusion and payments for environmental services schemes through direct mobile payments.[3640]

Development Cooperation/ International organizations: • Support governments in identifying and upscaling innovative climate-smart solutions to make food systems resilient to climate change as well to make them able to meet the growing food demands • Provide more support to the government to revise their policies and translate policy into action and enable them to have sound governance mechanism for implementation of relevant policies.[3641]

Various strategies adopted at community levels can be scaled up to promote inclusivity and equitability in the WEF nexus. Some small-scale programs can be expanded to achieve the desired results.[3642]

[3637] 118:49 p 11 in 117_Apr_22_21_Dinesh D_Multi

[3638] 119:46 p 12 in 121_Apr_28_21_Doumeizel V

[3639] 120:31 p 11 in 127_May_13_21_IAFN_CWFS

[3640] 120:46 p 16 in 127_May_13_21_IAFN_CWFS

[3641] 127:23 p 10 in 159_Apr_21_21_Hafeez M

[3642] 127:60 p 16 in 159_Apr_21_21_Hafeez M

Scaling up innovation for Water and Energy for Food (WE4F) through the MENA Regional Innovation Hub to produce more nutritious food with less water and energy.[3643]

Provides quality information for women to scale up modern agriculture practices and enhance access to farm inputs.[3644]

Scale up CSO actions to ensure accountability and transparency (watchdog role).[3645]

A clear scaling strategy is necessary to scale successful MSPs (also as a visual, based on an integrated view of the value chain), as well as identifying and engaging scaling partners. Such scaling strategy needs to follow a regional or national/local approach, as there is no one scaling strategy that applies to all.[3646]

The government needs to put a strong effort in scaling up, supporting the connections, and different actions. Their support is essential.[3647]

Explore how institution's like the WHO and UN Nutrition can help us scale local pathways to resilience and community empowerment.[3648]

The discussion around this topic focused on the need to foster the relationship between national agricultural institutions and regional agricultural institutions, and it looked at some existing solutions with potential for scaling up.[3649]

We need to start small, and with small successes, we can build models for upscaling solutions in the food system.[3650]

We need to start small, and from small successes, we can build models for upscaling solutions in the food systems.[3651]

Innovations are not necessarily something totally new. Innovation is equally about how local, old and new knowledge and technologies can be applied in new contexts or scaled-up. With this basis understanding there are a wide range of innovations ready for scale. Achieving scale may be about aligning interests - takes us back to partnership and respect.[3652]

Projects that can be funded for scaling up should be localized problems and the solutions are driven by the farmers themselves.[3653]

[3643] 132:50 p 10 in 193_Apr_19_21_Ringler_Kassim

[3644] 137:25 p 8 in 212_May_04_21_Akinbamijo Y

[3645] 138:2 p 7 in 214_May _05_21_50by40

[3646] 141:19 p 11 in 229_May_18_21_NFP_Rabobank_Multi

[3647] 141:54 p 16 in 229_May_18_21_NFP_Rabobank_Multi

[3648] 149:27 p 11 in 243_June_03_21_Schwartz A

[3649] 150:29 p 8 in 253_Apr_29_21_AFDB_Multi

[3650] 157:24 p 6 in 278_May_18_21_Gregorio B

[3651] 157:78 p 11 in 278_May_18_21_Gregorio B

[3652] 158:17 p 6 in 279_May_18_21_Yoovatana M_Multi

[3653] 158:20 p 8 in 279_May_18_21_Yoovatana M_Multi

There are a number of digital technologies and platforms that are being scaled, for an example how social media and digital platforms have been used in some countries to help link farmers to markets following the impact of COVID-19. In addition to how farmers are increasingly using platforms like YouTube on how to learn about new innovations.[3654]

They also stated that strategies that have been proven to work at the local level should be scaled up or tested in other settings.[3655]

Second, nature-based solutions that improve soil and water management, reduce pollution, and lower agricultural GHG emissions need to be scaled up.[3656]

PPP should be scaled up and the successful or working models highlighting private sector engagements should be explored.[3657]

Private sector and government to lead in upscaling precision agriculture.[3658]

Contribution of Agro-forestry in scaling up climate resilience and other potential ecosystem contributions.[3659]

Scaling such transformational changes in the food systems requires digital augmentation for collective action to interlink various systems-level solutions for inclusive development.[3660]

Scaling Up Nutrition Movement Business Network (SBN) to provide technical assistance to small and medium-scale enterprises to facilitate compliance with fortification standards.[3661]

Scaling Up Nutrition Business Network (SBN) to provide technical assistance to small and medium scale enterprises to facilitate compliance with labeling standards.[3662]

Linking open projects enables scalable solutions.[3663]

Strengthen production fundamentals, such as research and innovation, to direct how we leverage our production resources, generate relevant technologies, guide threat surveillance, and inform policy design and accountability. Institute industrial policies that promote private investment and job growth in local non-farm sectors, essential to attract investment in agri-food systems (the focus on agro- industrialization) Scale up of

[3654] 158:52 p 6 in 279_May_18_21_Yoovatana M_Multi

[3655] 167:38 p 9 in 311_June_14_21_NCD Child

[3656] 174:36 p 8 in 332_May_24_21_FAO_UNDP

[3657] 181:20 p 6 in 339_May_27_21_Sayoc_Multi

[3658] 181:26 p 8 in 339_May_27_21_Sayoc_Multi

[3659] 183:89 p 16 in 341_May_28_21_Sewraj_KS

[3660] 188:29 p 7 in 346_May_31_21_CANEUS_Multi

[3661] 193:39 p 9 in 351_June_03_21_CIF_Multi

[3662] 193:51 p 10 in 351_June_03_21_CIF_Multi

[3663] 194:35 p 11 in 352_June_04_21_Troughton J

technologies developed by universities to make them available for youth and use within the country. Foster Intellectual Property and patenting.[3664]

Mechanisms should be put in place to improve livelihoods by combating social exclusion, vulnerability, and poverty. Adoption of model fishing villages which have potential to transform livelihoods should be upscaled.[3665]

Farmers' innovation (researching climate-resilient crops, upscaling a successful model on new crop variety, etc.)[3666]

Member States need to scale-up technologies developed by Universities to make them more available for the Youth and use within the different countries.[3667]

Relevant action with measurable results that help achieve the 2030 SDGs. This includes highlighting existing solutions, celebrating and recognizing leaders in food processing systems, and calling for new actions from all sectors.[3668]

Create a trade center and economies of scale to diversify effective transshipment ports outside the US in a direct line to and from the Panama Canal.[3669]

It is also important for supporting smaller farmers to have access to the same kind of public-private partnerships that typically bigger companies access to help them scale-up.[3670]

Proposal to support and scale up organic farming and agroecology through financial models for organic farming and maybe consider awards for farmers pursuing this.

Push governments to create policy to reduce use of pesticides and chemical fertilizers. Ban these. Promote organic fertilizers. Policies that support small scale organic farmers to create favorable environment for them to thrive and become productive. It should include policy to introduce good post-harvest facility for farmers. Subsidy not adequate. Some more support for farmers to store product to get better price for products.[3671]

An interconnected set of considerations for approaches to plant-based innovation, to address as a whole, in order to help catalyse a just transition to better diets: a. Address the challenges holistically, avoiding trading off one aspect against another b. Design/test for - and commit to - scaling up, at speed c. Cater to more different individuals and communities and unmet needs d. Look beyond the product level, towards: Creating genuinely equitable business models; Changing eating behaviours for the better; Driving

[3664] 206:6 p 7 in 365_May_27_21_Ekwamu A

[3665] 208:26 p 10 in 367_May_27_21_Kachulu_Thilsted

[3666] 209:3 p 6 in 368_May_31_21_Lao Farmer

[3667] 223:9 p 6 in 384_June_09_21_Ekwamu A

[3668] 235:3 p 6 in 276a_May_13_21_CCIE_English

[3669] 236:13 p 8 in 277a_May_14_21_IICA_English

[3670] 245:19 p 10 in 481_June_23_21_Global Counsel

[3671] 250:17 p 9 in 486_June_23_21_AFA_Multi

and supporting mindset and cultural shifts e. Decentralise access to good food f. Empower people through food skills and knowledge.[3672]

Design/test for - and commit to - scaling up, at speed, because the challenges are urgent, and we need rapid positive change at scale. Scale can happen in different ways: it might mean many similar innovations or activities joining up more effectively, not just one innovation becoming "bigger".[3673]

A food system approach does not just happen. For scalability to happen analysis is needed in order to match solutions with the most urgent needs. Change makers need to be identified, supported and connected.[3674]

Making sure to build upon systems that already exist rather than create a parallel industry.[3675]

Conducting reviews of successful pilot projects and technologies to identify those that can be scaled up.[3676]

Recognise and scale up the dozens of local initiatives.[3677]

Pragmatic tools for farmers to be efficient, use the ones already exciting at a large scale.[3678]

The next steps are not about starting conversations about food systems and environmental sustainability, but rather building on existing conversations.[3679]

Scaled policies and good practices can crystalize solutions to ensure needed impacts at territorial levels and bring everyone in the system together. These can be designed into context-specific projects and programs but also provide cross-cutting solutions relevant in several contexts. While locals build good practices, continued effort is needed for flexible, replicable models and knowledge-sharing networks.[3680]

The key is to gather varied and diverse experiences related to territorial development as a model adaptation/building tool, as well as connection/collaboration effort + creation of communities of practices, e.g. Farm Field and Business Schools enable farmers on the ground and offer a programmatic solution that can be scaled.[3681]

Support strong local food/farmers' markets and connect producers and consumers (to harness their economic and political power). Consumer information, education and

[3672] 259:3 p 6 in 495_June_23_21_Forum for the Future

[3673] 259:11 p 8 in 495_June_23_21_Forum for the Future

[3674] 263:34 p 8 in 499_June_25_21_GANSF

[3675] 264:89 p 13 in 500_June_26_21_Edible Issues

[3676] 271:30 p 8 in 507_June_30_21_AKADEMYA2_FANPRAN

[3677] 273:68 p 11 in 509_June_30_21_FFA_Nestlé

[3678] 273:86 p 12 in 509_June_30_21_FFA_Nestlé

[3679] 280:77 p 12 in 516_July-01_21_Anastasiou K

[3680] 299:26 p 8 in 535_July_08_UNESCO Chair on Food

[3681] 299:27 p 8 in 535_July_08_UNESCO Chair on Food

communication is essential. Scale up, not through corporatization or industrialization, but grow through aggregation with the support of appropriate local platforms controlled by local actors (e.g., food hubs) and local alliances.[3682]

Support for agroecological transitions through small-family agriculture projects and linking these to broader landscape-scale initiatives and international support organizations.[3683]

Replication of the Proof of Purchase model at first sale point(this allows us to know the origin of the seafood, is easy to read, and incentivises purchases from first sale points and compliance with the rules).[3684]

Scaling up the availability of technologies, information and innovative solutions is significant to accelerating the transformation of food systems, while ensuring that possible trade-offs are minimized as a consequence of the transformative process.[3685]

Scalability, or the potential for scale, is often a key driver and metric for investors. At times this can conflict with food security goals if/when the "solution" or investable product/service is one that increases the potential for food loss and/or waste, rather than reduces it. Sustainability and ESG metrics need to be better integrated into investment decision-making in order to avoid this potential negative consequence or scenario.[3686]

Non-returnable financial support for the development of co-innovations by AFCI organizations and research institutes to expand biologically, environmentally and economically sustainable agroecological production systems. Need for budgets for the scaling up of successful experiences such as what has been accumulated with "Sierra Productiva". It's not only a question of whether the budget is there or not, but also of what type of projects are financed, as there is a tendency to finance projects that come from the government and not more long-term projects that are already being generated and validated by the organizations themselves.[3687]

Women advocate the creation of policies that respect the food autonomy of indigenous peoples, based on the production, consumption, distribution and bartering of the items produced by indigenous communities, as a strategy for food sustainability in emergency situations, innovating exchange and commercialization.[3688]

Technology

Adapt technologies and innovations to local context and need to adopt feasible technologies that make sense from the income perspective of farmers.[3689]

[3682] 299:40 p 9 in 535_July_08_UNESCO Chair on Food

[3683] 299:63 p 11 in 535_July_08_UNESCO Chair on Food

[3684] 301:52 p 9 in 537_July_08_21_ANP_WWF

[3685] 315:10 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[3686] 331:2 p 2 in 139a_May_27_21_WBCSD

[3687] 341:16 p 12 in 408a_June_11_21_COPROFAM_CLOC_Eng

[3688] 343:6 p 6 in 417a_June_18_21_Fernandez L_Eng

[3689] 358:19 p 7 in 402_June 10_21_Ekwamu_El Dukheri

Workforce reconfiguration: Without significant investment in improving human capacity and infrastructure for agricultural research, training and extension the necessary transformation of African agriculture and food systems will not occur.[3690]

been discussed during the last fifteen years have been on the front burners but success continues to elude our continent in these regards.

Unfortunately, the question of institutional capacities to embrace and deploy contemporary technologies remain our Achilis heel in our quest towards food self-sufficiency. It is, thus, important to invest in research and development to strengthen understanding of nature-positive production systems while increasing cooperation between public and the private sector

Civil society and the municipal government should design and disseminate actions for the conservation of water, and the agricultural sector should be supported with innovation and technology to make better use of water.[3691]

Group 1: Access to ICTs with respect to coverage and quality as a basic element for developing digital agriculture. Emphasis on working more with farmers in cooperatives and improving their technological knowledge. Knowledge developed through various organizations. Emphasis on international e-commerce, and the sale of waste products for processing. Digital agriculture to be made more accessible for rural families and excluded groups, such as indigenous communities. Rural territories that are more economically dynamic will be able to achieve greater digital development.[3692]

Group 2: A large number of producers are not aware of the digital solutions available. To make these solutions better known, we must launch an analysis of the various contexts in which they are applied, as some technologies focus on specific contexts and are not applicable in others. It is important to objectively evaluate and document the specific impact generated by each of these technological solutions. Focus on training users in technological uptake and attempt to include young people as central drivers of these processes, especially young women. The role of digital technologies to preserve ancestral knowledge, which is at risk of being lost and contains great value.[3693]

Demonstrate the positive impacts produced by technologies and share these with communities. We need to focus on intelligent incentive systems to foster the increased adoption of technology.

Group 3: Important aspects that consider the ease of use of the technology; making sure the software is intuitive and can be used with minimal training. Furthermore, make clear the use and significance of the various tools. Ensure the tools can be adapted to the

[3690] 505:4 p 6 in 062_Feb_16_21_FARA-CAADP

[3691] 506:10 p 3 in 065a_Mar_31_21_Hidalgo Multi_Eng

[3692] 509:2 p 3 in 073a_May_18_21_IICA_Eng

[3693] 509:3 pp 3 – 4 in 073a_May_18_21_IICA_Eng

farmer, and not the other way around. They must be adapted with consideration to the target audience (youth, women. etc.).[3694]

** Emergence of applications and technologies that allow marketing and bringing fruits and vegetables closer to the population, an opportunity to promote them and facilitate their consumption.*[3695]

Also, to evaluate the impact of technology to mitigate the carbon footprint, always bringing it to the national reality. Finally, we ended by raising awareness of the importance of monitoring, and how this is vital to continue advancing in the region.[3696]

One of the directions of state policy in the field of food safety is developinh various branches of agro-business through introduction of domestic technologies based on the latest scientific achievements…[3697]

Support family farming in the availability of inputs, popularization of small mechanization, and improve the agricultural roads to improve the sale of produce.[3698]

Lessen the digital divide by improving connectivity in rural areas.[3699]

Promote the use of technologies for sustainability.[3700]

Rainwater harvesting.b) Drip irrigation and aquaculture.c) Diversify locally made products from crops (flours, starches, preserves, canned, dehydrated, etc.) d) Increase local capacity for food processing, storage, and food preservation, adding value to crops.e) Strengthen capabilities for production of bio-inputs.f) Promote biodigesters and other methods for raising pigs ecologically.[3701]

Digitalization can play an important role in strengthening sustainability and resilience through supply chain and improved traceability;[3702]

Simulated modelling for implementing research informed climate smart agricultural techniques, new technologies for data collection and increased crop production are instrumental to feed the growing population with the same amount of arable land. Public research agencies should adopt these new technologies but need political will and commitment. Regional cooperation is needed for technology transfers.[3703]

It was highlighted the need to promote the best practices of the excellence of Italian agri-food production and fisheries by valorizing their high values in combining food cultures,

[3694] 509:4 p 4 in 073a_May_18_21_IICA_Eng

[3695] 515:8 ¶ 276 in 094a_June_09_21_Luchetti T_Eng

[3696] 516:4 ¶ 285 in 098a_June_10_21_Caballeros C_Eng

[3697] 519:14 p 7 in 106a_June_18_21_Nurgaziev R_Eng

[3698] 524:22 p 7 in 119a_July_08_21_Moussavou B_Eng

[3699] 525:15 p 10 in 122a_July_13_21_RIMISP_Eng

[3700] 526:5 p 6 in 124a_July_18_21_FEA Hatillo_Eng

[3701] 526:17 p 7 in 124a_July_18_21_FEA Hatillo_Eng

[3702] 359:29 p 8 in 403_June_10_21_ESCAP_Multi

[3703] 359:32 p 8 in 403_June_10_21_ESCAP_Multi

technological and social innovation, efficiency, productivity and sustainability of the food chains, closed linked to territories, local producers, farmers and fishermen. Innovation, both technological and social, was pointed as a crucial key for the development of an effective green, blue and circular economy at the centre of a sustainable transformation of food systems. The important contribution of the marine resources and aquaculture was highlighted for building more sustainable food systems and revitalizing the MD.[3704]

In the synthesis of the dialogue "Local Action, Global Connection", the food transition was highlighted as an expression of a diversified, territorialized and responsible production and consumption system. It was pointed out the need that this transition takes place through: promotion of demand through a local vision of food sovereignty; landscape protection with agro-ecological production models; affirmation of the centrality of family farming; strengthening short supply chains and local markets; promotion of technological and social innovation to enhance local traditions; development of food education programs; enhancement of the role of networks, cities and public policies.[3705]

Business leadership toward the food systems' transformation was mentioned as a means to strengthen public-private partnerships linked to the adoption of technologies by producers and industries, the role of retailers in consumer education, and the potential of joint initiatives involving distinct stakeholders aimed at mitigating food loss and food waste, and increasing access to healthy foods.[3706]

The democratization of healthy diets was suggested to be dependent on the access that producers have to markets. Therefore, it is necessary to work on the integration of the chain, distribution, shortening the chain through digital technologies such as apps for direct sales, and with the vision of a circular economy that reduces waste.[3707]

Participants discussed that access to healthy and sustainable diets is dependent on the accessibility of sustainable production technologies, especially for small and medium producers that still lack the basics such as access to credit. Technical assistance must be expanded and improved, as well as rural connectivity, involving the government, companies and academia.[3708]

Continuous scientific, technological advancements and the expansion of technical assistance are essential for the adoption of good production and processing, democratizing the access to healthy and sustainable food.[3709]

Food safety in donations should be a shared responsibility among donors and food banks, and the law should stretch beyond donations. It was emphasized that public policies should

[3704] 386:13 p 6 in 429_July_05_21-CIHEAM Bari

[3705] 386:27 p 8 in 429_July_05_21-CIHEAM Bari

[3706] 389:22 p 7 in 431_June_22_21_CEBOS_EMBRAPA

[3707] 389:45 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[3708] 389:50 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[3709] 389:84 p 7 in 431_June_22_21_CEBOS_EMBRAPA

permeate the entire system, from production to the consumption and disposal of packaging, assisted by technology.[3710]

Participants discussed that access to healthy and sustainable diets is dependent on the accessibility of sustainable production technologies, especially for small and medium producers that still lack the basics such as access to credit.[3711]

More transparency is needed, making traceability technologies more accessible and widely implemented, also widening and integrating multi-stakeholder communication and education, throughout society, in schools and across consumer classes.[3712]

Introduce ways to be more responsive to an increasingly mobile population, anticipating increasing mobility of vulnerable groups driven by economic as well as environmental events. For this, the GoB can try to transfer cash to the potential beneficiaries by utilizing mobile financial technology. Important to note that at the union level, the government has the necessary infrastructure (e.g. Union Digital Centres or UDCs) to facilitate this transformation.[3713]

Modernization of agriculture production including post-harvest management of crops through use of adapted technologies.[3714]

1.Target support at food SMEs a. Most SMEs participants in our breakout room believe that with more direct and practical support from the government agencies and international NGOs, they can purchase equipment and expand their production, and maybe offset some of the inherent problems with agriculture such as high initial capital input, long payback period and unpredictable risk factors. b. These supports can come in various forms such as infrastructure improvement, funding, business consulting, and technology know-how, but they must be direct, feasible, and easily accessible. c. Although China has made a tremendous effort in the past decades to focus on sustainable development. As a developing country, we still have a long way to go in terms of building a better food system, not only for the 1.4 billion people but the whole globe as well. SMEs in China are thriving, and they need more target support more than ever.[3715]

Co-develop the human welfare agriculture system in diverse groups. More technology should be involved in product design.[3716]

Youth is the largest proportion of the population in most of the communities ~ 75% so they need to play a bigger role in preserving Indigenous food systems, and harness their knowledge from formal education, and access to smartphones and internet compared to elders, and increased financial services (we are using whatsapp now, to bring knowledge

[3710] 389:137 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[3711] 389:138 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[3712] 389:144 p 10 in 431_June_22_21_CEBOS_EMBRAPA

[3713] 392:10 p 8 in 434_June_02_21_Hanan_KA

[3714] 392:12 p 9 in 434_June_02_21_Hanan_KA

[3715] 393:26 p 9 in 435_June_08_21_FAO_ICC_UNFSS

[3716] 393:35 p 10 in 435_June_08_21_FAO_ICC_UNFSS

from the youth and various specialists to the community on how to incorporate modern ag into the food systems).[3717]

In Nigeria, small holder farmers contribute more than 80% of Nigeria's domestic input. However, farmers still make use of age long techniques in the agricultural processes. Because of this, optimal production is not guaranteed with challenges such as; climate conditions, insecurity, poor funding and the likes. The introduction of technology such as precision soil sampling, drone technology, nitrogen censors, data science among others will help improve production and profit for farmers which in turn have an effect on the food system supply chain.[3718]

Develop and apply innovative methods of ICT (Information and Communication Technology) use within the food system in ECA E-agriculture in many parts of ECA still suffers from underinvestment. The younger generation is the bearer of IT skills and knowledge and "loosing" more youth from the countryside will constitute a big problem for modernizing agriculture. The digital gender divide in the region also remains a reality, with still fewer women than men benefiting from Internet use. The ITU which is involved in monitoring and changing this situation called for more action in building an equal digital future.[3719]

Digital tools were predicted to be key in this process, allowing unprecedented access to increasing diversity and inclusivity, as well as more accurate measurement and evaluation systems.[3720]

There is also a need for greater access to technology, access to internet, and language, which are currently the main barriers to inclusion.[3721]

New, innovative technologies and research can be used to reach a wider audience and to help communicate research effectively.[3722]

Limit food importation and develop better tools and technologies to build our potential. Increase investment in development and application of agricultural digital technologies.[3723]

Re-orient effort to maximize the benefits of available technologies.[3724]

Improve Communication, Storing and Sharing technology advances and approaches and make them accessible to policymakers and from farm to table.[3725]

[3717] 394:71 p 13 in 436_June_16_21_GIYC_Multi

[3718] 397:55 p 11 in 439_June_17_21_INAI

[3719] 403:27 p 9 in 444_May_25_21_FAO_UNICEF_Multi

[3720] 405:17 p 8 in 446_May_27_21_Lyons_Gould

[3721] 406:20 p 6 in 447_Jan_29_21_IFAD_Multi

[3722] 407:24 p 7 in 448_Feb_25_21_IFAD_Multi

[3723] 414:11 p 6 in 455_May_14_21_Ekwamu_A

[3724] 414:37 p 8 in 455_May_14_21_Ekwamu_A

[3725] 414:44 p 8 in 455_May_14_21_Ekwamu_A

They are the engines for technologies and innovations generations including; crop varieties, vaccines, diagnostic tools for managing risks from biosecurity and climate change. Universities need to be brought to the center of the food systems this enable them play this critical role and help in the delivery of nutritious and safe food, improved financial sustainability of farm enterprises, greater engagement with communities, engagement with policy makers and change their culture of doing business by for example making universities easily accessible and open to the smallholder farmers and communities.[3726]

Discussion topic 1: Status of Food Systems In Africa: Key Drivers, Challenges And Needed Interventions There is need to strengthen food production to consumption fundamentals through STIs. This involves the development of yield enhancing resilient technologies (New varieties, breeds); value added and post-harvest reduction for diversified urbanizing populations; renewable production systems - climate change for posterity; and, effective and efficient knowledge generation (Agricultural Education and Advisory services).[3727]

Development of human capital for the flourishing the food systems needs to be undertaken through balancing the human resource pyramid for science technology & innovations and entrepreneurship ; and leveraging and convergence, rather than competition, in science technology and innovations development and human capital development.[3728]

- Dynamic food systems – using software solutions (increasingly widespread in UK)[3729]

The research-extension-farmer-nexus needs to be strengthened for high technology adoption; build and strengthen solidarity and collective actions through partnerships that mobilize research and innovation expertise; co-create technologies and innovations with farmers, to address farmer's challenges while providing local solutions; and, enhancing the capacity of farmers and consumers to contribute to research and innovation, and to policy formulation and implementation.[3730]

Orientation and focusing more on the drivers and game changers including: value chain development, entrepreneurship development; and, digital transformation especially for Youth and Women both regional and in the African Context.[3731]

Provide smallholder farmers with technical assistance, resources, incentives, payment systems, and access to technology and connectivity, the best seeds, and crop insurance, so they can produce crops sustainably, while making a livelihood for themselves and their families.[3732]

[3726] 415:17 p 6 in 456_May_17_21_Ekwamu_A

[3727] 416:8 p 7 in 457_May_20_21_Ekwamu_A

[3728] 416:9 p 7 in 457_May_20_21_Ekwamu_A

[3729] 417:11 p 7 in 458_May_31_21_Madsen BB

[3730] 425:6 p 6 in 466_June_17_21_Ekwamu A

[3731] 425:30 p 7 in 466_June_17_21_Ekwamu A

[3732] 429:10 p 7 in 470_June_17_21_Burian_Multi

Ensure that digital tools are co-created and farmer-centric to address their issues, including lowering production costs and improving incomes.[3733]

With the private sector, to bring innovation, digital technology, finance, and insurance products to farmers, especially smallholder farmers.[3734]

Better understand and increase the use of MRV (Measurement, Report and Verification) with technology, as soil is the most critical and diverse area related to food systems.[3735]

Create broad statements from the UNFSS that are science-based and provide access to tools and technology to guide national-level action.[3736]

Provide tech tools via mobile phones – they are the key device. Social media is also an important tool.[3737]

Better use of digital space - For example, companies like Bayer could provide technology to diagnose plant diseases. This could also connect to government information and support.[3738]

Digital platforms - Big data works if is run in a massive way and includes a lot of data, especially regarding smallholders.[3739]

Understand that there are technologies out there that are applicable, but they are dependent on things like glyphosate. What are the less toxic or less controversial chemicals? Companies need to radically change, too. Only 10-12 companies in the world dominate the input space.[3740]

Establish partnerships and coalitions including: 1. Regional and context-specific coalitions that include technology providers, farmers, and brands that sell products on the market (as livestock is very heterogeneous and very regional).[3741]

Ensure that tools are co-created and farmer-centric and actually address farmer issues, rather than tools developed that are disconnected to the actual use. Tools need to be USEFUL and APPLICABLE and they must be serious about lowering production costs/improving farmer's income.[3742]

Involve women in designing (farm and other) technology.[3743]

[3733] 429:118 p 7 in 470_June_17_21_Burian_Multi

[3734] 429:130 p 7 in 470_June_17_21_Burian_Multi

[3735] 429:160 p 11 in 470_June_17_21_Burian_Multi

[3736] 429:195 p 13 in 470_June_17_21_Burian_Multi

[3737] 429:205 p 13 in 470_June_17_21_Burian_Multi

[3738] 429:206 p 13 in 470_June_17_21_Burian_Multi

[3739] 429:207 p 13 in 470_June_17_21_Burian_Multi

[3740] 429:240 p 16 in 470_June_17_21_Burian_Multi

[3741] 429:262 p 18 in 470_June_17_21_Burian_Multi

[3742] 429:269 p 19 in 470_June_17_21_Burian_Multi

[3743] 430:25 p 6 in 471_June_08_21_van Liere M

Imbedding a hybrid of new agriculture technologies, vertical, hydroponics, greenhouses, to enable communities places to grow anywhere, anytime…[3744]

Gender Integration in food systems. Research has shown that empowering women leads to several positive outcomes along the food value chain and hence addressing the unique challenges faced by women is key. Moreover, research has shown that when women farmers have equal access to agricultural inputs (fertilizer and seed) as men, yield can increase by 19%. Considering all the challenges that women face, several strategies need to be put in place or those already in place should allow for better inclusivity. Foremost, there is a need to factor in women when structuring policies and ensure that women also occupy positions of leadership. Subsequently, there is need for policies that ensure women have access to productive resources such as fertilizer and seed. This can be executed through subsidies for inputs that can be accessed through digital platforms i.e. the E-voucher system. Also, digitalization would help deal with the time constraint faced by women. Further, support for women led MSMEs to ensure they have equity in accessing markets and attain greater bargaining power is instrumental and increase for energy supply for running production and value addition processes carried out by women farmers, need to be factored. A clear focus should be made on women and youth farmers to strengthen their participation in agriculture. There is therefore (1) need for redirecting policies to focus on gender inclusivity and financial inclusivity (2) need to follow policy implementation for successful outcomes on gender equality in food systems and (3) need for sustainable collaboration and establishment of partnerships, globally and locally, for increased women empowerment within the food system and gender equality.[3745]

Capacity building in terms of market access. Establish data driven programs to enable women to grow profitable products Finance- structure right finances to look at the cycles between payment of loans and farmers' harvest time Digitalization- establish easy platforms such as USSD platforms that share information such as market information on pricing, consumer products demand and extension support.[3746]

Through accurate digital governance, it can open the access for small farmers and achieve the organic combination of standardization and flexibility of procurement mode. Of course, this depends on the preconditions such as information and communication technology as well as the concept of local governance.[3747]

The research and academia should produce technologies, innovations, education programmes, and evidence which in turn can be applied by the food systems actors, used to train students, and used to enrich evidence-based advocacy.[3748]

[3744] 432:11 p 6 in 473_June_18_21_Sheridan S

[3745] 433:11 p 7 in 474_June_18_21_Matu_Opiyo

[3746] 433:13 p 7 in 474_June_18_21_Matu_Opiyo

[3747] 444:21 p 8 in 027_Feb_02_21_CBCGDF_UNFSS

[3748] 448:18 p 6 in 388_May_03_21_Kambewa_D

Adapting bio technology, Increasing awareness on safe, nourished and healthy food, Promoting bio safety technology with government subsidy, Expansion of appropriate agricultural mechanization for small and marginal farmers…[3749]

Preserving, promoting and practicing indigenous practices through technological inclusion.[3750]

Policies that treat the farm as an enterprise, promote women-owned and managed social enterprises and bring in technology and skills to strengthen the decentralized supply chains. Policies that promote asset ownership by women farmers, direct procurement from women farmers - thereby facilitate decent and enhance livelihood opportunity.[3751]

A critical success factor for such platforms is the use of participatory approaches in design of technologies to enhance access and openness, rather than a roll-out of platforms developed by the international development community and governments. Multi-stakeholder dialogues with the most relevant actors that need to be at the core of platform development, can then be also used to develop the base for national digital strategies and data platforms. At the same time, developing inclusive dialogue platforms requires strong involvement and investment from the private sector.[3752]

Recommendation 4: farmers' productivity and profitability need to increase, allowing to boost investment as well as quality and safety of food, improving market conditions, farmers' livelihoods, and involvement in decision-making processes Who: government authorities in partnership with farmers' organizations, the private sector (input suppliers, water and electricity providers, tech companies) and other relevant stakeholders. How: higher levels of productivity and profitability for farmers will be achieved by establishing an enabling context (water, electricity, infrastructure including innovative technology), expanding contract farming, supporting trade fairs and marketing to advertise local foods, leveraging the potential of new tech to communicate on innovative farming techniques, and capacity building for youth wanting to start agribusinesses. Governments should help set up and/or strengthen the functioning of traditional (so-called informal) markets, short marketing circuits or EcoFairs in different places in peri-urban and urban cities on a massive scale (without many restrictions on agro-ecological products).[3753]

Recommendation 2: Integrate social networks as an extension tool Who: UN, civil society, producer cooperatives and farmer organisations, private sector, and governments How: Make use of available tools such as social media; working through seed groups, incorporating the private sector, making use of digital technology to close knowledge gaps. Some best practice examples have been cited in Ghana and Nigeria.[3754]

Recommendation 2: Promote digital solutions across value chains. Who: venture capital/ private sector. How: in ten years all smallholder farmers need to have access to digital

[3749] 450:36 p 9 in 391_May_31_21_FAO_Multi

[3750] 455:27 p 7 in 063_Mar_04_21_Nanavaty_Multi

[3751] 455:37 p 10 in 063_Mar_04_21_Nanavaty_Multi

[3752] 457:43 p 8 in 120_Apr_27_21_Mauderli_U

[3753] 458:54 p 10 in 123_May_04_21_Mauderli U

[3754] 458:57 p 12 in 123_May_04_21_Mauderli U

technology, access needs to be free for especially vulnerable groups. It is crucial that companies develop a viable business model for digital service provision to farmers. So far digitalization in smallholder farming has been donor driven and failed to scale.[3755]

With the current food value chains being urban-bound and export-oriented, we concur that this localisation must be given priority. The tendency of rural farmers to sell their produce to large cities and abroad has only provided avenues for several middlemen to intervene between farm and table, thus increasing the cost of food. To shorten the value chain, we see the need to invest in enabling technologies that would localise food production and distribution.[3756]

Lastly, it is important to create stronger ties between local grassroots projects and national data collection, so that localized action is better informed by big data and scenario planning, taking advantage of 'composite' technology. Participants also emphasized the need to put data directly into the hands of those who create value.[3757]

Participants also noted the need to continue developing basic / practical technologies such as water management technologies, solar water pumps, varieties suitable to different agroecological features (soil management), and practical steps to deal with Bio Circular Green Economy (BCG) and resilient food systems approaches (amidst a pandemic).[3758]

Solutions to these problems were also discussed. These included fostering public-private partnerships in innovation, reducing food loss and waste, as well as building the production capacity of smallholder farmers – not by introducing high technological advancement, but rather by catering technologies to specific site problems (for example, by packaging technologies for specific agroecological natural systems).[3759]

First, this group identified two trends in agriculture today: 1. Regenerative agriculture: low tech, lots of manual labour and 2. Digital/automated agriculture: high tech, data-driven. The group discussed the need to embrace helpful technology while also fostering employment and keeping a sacred connection to the land, this being particularly true for communities in Northern Canada.[3760]

Financial and technical assistance is especially critical in communities of color and indigenous communities. Technology advancements can help with affordability and accessibility. Investment in the development of local food hubs, enabling schools to have better access to organic options, and empowering communities with the tools they need to feed and nourish themselves is critical.[3761]

[3755] 459:62 p 14 in 125_May_11_21_Mauderli_COSUDE

[3756] 460:98 p 12 in 131_May_25_21_IISLA Ventures

[3757] 463:52 p 9 in 155_Apr_27_21_FCDO_Multi

[3758] 463:68 p 13 in 155_Apr_27_21_FCDO_Multi

[3759] 463:69 p 13 in 155_Apr_27_21_FCDO_Multi

[3760] 464:20 p 11 in 185_Apr_14_21_Local Farm_Multi

[3761] 468:51 p 7 in 219_May_10_21_OTA

Technology can be used to create awareness and sustainability and healthy diets. E-commerce provides greater reach to and for the consumer.[3762]

Agri-food as a career option Create a bank of agri-food professions and professionals that can be used by career counsellors at high school; use Tik Tok to attract youth to these careers; more professional development programs need to be created to bring youth into the field; make better use of social media and digital tools.[3763]

The stakeholders in the dialogue called for technological innovations to scale-up solutions for sustainable aquatic food production, Traceability of aquatic foods to ensure food safety (e.g. block chain technology).[3764]

We need to bring all parties with us, using digital spaces as open public infrastructure where we can connect as both farmers and citizens.[3765]

Promotion of veg on websites good and good visibility of veg online…Transformations across social media channels with the inclusion of veg and bright colours. A positive amount of veg and conversation on national veg week…[3766]

Small farmers must have greater access to new technologies, particularly information technologies (Apps, GPS, etc.), and maintain over time the adoption of technologies with indicators that allow evaluating their benefits.[3767]

It is necessary to update regulations and harmonize regulatory criteria at the regional level. In addition to science-based regulations, a positive political will is required in favor of the adoption of new technologies.[3768]

The academic and scientific community must play a more leading role in discussions for decision-making by governments and congresses. Many decisions about technology adoption are made under pressure from public opinion, based on fear, not science.[3769]

Migrate towards an agriculture based on sustainability that is perceived as part of the solution. The inefficiencies of agricultural production can be solved through the integration and correct use of new and existing technologies, such as drones, NBTs, and precision agriculture, which can be measured by indicators: carbon footprint, efficiency in the use of water, nitrogen, phosphorus, potassium.[3770]

This mechanism makes it possible to provide sustainable solutions and strengthen the system linked to the triple helix (academy-industry-government) with a view to developing standards and practices that avoid over-regulation, allow economic access to

[3762] 472:15 p 7 in 241_May_19_21_IFAD_Food Tank_Multi

[3763] 476:17 p 8 in 264_May_06_21_Arrell Food_Multi

[3764] 485:24 p 6 in 288_May_20_21_GAN_Multi

[3765] 486:19 p 14 in 291_May_21_21_Polman_Prabha

[3766] 488:6 p 6 in 295_May_25_21_Wheeler A

[3767] 491:6 p 6 in 301_May_27_21_CropLife Latin America

[3768] 491:20 p 6 in 301_May_27_21_CropLife Latin America

[3769] 491:21 p 6 in 301_May_27_21_CropLife Latin America

[3770] 491:23 p 7 in 301_May_27_21_CropLife Latin America

technologies, and recognize the associated value to sustainability by the production chain.[3771]

Some of the regulatory frameworks in Latin America must be modernized in light of compliance with the Sustainable Development Goals, SDGs, they must also encourage the use of environmentally friendly technologies, prioritize scientific and technical data over public perceptions and be designed with regulatory criteria that are regionally harmonized. The modernization of laws under these approaches will positively impact better access to export markets, as well as greater traceability of the correct use of technologies.[3772]

Providing further support to SMEs, specifically though tailored subsidies to address significant costs that prevent SMEs from moving to the next level (e.g. capex for technology, equipment or infrastructure).[3773]

Bridge the digital divide across rural/urban, income levels, and gender, both in terms of infrastructure coverage and in terms of literacy…[3774]

Digitize the innovation finance ecosystem to make access to opportunities to obtain seed or innovation testing funding easier for farmers and small entrepreneurs who would otherwise either not know about these opportunities or find the processes associated with them too costly/long.[3775]

Make innovation labs available to small entrepreneurs to test their products or technologies, considering that for most of them it is impossible to develop internally or at their own expense this type of infrastructure.[3776]

Connecting producers with who will ultimately be consumers, through technology they can connect, but considering access gaps is an important step.[3777]

Automating activities that do not add value, not having productivity indicators, makes it more distant to increase productivity, to strengthen these capacities, either through technologies or technical assistance.[3778]

Need access to technology that incentivizes beneficial practices.[3779]

[3771] 491:27 p 7 in 301_May_27_21_CropLife Latin America

[3772] 491:36 p 8 in 301_May_27_21_CropLife Latin America

[3773] 492:10 p 6 in 302_June_01_21_FAO_ICC_Multi

[3774] 494:23 p 7 in 308_June_09_21_FAO_Pinduoduo_Multi

[3775] 494:25 p 7 in 308_June_09_21_FAO_Pinduoduo_Multi

[3776] 494:26 p 7 in 308_June_09_21_FAO_Pinduoduo_Multi

[3777] 496:26 p 7 in 312_June_15_21_FAO_ICC_ Multi

[3778] 496:28 p 7 in 312_June_15_21_FAO_ICC_ Multi

[3779] 497:34 p 7 in 314_June_16_21_ICC_US Farmers_Multi

With respect to technological advancement in addressing key cocoa production bottlenecks, the Ghana Cocoa Board is using digital technologies and innovations such as GPS to collect and manage farmers bio data.[3780]

ICT o Application of technology to tackle complex problem Innovation in technology to scale-up agricultural productivity and accelerate food security such as solar, wind, water energy and agro-processing. Digital innovation - Entrepreneurial Skills. Co-create innovation/solutions that respond to community needs. Hands on skills o Critical thinking, Problem solving and Communication skills. People (Soft) skills. Entrepreneurship for the youth, young women and mothers to be involved in the food system. Entrepreneurial skills within different stakeholder groups connecting different universities - Networking o Collaboration skills (for private sector engagement). Critical thinking skills and communication skills. Open-minded and receptive to informed change. T-shaped skills- possess excellent knowledge of and skills in specific areas and are good at working with others in a collaborative way – Research. Translation of research results to inform policy and practice. Curriculum must be relevant to the needs of the society. Agricultural Sciences is important to sustain and improve the food system o Researchers and students should be strongly encouraged to embrace practical, on-farm skills. Skills in interdisciplinary work and transdisciplinary (working with all stakeholders), graduates should be able to have meaningful conversations with all. Both soft and hard skills that allow management of people, materials and processes in the agricultural value chain.[3781]

On the one hand, technology can reveal the transparency of supply chains to align to the rise of digital, values-based purchasing evidenced in Australia's retail sector.[3782]

Carbon and biodiversity markets offer valuable farm revenue streams if we can evolve the data-driven technologies necessary for markets to scale.[3783]

Importance of 'holistic' SMART Farms that includes post-farm-gate with feedback into the farm operations/decision making. All SMART Farms engaged early in initiatives related to environmental sustainability/carbon neutrality- there is a strong demand for this by stakeholders.[3784]

Covid thinned the herd of Australian agtech scale-ups, but those who survived are thriving. With agtech a vital and growing part of the agrifood sector, a 'unicorn' Australian agtech company could be the next Bitcoin, revolutionising the industry. Agtech is a distinct but parallel industry from agriculture and agrifood, which provides technology solutions to productivity challenges.[3785]

[3780] 499:19 p 6 in 394_June_01_21_Egyir I

[3781] 1:54 p 12 in 072_Mar_09_21_Sibanda L

[3782] 2:4 p 6 in 081_Mar_15_21_CRC

[3783] 2:6 p 7 in 081_Mar_15_21_CRC

[3784] 2:10 p 9 in 081_Mar_15_21_CRC

[3785] 2:13 p 10 in 081_Mar_15_21_CRC

Introduce clear measures so that women have better access to financing, technology, information, and training.[3786]

Resiliency is boosted by mutual understanding and enhanced communication between stakeholders, governments, technical experts, and consumers. Youth voices agreed with farmers about the need to embrace technology and innovation and not block farmers' access to new tools. Youth voices were also particularly focused on improving ag and food stakeholders' connectivity through digital media.[3787]

Technology and data, as in precision agriculture, are driving more and more of agriculture. Implement manufacturers are now data and technology companies. Technology needs to be scaled appropriately and made available and affordable to farms of all sizes, with continual outreach to keep farmers abreast of technology changes. Broadband access will become ever more important in nature-positive production, enabling global adoption of precision agriculture in harmony with nature.[3788]

Lenders, insurers, cost-share programs, regulators, and farmers need to be on the same page and work together on the long-term benefits of nature-positive practices. And they need to reach out to farmers who have been slow to adopt change. But agronomy and soil testing are part of that education – along with the technology of precision farming and understanding the varying needs across the land, even if different parts of the same field. Technology and data will drive many advances – especially when combined with farmers' common sense and knowledge of their land.[3789]

TECHNOLOGY is critical to the drive for nature-positive agriculture, but it must be adaptable to farms of all types and scales. Plant breeding innovations must continue their progress in reducing soil loss, water use, and herbicide use. grower situations – that's why there is a need for a "dynamic, robust toolbox" to accommodate different crop conditions. Another example is finding new uses for by-products – like the nutshells used as mulch or energy generation – that can enhance fruit, nut, and vegetable production while also helping other ag-related industries reduce their footprints. Finding new and better ways to compost, or returning materials to the soil contributes to carbon sequestration initiatives. Producers are constantly studying new technologies and trying them out.[3790]

Green technology should be developed to optimize productivity in urban farming.[3791]

Reduce postharvest losses by introducing processing technology, shorter supply chains and appropriate market storage space for vegetable vendors.[3792]

[3786] 3:12 p 9 in 099_Mar_31_21_FAO_IFPRI

[3787] 4:29 p 12 in 104_Apr_8_21_Animal Agriculture Alliance

[3788] 8:11 p 6 in 169_Apr_6_21_Shea E

[3789] 8:17 p 8 in 169_Apr_6_21_Shea E

[3790] 8:18 p 9 in 169_Apr_6_21_Shea E

[3791] 10:7 p 8 in 181_Apr_8_21_Miranda

[3792] 16:9 p 7 in 251_Jan_25_21_World Vegetable Center

Strong attention should be directed towards introduction of water-saving technologies (drip, sprinkling, subsurface and other micro-irrigation methods) for irrigation of agricultural crops.[3793]

There are reclamation expeditions in the countries that monitor the processes of land degradation (salinization, groundwater levels, the state of the drainage network) - it is necessary to strengthen the technical potential of these services in order to move from simple monitoring to real management of reclamation regimes.[3794]

Participants agreed that governments, researchers, and development institutions should focus more effort into capacity/knowledge building for farmers who might benefit from implementing low carbon technologies in their production, as well as greater investment in the sector.(…) Because such technologies are new and may involve expensive initial implementation, there is hesitation to adopt, but in the long run such technologies could improve water and energy efficiency while improving farm-level outcomes.[3795]

Technology is "often for incremental change, expensive and not accessible to all". It is a necessary resource but "needs to be viewed across whole of sector".[3796]

"Focus on developing a nimble supply chain with real time management, something not currently being fully achieved".[3797]

"Smart use of technology through innovative apps, incorporating ethnic ideas, and fruits and vegetables presented in new ways (e.g., kumara noodles)".[3798]

The main points of the BoT representatives was that digitalization is an important vehicle for change: they suggested that by increasing access to connectivity and technology, inequalities can be reduced and people can be made more aware of what they are actually consuming. Indeed, information and knowledge should be better accessible, especially for young people.[3799]

The reactions of the two external speakers were amazing, as they underlined the important message of the Bites of Transfoodmation community. Indeed, they felt inspired and considered that equal access to digitalization, technology and connectivity is a crucial goal to ensure sustainable future food systems. However, despite equal access, they highlighted the importance of filtering good information from bad information (the way we distinguish good quality food from bad quality food). Mirja Michalscheck and Francesco Holecz also confirmed that technology is only a vehicle of change, since people are the ones ensuring change; data and artificial intelligence just facilitate the process. Finally, they concluded their interventions by suggesting that there is a need for a legal framework regarding technology, so that the whole society can operate through these rules: the idea behind it is

[3793] 17:13 p 8 in 164_Apr_15_21_Anarbekov_Akramov

[3794] 17:29 p 11 in 164_Apr_15_21_Anarbekov_Akramov

[3795] 17:38 p 6 in 164_Apr_15_21_Anarbekov_Akramov

[3796] 18:14 p 9 in 114_Apr_19_21_Maurer H_Roskruge N

[3797] 18:17 p 10 in 114_Apr_19_21_Maurer H_Roskruge N

[3798] 18:21 p 11 in 114_Apr_19_21_Maurer H_Roskruge N

[3799] 22:7 p 8 in 191_Apr_16_21_Donati L

to make sure that responsibilities do not only lay on the consumer's side, but also on the authorities'…[3800]

The crucial role of innovation, sustainable technologies, digitalization and data, both quantitative and qualitative. These need to be inclusive and accessible especially to small-scale farmers, fishers and small-holders. Education, training and awareness raising as potential game changers in transforming both production and consumption patterns.[3801]

Properly consider the correlation between environment governance schemes and appropriate technologies in the design of land and water management policies or interventions.[3802]

Role of Technology – Digital technology can be a useful tool in disseminating information, improving access to resources, and reducing the gender gap in agriculture.[3803]

Technology and innovation are key to helping farmers be more productive and also to reduce food loss and waste.[3804]

Importance of Transfer of technology importance to empower small and to better empower entrepreneurs to come up with new initiatives, piloting them, recording their work modality and benefits so that farmers are encouraged to scale them up.[3805]

Build capacity to improve use of green technologies that are affordable, use water saving technology to help farmers and promote use of nonconventional water resources.[3806]

The idea of a Blockchain approach was also discussed to aid in traceability.[3807]

We can build resilience to vulnerabilities, shocks and stress in the food system by investing in skills training, land spaces, technology, financial support and mentorship for agricultural purposes.[3808]

Reclaim and rehabilitate agricultural lands, encourage good management of resources and increase efficiency of resources used, especially ground and surface water and agricultural lands through the use of modern technology • Enhance provisions related to technology transfer and capacity building included in the UN Climate Change Agreement.[3809]

Implement digital solutions such as e-commerce platforms, digital payments and simple digital technologies to enable smallholders to access data and knowledge to make timely

[3800] 22:9 p 8 in 191_Apr_16_21_Donati L

[3801] 23:22 p 6 in 205_Apr_27_21_CIHEAM_Multi

[3802] 23:84 p 10 in 205_Apr_27_21_CIHEAM_Multi

[3803] 27:24 p 6 in 044_Feb_18_21_Bharat K S

[3804] 28:12 p 7 in 064_Mar_4_21_Farming First

[3805] 30:50 p 7 in 071_Mar_11_21_ESCWA_FAO

[3806] 31:15 p 7 in 077_Mar_09_21_ESCWA_FAO

[3807] 35:51 p 8 in 095_Mar_27_21_Chinapoo C_Multi

[3808] 35:86 p 11 in 095_Mar_27_21_Chinapoo C_Multi

[3809] 36:32 p 9 in 096_Mar_29_21_ESCWA

and informed decisions and to connect them directly with markets and finance • Focus on vulnerable groups, especially small farmers through providing support and financing and introducing modern technologies that increase productivity and production and improve their income.[3810]

Our landscape support organizations reiterated the need for long-term institutional support for landscape partnerships. They highlighted the following key areas where they requested support from the UNFSS: • Technical support through data, tools, technology, and knowledge exchange for improved scenario planning and decision-making. [3811]

Secondly, the group talked about connectivity, knowledge and digitalization. It suggested that, in order to shift our food systems, on one hand we need knowledge coming from family, school, etc. to know how and what to consume and on the other hand we need data to improve the provision of food in terms of diversification and personalization to make it more accessible. [3812]

Participants also made an additional proposal for a global programme to set up local technical assistance hubs for women farmers and entrepreneurs, with particular focus on strengthening their business skills. The important role that farmers' organizations and local SMEs can play in delivering or channelling business development support, facilitating peer learning and mentoring for women entrepreneurs was emphasized. Similarly, participants stressed the need to strengthen the digital infrastructure for information sharing among both women entrepreneurs (or aspiring entrepreneurs) and financial institutions.[3813]

The proposed global matching fund for investments by agri-SMEs can be more relevant to or focused on women entrepreneurs' needs if it provides not only for grants or soft loans but also for in-kind finance (especially via equipment) and technically assistance around its use. The proposed rolling out of digital solutions among rural financial intermediaries and FSPs can be made more relevant to women by also including revolving funds and local savings and credit associations among the types of institutions that can benefit from automation and/or use of digital data and systems.[3814]

Enhancement of farmer productivity through investment in mechanization and agricultural technology which will positively impact their income and purchasing power…[3815]

Public-Private Partnerships between industry and value chain actors is essential to ensure that technology is embedded in interventions. c) Government at all levels must ensure an enabling environment (characterized by right incentives, tax breaks, less regulatory controls on digital services, reduced red tape) for emerging technologies to thrive. d) Mass

[3810] 36:46 p 10 in 096_Mar_29_21_ESCWA

[3811] 37:15 p 8 in 097_Mar_30_21_EcoAgriculture Partners

[3812] 39:9 p 7 in 175_Mar_16_21_Donati L

[3813] 42:8 p 7 in 178_Apr_8_21_AGRA_Multi

[3814] 42:27 p 10 in 178_Apr_8_21_AGRA_Multi

[3815] 44:14 p 7 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

technological education for stakeholders (farmers, processors, etc.) on relevant applicable technologies is vital.[3816]

a) The most effective information systems are those that are close to users – whether closeness means accessibility of information services via digital tools (e.g. phones) or via radio or small-group training organized directly with young (prospective) entrepreneurs in the field. For either approach to be really game changing though we need a lot of curation of information content, as this needs to be really relevant to young people's practical needs, accessible (not too abstract or "fancy"), and focused on concrete experiences and lessons learned. This may be packaged into a multi-lingual app with localised content related to specific markets, commodities, and financial systems, or it may be delivered through local information points e.g. in mini business centers located in postal offices.[3817]

Decreasing food waste through a shifting of labeling regulations (i.e. removing expiration dates in favor of 'best by' dates) and leveraging technology to connect organizations as a method to utilize food before it is wasted.[3818]

Consider relying on blockchain technology to inform consumers of packaging implications of the food they are considering, as well as the environmental footprint, especially important with meat-centered vs. plant-centered main dishes.[3819]

We not using what we have (natural resources). Make use of our natural resources. Use solar energy and reserve energy for other things. There is a need to invest in and support greater deployment of energy and water efficiency technology. Global funds and grants should target and support investments that address the nexus The circular economy models and principles and opportunities will be critical in navigating and addressing issues across the nexus…[3820]

Education and training was seen as the key way to improve the supply chain along with sharing information and communication. Technology can be leveraged across supply chain.[3821]

There is great need to promote the use of internet based applications or platforms where farmers can showcase their products directly to the consumers or connect with them in other to sell at a good price and attain high productivity. • It was also revealed that farmers incur much expenses in purchasing basic agro inputs like seeds, feeds and fertilizer. Some of the middle scale and commercial farmers in West Africa spend so much money importing seeds from abroad because it is not easy to source it in their location, where as it exists in large quantity somewhere in their home country but because they have no knowledge of it, it becomes expensive to buy from far away countries who leverage on online technologies to sell their products. There is urgent need to raise the awareness of

[3816] 44:18 p 8 in 014_Jan_20_21_Sahel Consulting Agriculture and Nutrition Ltd

[3817] 46:12 p 8 in 049_Feb_23_21_SAFIN_Multi

[3818] 49:28 p 9 in 086_Mar_20_21_Rosatan B

[3819] 49:33 p 10 in 086_Mar_20_21_Rosatan B

[3820] 50:4 p 6 in 087_Mar_20_21_Chinapoo C_Multi

[3821] 50:22 p 9 in 087_Mar_20_21_Chinapoo C_Multi

using affordable agro-commerce platforms or social media handles among farmers locally to trace where agro inputs are available and cheaper in their locality. [3822]

Application of ICT in Farming systems; Mr Iheanacho Patrick MD of Zardalic Consults listed the tools in ICT that can be used to facilitate different processes in Farming systems. Tools like Telephones for interactive voice response, Computers and websites for agricultural information and markets, Broadcasting for expertise sharing, advisory and information dissemination in communities, Satellite for weather, universal accessibility and remote sensing, Internet and broadband for knowledge sharing, social media, e-community, market platform, trading and so on.[3823]

Greater use of technology in agriculture Diversification in farming technology to attract and sustain livelihoods and co benefits-.aquaponics-.backyard, commercial, community gardens.[3824]

Start at the community level to promote sustainable food production Agriculture is about high technology Use this high technology as a means of pulling youths in.[3825]

Farmers will be empowered by providing access to new simple technologies that include scientific and traditional information to ensure food and nutritional security while maintaining cultural diversity.[3826]

They emphasized the importance of collecting data and evidence about trade-offs and what works, leveraging technology for sharing real-time information, and being inclusive.[3827]

However, people remained resilient by utilizing IT tools to enable "direct selling" by small agricultural producers to local consumers, which ensured many women farmers to continue their businesses and promoted youth participation as digital mediators of food value chains. Digital platforms were also utilized to donate excess food from producers to those most in need, and she cited one recent study which found about a 72 per cent increase in food donation during the pandemic. Similarly, Ms. Izabella Teixeira, former Minister of Environment of Brazil and member of the UN High-level Advisory Board for Economic and Social Affairs, noted that in Brazil, digital tools and e-commerce were utilized as part of national food value chains to connect small and organic farmers with consumers across the country. In this regard, she noted that digital platforms have a bigger role to play beyond providing supply chains and traceability of products. She suggested that e-tools could help optimize production to minimize food waste.[3828]

…support innovation in digital technology and in business models applying digital solutions to agri-SME finance, b) address barriers to scale for business models with scale

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[3822] 51:2 p 6 in 137_Mar_24_21_Ejezie J

[3823] 51:6 p 7 in 137_Mar_24_21_Ejezie J

[3824] 52:24 p 6 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[3825] 52:38 p 7 in 080_Mar_13_21_Impact Youth Sustainablity_Multi

[3826] 53:18 p 5 in 001_Nov_5_20_CGIAR

[3827] 54:36 p 9 in 002_Nov_19_20_CGIAR

[3828] 56:15 p 7 in 006_Dec_16_20_UNDESA

potential, c) roll out digital solutions among a broad community of financial institutions serving agri-SMEs.[3829]

Technology can play an important role by providing specialized instruments that redistribute risk or directly cover against important specific sources of risk. It can also help by reducing transactions costs and hence the cost of borrowing, and by improving transparency in market functioning and reducing information asymmetries among borrowers, lenders, and other market intermediaries.[3830]

There is a need to harness assets and technologies that were not available 5 or 10 years ago to develop out-of the-ordinary solution thinking: use of satellites/drones to monitor progress across multiple small holding reserves; and cheap monitoring sensors that were not previously available to help with issues like fertilizer, water, soil carbon etc.[3831]

Technology is key to overcoming informational challenges leveraging also financial innovations and improved warehouse receipt systems, improved regulations and standards also help overcome information gaps.[3832]

A controlled and responsible use of new DNA editing technologies is accepted, only if these will not compromise traditions, typical products, biodiversity and health.[3833]

Adaptive approaches and youth inclusion The factors affecting food sustainability are ever-available so, adaptive measures to respond to their incidence must be adopted. Climate Smart Agriculture, incorporation of Geographic Information System and other technologies into the Food System etc have been said to be adaptive.[3834]

It was concluded that adoption of Climate-Smart Agriculture, Geographic Information System, Technology, Crop selection etc will enhance an adaptive and sustainable Food System in Nigeria.[3835]

Integration of value chains to the smallholders' benefit with the right technology: digitizing value chains, enabling digital wallets on smartphones, monitoring individual plots enabling farmers to access pre-harvest advances when the need for finance is at its peak. Creating more traceability/transparency throughout the value chain.[3836]

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[3829] 58:11 p 5 in 011_Jan_11_21_SAFIN

[3830] 59:14 p 5 in 020_Jan_26_21_IFAN

[3831] 59:18 p 5 in 020_Jan_26_21_IFAN

[3832] 59:21 p 5 in 020_Jan_26_21_IFAN

[3833] 60:15 p 7 in 021_Jan_27_21_Donati L

[3834] 61:4 p 5 in 030_Feb_4_21_CAFS_CSAYN

[3835] 61:15 p 7 in 030_Feb_4_21_CAFS_CSAYN

[3836] 63:11 p 6 in 037_Feb_12_21_Food Systems for the Future_Multi

Partnerships: such as the project Seed NL that was showcased (see annexed presentation)[3837]

Theme 5: technologies are needed to better adaptation and mitigation Proposal: to make sure the technologies that are being developed are used to support health and sustainable diets and not produce ultra-processed food. Proposal: use of technologies (special apps) to reduce food loss and food waste –including on retails, catering services, restaurants, and neighbourhoods.[3838]

New technologies and applications are emerging, and more research and collaboration with academics are needed to find solutions to agriculture losses and find other more sustainable alternatives to preservatives, fertilizers, and during transportation and storage.[3839]

…to responsibly consider marketing and labelling as elements that influence consumer choices; to work together with policy makers to create stimulating food environment, which will make healthy and sustainable choices easy choices; wherever possible, to use sensible production methods and to (keep) implementing innovative technologies that allow more sustainable production.[3840]

Utilise technology: Maximise the use of available solutions and be on the forefront of implementation of new technologies (e.g. use block chain technologies for ensuring food chain transparency and reducing waste).[3841]

Make use of innovation & technology. Develop the economic potential of food waste through innovation (e.g. restaurants making beer from old bread); increase and facilitate access to refrigeration and freezing in developing countries; spill over the knowledge and best practices.[3842]

…help mechanize the means of transport for fishing…[3843]

We will strive to develop site-specific farm plans using appropriate technologies towards viable farming models that would help our smallholders and agri-entrepreneurs in their food production systems and processes.[3844]

To advance our national economy, Dr. Habito espoused a Bicycle Model for the economic recovery where the two most durable sectors are (1) Agriculture, Agribusiness and Food Systems (front wheel) and (2) Digital Economy & Allied Industries (rear wheel). There is a need to accelerate agriculture and agribusiness growth using digital tools to improve finance-to-field-to-fork value chains. This would require substantial public and private

[3837] 63:36 p 9 in 037_Feb_12_21_Food Systems for the Future_Multi

[3838] 64:20 p 6 in 041_Feb_17_21_Adler D

[3839] 64:24 p 7 in 041_Feb_17_21_Adler D

[3840] 66:21 p 7 in 052_Feb_25_21_EUFIC

[3841] 66:35 p 9 in 052_Feb_25_21_EUFIC

[3842] 66:46 p 10 in 052_Feb_25_21_EUFIC

[3843] 71:4 p 18 in 033a_Feb_6_21_Serge BDS_ENG

[3844] 74:5 p 6 in 189a_April_16_21_Ateneo de Manila

investments with greater connectivity across all sectors and an upgraded logistics system with wider reach.[3845]

While there are opportunities that exist due to increasing demand for food driven by increasing population and income, liberalizing markets, among others, these trigger changes in the food chains to respond to these opportunities. This often requires restructuring the value chains with changes in technology and financial requirements, and even market structures.[3846]

Training on the use of new technologies to take advantage of the opportunities e-commerce offers.[3847]

Fostering better logistics, urban planification and traceability tools were also mentioned as core challenges. The introduction of a full, rapid, transparent model of traceability of produce, and better communication between the supply and demand that imply the identification of production centers and other key stakeholders can help to achieve these goals, as persisting loopholes are mainly due to lack of enough human resources or technologies to check food life cycles, quality and innocuity.[3848]

It is increasingly important to ensure that wholesale markets have access to collective food waste management systems to address food waste with the example of organic waste as fertilizers and biofuels through collaborations with startups or organizations specialized in this area.[3849]

Meanwhile, innovation and advancement are also key. For example, to improve the linkages, efficiency, and transparency between markets, producers, and consumers, digital innovations need to be supported. An example is blockchain technology which can help ensure safe, timely, low-cost, and good quality food through proper traceability. There must also be support provided for short-circuits alongside the fostering of local supply. Another example is the Market Information Systems which must be improved with more multi-stakeholder considerations (e.g. transport, stakeholder consultations, etc.) to enhance the efficiency in disseminating information to traders and farmers and in addressing late or not very useful information. Meanwhile, better recycling, green energy usage, and improved last mile logistics are also identified as critical points moving forward. In Asia, as there are many small farmers, there is a need to strengthen capacity building efforts to help them comply with better standards. In this context, digital tools and innovations is an option and should be financed not to leave anyone behind. It is important to evaluate the price of technologies applied across contexts and the accompanying need for good internet connection. If these tools are not accessible, it may exclude small scale traders and farmers, making food systems less inclusive. Blockchain can be adapted to large scale farming or crop farmers' cooperatives, and innovations in food traceability can be achieved in a less demanding way (e.g. labeling of food and farmer's commitment to

[3845] 74:11 p 10 in 189a_April_16_21_Ateneo de Manila

[3846] 74:24 p 21 in 189a_April_16_21_Ateneo de Manila

[3847] 75:21 p 93 in 092a_Mar_24_21_El Ayuntamiento de Meride_eng

[3848] 76:4 p 7 in 103_Apr_8_21_Carrara E_Multi

[3849] 77:11 p 7 in 108_Apr_13_21_Carrara E_Multi

refrain from dangerous chemicals). The former is not very well attended to in wholesale markets in Asia, despite being an integral part in Europe and North America, and reforms worldwide.[3850]

A collective food waste management system located within the wholesale market can help address food waste. Asian markets need also better tools to measure food waste. Several markets are lacking methodology and a procedure to collect information on food waste. There is also a need to give value to waste. For example, organic waste can be used as fertilizers and biofuels - explore collaborations with startups or organizations that are specialized in this area. Moreover, the best practices must also be promoted in the region. For example, a wholesale market in Hongkong was able to decrease food waste with financial support from the government by setting up a system to distribute food waste to communities in need. Beyond this, it is also important to have a better tracking system in Asia concerning backward and forward linkages to decrease transport periods.[3851]

In this context, technology can be a great boost also from a logistical point of view and even tough FEBA is doing a great work on digital transformation and data collection, FEBA members need a lot of resources and capacity building for innovation and technology.[3852]

Innovative solutions, such as knowledge tools and mobile applications that are efficient, cost-effective and accessible, are critical to bridge technical gaps and develop consumer knowledge and understanding of diverse aquatic foods and their benefits.[3853]

…digesters and introduce them across the country for farms of all sizes and to look to community digesters. Finally, there was discussion of producers at all levels – but particularly small producers – trying to keep their farms running in addition to working towards enhanced environmental sustainability practices and animal care. These individuals need better support, including access to research and proven best practices. Within supply chains, corporations, cooperatives and processors can help create tracking systems, share expertise and incentivize farmers both within the U.S. and globally.[3854]

Adoption of technologies in the face of the fourth industrial revolution. Creating capabilities is needed, not only in producers but also in those who provide support to the private sector. The need for digitalization was mentioned, in order to adapt to this new virtual era. Also, the idea of "digital villages" was mention, which require great integration at the subregional level with municipalities. The importance of increasing access to infrastructure technology was emphasized, as well as creating capabilities to have good preparation on technological issues.[3855]

As a solution to the challenges of climate change, the use of new technologies is important to be able to implement better farming techniques. As a success story, the dry washing of

[3850] 77:20 p 9 in 108_Apr_13_21_Carrara E_Multi

[3851] 77:25 p 10 in 108_Apr_13_21_Carrara E_Multi

[3852] 77:25 p 10 in 108_Apr_13_21_Carrara E_Multi

[3853] 82:8 p 6 in 150_Apr_30_21_GANSFOIWFSN

[3854] 84:31 p 11 in 153_Apr_28_21_GCNF_Multi

[3855] 89:3 p 57 – 58 in 186a_Apr_15_21_Caballeros_eng

sugar cane was mentioned for better water management. The possibility of using specialized software and drones for controlling crops was also mentioned. In order to take maximum advantage of these technological tools, it is also necessary to increase internet access in rural areas.[3856]

As for the intersection of food security and sustainability, it was noted that the two are not mutually exclusive. Both can be addressed by technologies and innovations to reduce resource use and decrease price.[3857]

"To be as efficient and sustainable as possible we need to invest in research and make technology available to livestock producers. Adoption of new technology has to be financially sustainable, and tools are needed to make transitions to more sustainable practices less of a financial burden.[3858]

Improving sustainability and efficiency of the sector through new technologies which also requires adequate investment for the transition processes. A more resilient, more productive, fairer livestock sector from the social point of view underpinned by the research and technology transfer processes.[3859]

If and when we transition to a 'New Normal', the stark threats to food systems and human health are real. So are the solutions, which depend on new technologies and a supportive policy environment for sustainable agriculture.[3860]

Broaden diversification of the demand for agricultural production with new technologies, thereby creating greater sustainability and reducing greenhouse gas emissions.[3861]

Highlighted: a. The role of new genetic technologies and plant health products, which allow farmers to produce more food with less input. b. The importance of biotechnology for ensuring adequate food production, both in volume and quality, which overcomes the growing challenges.[3862]

Technology can be key in connecting mountains and markets as well as connecting communities in mountains.[3863]

Tailor technology and innovations in mountain food systems to all people, including women and youth, and develop the capacity of local people on best agricultural practices in mountains. Promote participatory approaches to develop technology and innovations that accommodate traditional and indigenous food culture and knowledge.[3864]

[3856] 89:13 p 71 in 186a_Apr_15_21_Caballeros_eng

[3857] 90:15 p 9 in 206_Apr_27_21_CCANCC

[3858] 90:17 p 10 in 206_Apr_27_21_CCANCC

[3859] 93:58 p 13 in 227_May_18_21_Tarawali S

[3860] 94:13 p 7 in 228_May_18_21_Kovnat K

[3861] 97:4 p 60 in 258a_Apr_23_21_IICA_eng

[3862] 97:9 p 65 – 67 in 258a_Apr_23_21_IICA_eng

[3863] 98:11 p 6 in 282_May_18_21_Romeo R

[3864] 98:29 p 10 in 282_May_18_21_Romeo R

Technologies; transparent frameworks; multi-stakeholder approaches; co-creation; an open-mind; funding (public and private); decentralized autonomous organisations; open-source solutions; public procurement processes; multinational agreements impact framed, education; openness to change…[3865]

Digitalise consumer information (including positive and negative consumer labelling (e.g. tobacco ads!) and connect consumers with local producers.[3866]

Intensifying food production within the city through incentivising small scale farmers to produce and providing the right assistance with access to finance, production technology and access to markets. In addition the opportunity of schools and institutions such as prisons, hospitals were identified as they have access to large parcels of land which could potentially be used as intensive production and education centers.[3867]

Technology and innovation: Strengthen co-production of knowledge for innovation and technology.[3868]

There is a need to accelerate agriculture and agribusiness growth using digital tools to improve finance-to-field-to-fork value chains.[3869]

Prof. Shenggen Fan said that to promote the food system's transformation, and we must start from four aspects: policy, technology, institution, and individual behaviors.[3870]

One of the floated ideas is creating an app to "lease" machinery by the hour to facilitate harvest and cultivation.[3871]

Consider further digitization of agricultural information beyond productivity – including carbon sequestration.[3872]

A second key enabler of change centers on the idea of 'knowledge fueling action'. This relates to leveraging science, research, collaboration, data and new technologies to enhance decision-making among all of the actors in the food chain and in policy. This will include measurement systems across the food chain to track progress and enhance transparency.[3873]

Two enabling technologies were identified as important: digital labelling identifying beneficial nutrients in unpackaged/unprocessed foods (particularly those we are deficient

[3865] 99:37 p 11 in 285_May_20_21_TFFF_Multi

[3866] 99:43 p 13 in 285_May_20_21_TFFF_Multi

[3867] 101:2 p 6 in 325_May_19_21_ICLEI Africa_Multi

[3868] 102:24 p 8 in 326_May_5_21_ICLEI Africa_Multi

[3869] 103:6 p 10 in 007a_Dec_18_20_NAAGD

[3870] 105:35 p 29 in 176a_Mar_25_21 AGFEP

[3871] 109:10 p 6 in 061_Mar_02_21_Adeboye T

[3872] 110:10 p 7 in 067_Mar_05_21_O'Doherty M

[3873] 112:12 p 6 in 074_May_18_21_O'Mara_Teagasc

in) and nutritional analysis of the entire shopping basket (phone-based app based on scanned produce).[3874]

It was agreed that smart technologies have a major role to play across the full supply chain, from soil to food, and that blockchain will be an important tool for enhancing transparency in the system. Critical actions to be undertaken include identifying the gaps in knowledge, data and technology, increasing engagement and supporting education in the area.[3875]

To maximise the potential of technologies in enabling fair, safe and sustainable supply chains, concerted efforts will be required to scale up and provide targeted education, including incentives & supports.[3876]

Focus on accessibility and addressing barriers to adoption – cost, communication, skill set, specificity of local and regional context. Investment in broadband infrastructure to bring the technology to those that need it. Need to look at innovation from the lens of underrepresented populations (youth, gender, indigenous populations). A solution – Public investment in rural connectivity and communication platforms.[3877]

Digital SPS tools help move agricultural products along the value chain across borders. Blockchain tools can be useful, for example, in digitalizing seed supply chains.[3878]

Digital marketplace to link producers with global markets, with payments and documentation of climate and social results facilitated through blockchain. This platform would also serve as a mechanism to pay for externalities associated with different projects or companies, to the extent that these externalities could be credibly booked on the blockchain infrastructure.[3879]

Internet purchasing: small scale farmers chain to market is long, therefore using online shopping small scale famers can shorten this and improve their on farm economics.[3880]

More use of efficient systems such as irrigation technologies that time irrigations flows based on what is needed and when. There is a need for more wholesome energy that uses available waste and other resources linked to the food system.[3881]

MEASURING IMPACT, TRANSPARENCY, AND TRACEABILITY: (1) Low-cost digitization solutions to allow data gathering and increase transparency (2) Address the digital divide, by supporting farmers to access and use digital solutions.[3882]

[3874] 112:24 p 7 in 074_May_18_21_O'Mara_Teagasc

[3875] 112:73 p 13 in 074_May_18_21_O'Mara_Teagasc

[3876] 112:82 p 13 in 074_May_18_21_O'Mara_Teagasc

[3877] 113:7 p 6 in 075_Mar_10_21_IFAN

[3878] 113:26 p 8 in 075_Mar_10_21_IFAN

[3879] 115:20 p 9 in 085_Mar_17_21_IFAD_FSFS

[3880] 117:11 p 8 in 109_Apr_13_21_Jacobs-Mata I

[3881] 117:20 p 8 in 109_Apr_13_21_Jacobs-Mata I

[3882] 118:17 p 6 in 117_Apr_22_21_Dinesh D_Multi

Technology will also be a key driver for sustainable efficient food production. Connecting final consumer to farmer using tech could double the profit of farmer.[3883]

Tools/Innovation: Programs and initiatives need to provide the necessary tools to enable access. This includes investing in digital tools and emerging ag technologies.[3884]

Ensure new technologies and research results reach farmers, processors and consumers. Promote application of digital technology[3885]

New technologies will need to be developed to complement existing waste infrastructure to ensure we can use these waste products as a resource.[3886]

He also mentioned the need to focus on technologies (cold chain) to reduce post-harvest losses of agricultural products and food waste.[3887]

Crops driven by technology: Technology based remote sensor monitoring and water modelling on cropping patterns and pricing may yield great benefits. The focus should be on exploiting technology and statistical modelling for forecasting production, pricing and consumption. Ways should be explored to make the existing agriculture system more productive.[3888]

Existing systems need to be updated and parallel to that introduce the latest technologies.[3889]

Employing ICT is a recommended approach to increasing equitability in the WEF nexus. Barriers such as mobility constraints, lack of access to information and technologies, lack of credit services can be addressed by using ICT tools in disseminating information, increasing communications, and providing credit and technical support.[3890]

Likewise, complex technologies may provide solutions to management problems at a large scale but the importance of simple technologies cannot be ignored for small scale and community run operations.[3891]

Practices that are needed for food system sustainability: Culturally intact communities with access to water, land, seeds, technologies and traditional knowledge.[3892]

[3883] 118:69 p 13 in 117_Apr_22_21_Dinesh D_Multi

[3884] 120:9 p 5 in 127_May_13_21_IAFN_CWFS

[3885] 122:27 p 8 in 135_June_08_21_Calub_Gregorio

[3886] 124:17 p 8 in 142_May_11_21_Carter L_Dennis S

[3887] 126:6 p 10 in 157_Apr_25_21_UNFSS-AT2

[3888] 127:33 p 12 in 159_Apr_21_21_Hafeez M

[3889] 127:59 p 15 in 159_Apr_21_21_Hafeez M

[3890] 127:63 p 16 in 159_Apr_21_21_Hafeez M

[3891] 127:83 p 18 in 159_Apr_21_21_Hafeez M

[3892] 129:4 p 11 in 179_Apr 01_21_Livingston_Way

This would require innovation in access to finance and insurance for farmers with only small plots of land or those who do not own any land, as well as access to technology and investment in bringing the technology to farmers.[3893]

The participants agreed that more effort is needed to invest in water-saving technologies and support farmers in the application of such technologies. The example of farmers in Indonesia shifting from flood to drip irrigation was mentioned. Use of digital tools—to improve irrigation scheduling—and support to extension services by connecting them to the research community to ensure a more steady flow of innovation from research to farmers and from farmers to researchers was also recommended.[3894]

Agriculture institutions working on soil and water management can promote farmers' adoption of new technological methodologies (e.g. use of saline water and recycling wastewater for irrigation) to avoid soil erosion and reduce freshwater consumption. This can be accelerated through using extension systems via NGOs and the private sector. Digital tools, civil society involvement, new policies on infrastructure and capacity development could be impactful in Egypt in the next few years.[3895]

Providing agroecological zoning for suitable cropping system water-land use resource plans • Working on land reclamation projects through organic farming • Use of agronomic technologies like mechanized seeds and Climate Smart-Solar technologies are key interventions, which should be considered in future.[3896]

There is a need to leverage on technology to bridge the information gap. Tools such as radio and SMS can be used to update farmers who have little access to the internet.[3897]

Access to proven technologies will help improve food production and food security, and job and wealth creation for women and youth across the value chains. Having the technology at scale will help more women and youth to access the technology for their agribusiness development. Thus, the need for private sector engagement to produce the technology and put them at scale.[3898]

Access to proven technologies will help improve food production and food security, and job and wealth creation for women and youth across the value chains. ii. Promotion of gender-sensitive technology that meet women's needs, labor-saving and very simple to operate by non-educated youth.[3899]

iii. Develop technologies with the users, the people who will use them because it ensures that they are going to address the needs and priorities of the users.[3900]

[3893] 132:1 p 6 in 193_Apr_19_21_Ringler_Kassim

[3894] 132:11 p 6 in 193_Apr_19_21_Ringler_Kassim

[3895] 132:24 p 8 in 193_Apr_19_21_Ringler_Kassim

[3896] 132:61 p 12 in 193_Apr_19_21_Ringler_Kassim

[3897] 134:3 p 6 in 200_Apr_22_21_HEDA

[3898] 137:2 p 6 in 212_May_04_21_Akinbamijo Y

[3899] 137:15 p 8 in 212_May_04_21_Akinbamijo Y

[3900] 137:30 p 8 in 212_May_04_21_Akinbamijo Y

In the food systems approach, technology cannot be looked at in isolation. It is not just about putting technology on a farm, but also ensuring that the market systems is working such that if farmers invest in the technology, they can make money out of their investment.[3901]

As a means of ensuring adequate technology and innovative knowledge transfer, youth insisted that investment in Train-of-Trainers (ToT) on modern techniques (especially for agriculturalist experts and interns) is urgently needed as primitive agriculture techniques cannot provide timely and needed outputs to meet the demands of an increasing population.[3902]

Understanding climate conditions requires adoption and deployment of low-end land mapping and space technologies to improve yield and increase food production.[3903]

Multiple actors working on digitalisation in agri-food should take responsibility to develop this sector further to deliver on food security outcomes. They can grasp opportunities to improve the performance of this sector through cooperation. The Netherlands should invest in digitalisation as a contribution to food security, and Dutch actors can share their broad experience in this domain with LMIC actors. Stakeholders working on digitalisation and mainstream organisations need to capitalize on their differences. Introducing technology and creating infrastructure is only one aspect, adoption of digital tools by farmers requires cooperation between different actors[3904]

Using ICT technology to foster awareness and engage women's voices in policy issues; demystifying computer and social media skills.[3905]

More than 1 Billion are under nourished. We need to use artificial intelligence, especially in areas without proper distribution. With simple applications of technology, farmers can be connected to markets, and harvest at the right time and for the right consumption patterns.[3906]

Cultivate a nature positive approach by ensuring zero food waste, reducing pesticides and fertilizers, restoring degraded land for agricultural use, preventing additional conversion, and enabling small scale traditional farmers by implementing technology to help them grow traditional crops and connect them to markets using seasons as a guide.[3907]

Smallholders farmers into tech tools, information for them to be even more relevant.[3908]

[3901] 137:31 p 10 in 212_May_04_21_Akinbamijo Y

[3902] 139:17 p 10 in 216_May_06_21_Ben_Aniabi

[3903] 139:21 p 11 in 216_May_06_21_Ben_Aniabi

[3904] 141:24 p 12 in 229_May_18_21_NFP_Rabobank_Multi

[3905] 143:39 p 11 in 231_May_19_21_MCD

[3906] 144:12 p 6 in 232_May_20_21_Schwartz A

[3907] 144:19 p 9 in 232_May_20_21_Schwartz A

[3908] 146:37 p 14 in 235_May_25_21_Gonzalez B_Multi

How to adapt technology in food sovereignty, technologies need to adapt to our environment and specificities.[3909]

In addition, 17 African Leaders committed to concrete actions to boost agricultural production by doubling current productivity levels through the scaling up of agricultural technologies, investing in the development of agro-industrial processing zones to boost national and regional food markets for value-added and nutritious foods.[3910]

A call for the establishment of a Financing Facility for Food Security in Africa, to scale up climate-resilient and successful agricultural technologies and strengthen commodity value chains for both staple food and cash crops.[3911]

Capitalize on the Technologies for Agricultural Transformation (TAAT) program: TAAT brings together scientists from international and national agricultural research systems, governments, and the private sector to deliver agricultural technologies to farmers, at scale…[3912]

Technology, apps/online platforms could be used to link and build trust and transparency between rural areas, wholesale market tenants, and regional and international stakeholders and should be further promoted across Africa.[3913]

Recognise and guarantee land titles for pastoralists. Information technology can be used to provide data on pastoralists' populations and their land use.[3914]

At the farm-level, farmers require a complete toolbox, including biotechnology and crop inputs, to respond to evolving agronomic, disease and consumer pressures and to both mitigate the impact of climate change and contribute to global climate change goals.[3915]

The suggested steps were food diversification with a particular focus on drought resistance varieties, adoption of Agri technologies that increase productivity with less impact on climate, support and promotion of Agri extension workers to reach farmers with new skills and models, the role of agro-dealers in local markets, reduction of tax for Agri inputs, promotion of livestock farming in drought-affected regions and the use of farmers cooperatives if commercial farming in not exploited.[3916]

…promotion information sharing and collaboration and use of technologies…[3917]

[3909] 146:43 p 16 in 235_May_25_21_Gonzalez B_Multi

[3910] 150:7 p 6 in 253_Apr_29_21_AFDB_Multi

[3911] 150:38 p 9 in 253_Apr_29_21_AFDB_Multi

[3912] 150:39 p 8 in 253_Apr_29_21_AFDB_Multi

[3913] 151:26 p 8 in 261_May_03_21_Carrara_Le More

[3914] 152:33 p 8 in 262_May_04_21_ILC_Multi

[3915] 153:18 p 7 in 263_May_06_21_CCGA

[3916] 154:5 p 6 in 265_May_07_21_CSONA

[3917] 154:11 p 7 in 265_May_07_21_CSONA

...promote sustainable prices that can benefit farmers to sell producing should promote technology farming and innovation…[3918]

Interventions should focus on building small-scale fisher capacity and agency. E.g. shortening supply chains so fishers capture more value; increasing access to electronic technology and pricing info; more shoreside facilities to process and market catch; etc.[3919]

A key part of driving this impact will be providing dairy farmers with the tools and increasing financial support through corporate and institutional investment, government incentives to farmers for sustainable practice, better technology to drive a circular economy and reduce packaging waste, and models of consumption that push consumers to pay for more sustainable products.[3920]

Transitioning to electric vehicles, this will need government support.[3921]

There is a need to foster national and international collaboration in a non-traditional way by utilizing information and communication technology.[3922]

Harnessing the use of digital tools and technology to transform agri-food systems, improve access to market, knowledge, and information.[3923]

Incorporate social dimensions in research, so adaptive capacity is checked and considered in implementing initiatives. This includes factoring in concerns such as adaption to technology, which is often difficult.[3924]

If innovations are not picked up by the industry, then these will not work. There is a need to commercialize the technologies developed to benefit the people.[3925]

There is need for new digital technologies that collect and organize information on farm conditions and options to improve productivity, address climate variability and address potential environmental impacts.[3926]

There are already be a number of technologies and approaches that we could taking off the shelf - agroecology for example. Such technologies to address interrelated climate and water management risks such as irrigation are perhaps not ground breaking, but will be essential.[3927]

[3918] 154:15 p 7 in 265_May_07_21_CSONA

[3919] 155:33 p 8 in 272_May_12_21_Battista W

[3920] 156:20 p 6 in 275_May_13_21_Dornom H

[3921] 156:45 p 10 in 275_May_13_21_Dornom H

[3922] 157:13 p 6 in 278_May_18_21_Gregorio B

[3923] 157:47 p 9 in 278_May_18_21_Gregorio B

[3924] 157:62 p 9 in 278_May_18_21_Gregorio B

[3925] 157:82 p 12 in 278_May_18_21_Gregorio B

[3926] 158:13 p 6 in 279_May_18_21_Yoovatana M_Multi

[3927] 158:16 p 6 in 279_May_18_21_Yoovatana M_Multi

Where such rights don't exist, focus on improving access to technology/ digital tools to enable collaboration, organization, and advocacy.[3928]

Support development and application of low-cost and flexible technologies, and use existing scaled technologies (e.g., telecommunications) to facilitate nature positive production at scale.[3929]

We need to increase farms' energy efficiency: invest in technology and pilot projects for sustainable agriculture, convert the power grid to renewable sources, convert septic tanks to sewer systems to avoid nutrient leakage into waterways.[3930]

Encourage, fund, and educate traditional farmers on new technologies to yield higher nutritional crops by using hydroponic and aquaponic.[3931]

Support processors in new technologies, innovations, training, more organic production, production quality.[3932]

Participants recognized the utility of technology and social media to market and communicate advocacy projects, and connect youth to one another.[3933]

New technologies have been used to monitor and change user behaviour.[3934]

The efficiency increase of food production must take into account social aspects. Small-scale production, when combined with innovative technologies, may provide positive impact on the quality of food and sustainability.[3935]

Innovation can take many forms – from researching new technologies, to scaling up of existing approaches and applying new ways of working, partnerships and practices.[3936]

Farmers must be supported and capacitated to adopt new technologies.[3937]

Digital agriculture is helping educate young farmers and help them to problem solve issues in real time.[3938]

Covid-19 accelerated the use of digital platforms for farmer extension and diagnostics.[3939]

[3928] 161:27 p 6 in 296_May_25_21_Battista W

[3929] 161:43 p 8 in 296_May_25_21_Battista W

[3930] 163:41 p 6 in 300_May_27_21_Alesso_Pommeret

[3931] 163:155 p 19 in 300_May_27_21_Alesso_Pommeret

[3932] 164:25 p 10 in 304_June_02_21_FAO_Multi

[3933] 167:37 p 9 in 311_June_14_21_NCD Child

[3934] 168:7 p 6 in 322_June_03_21_Apicella_Machado

[3935] 168:11 p 6 in 322_June_03_21_Apicella_Machado

[3936] 169:16 p 6 in 327_May_18_21_CropLife

[3937] 169:24 p 8 in 327_May_18_21_CropLife

[3938] 169:37 p 11 in 327_May_18_21_CropLife

[3939] 169:43 p 12 in 327_May_18_21_CropLife

The focus of this discussion was to establish measures that could be undertaken to strengthen and empower the Agricultural Knowledge Innovation System in Ireland through the adoption of digital and data-driven tools and technologies.[3940]

A fundamental requirement for any digital strategy is to ensure a high quality broadband infrastructure is in place throughout the country – without this, the digital divide will grow wider over time.[3941]

It was clear from the discussion that digital solutions must be value driven and offer clear benefits to the end user whether it be improving environmental sustainability, time saving, increasing profitability, improving traceability, improving transparency of value distribution along the supply chain, reducing the burden of compliance with regulations or improved lifestyle.[3942]

The group felt that there were enormous opportunities for different systems to communicate with each other particularly with the advent of technologies such as Application Programme Interfaces (API's).[3943]

New technologies that are put in place to tackle biodiversity/climate change/water quality that have a capital cost should be supported financially.[3944]

New technologies will have to be supported by all stakeholders to communicate the environmental sustainability message to farmers.[3945]

Farmers will put into practice new technologies if they understand the benefits of same to all stakeholders – they have the solutions and are not the problem.[3946]

However, technology and innovation can be a double-edged sword. Indeed, it is not always optimally used.[3947]

In this respect, the role of technology and digital solutions is crucial.[3948]

Need to invest in advanced technology in agriculture.[3949]

Farmers envisage a food system where research station is actively involved in generating technologies that adapt to the local environment.[3950]

[3940] 170:47 p 12 in 328_May_19_21_Lalor_Teagasc

[3941] 170:50 p 12 in 328_May_19_21_Lalor_Teagasc

[3942] 170:51 p 12 in 328_May_19_21_Lalor_Teagasc

[3943] 170:53 p 12 in 328_May_19_21_Lalor_Teagasc

[3944] 170:78 p 16 in 328_May_19_21_Lalor_Teagasc

[3945] 170:79 p 16 in 328_May_19_21_Lalor_Teagasc

[3946] 170:84 p 16 in 328_May_19_21_Lalor_Teagasc

[3947] 171:15 p 8 in 329_May_19_21_CI_WFO

[3948] 171:23 p 6 in 329_May_19_21_CI_WFO

[3949] 172:3 p 6 in 330_May_19_21_RYFP_UNMGCY

[3950] 173:38 p 12 in 331_May_24_21_LNFU

Use of modern technology must be exploited especially during milking where producers should consider use of milking machines and Artificial Insemination during breeding.[3951]

Private sector can take a leading role in development of new technologies but also need to be supported by laws and regulations.[3952]

Digital platform should be better utilized for credit disbursement, collection and agricultural information sharing.[3953]

Young people needs digital technology in agriculture.[3954]

The use of technology in gathering data. Use Artificial Intelligence (AI) to link "producers"/"sellers" in the food systems to "consumers"/"buyers" in the system so that consumers can contribute to the production decision-making.[3955]

Use technology to increase the shelf life of certain perishable products like fruits and vegetables through the use of some technological means.[3956]

Inefficiencies are present throughout the supply chain but technologies will help to bring them to light and overcome them.[3957]

Investment in new technologies to help overcome environmental and economic barriers to production and sustainability is also important.[3958]

Technology is an excellent tool to share information of any kind. If it is done in the right way, we can help many people with the information they need to access better nutrition.[3959]

Improve adoption, access and use of digital technology; The dialogue noted that today's agriculture routinely uses sophisticated technologies such as robots, temperature and moisture sensors, aerial images, and GPS technology.[3960]

The government was therefore encouraged to promote these technologies through capacity building forums for Primary Producers. Producers are encouraged to adopt and make use of new technologies.[3961]

Proper policies must be put in place to regulate technology and data.[3962]

[3951] 173:110 p 18 in 331_May_24_21_LNFU

[3952] 174:24 p 6 in 332_May_24_21_FAO_UNDP

[3953] 174:34 p 6 in 332_May_24_21_FAO_UNDP

[3954] 176:5 p 6 in 334_May_25_21_Buzingo_J

[3955] 177:18 p 6 in 335_May_26_21_Laar_Multi

[3956] 177:43 p 9 in 335_May_26_21_Laar_Multi

[3957] 179:12 p 9 in 337_May_26_21_CI_WFO

[3958] 180:7 p 6 in 338_May_27_21_UNHCR

[3959] 180:28 p 10 in 338_May_27_21_UNHCR

[3960] 182:18 p 7 in 340_May_27_21_Mamba_L

[3961] 182:19 p 7 in 340_May_27_21_Mamba_L

[3962] 182:40 p 9 in 340_May_27_21_Mamba_L

Adopt Drip Irrigation technologies: the group noted that A well-designed drip irrigation system benefits the environment by conserving water and fertilizer. By placing water on the surface, next to the plant, or subsurface, near the root zone, helps to maximized fertilizer uptake and reduces wash off of both soil and nutrients, and maximizing productivity. In dry years, fewer weed seeds germinate between rows because there is less water available beyond the plant root zone reducing the extent of soil disturbance.[3963]

Computerising the exchange system of agricultural produce for traceability to discourage thefts.[3964]

Development of locally-adapted technologies for transforming the food value chain to respond to the evolving client base and technologies available for sustainable food production.[3965]

Mechanization of farms: Making use of IT to facilitate farming as a whole. Use of drones to apply fertilizer or to detect diseases and pests on the plot or greenhouse. The technologies are available elsewhere which makes it easier to bring and adapt the technologies to the local context.[3966]

Promoting the use of IoT in agricultural production by government through schemes and incentives and technology development;[3967]

Encouraging farmers at primary production level to explore technologies yielding sustainable farming practices.[3968]

Participants also recognized that partnerships have been fundamental to face the difficulties and build resilience in spaces where everyone can participate, including access to technology and information, technical assistance, and efficient systems for small producers.[3969]

Promote climate adaptive technologies and techniques for sustainable food production.[3970]

Smallholder Farmers needs digital technology in agriculture.[3971]

The Dialogue first highlighted the significance and importance of emerging technologies in the context of indigenous knowledge for food security. For example, Space data, in a sense, game-changers and it is indeed great to see the list of the benefits, as more data and

[3963] 182:77 p 13 in 340_May_27_21_Mamba_L

[3964] 183:26 p 8 in 341_May_28_21_Sewraj_KS

[3965] 183:76 p 14 in 341_May_28_21_Sewraj_KS

[3966] 183:78 p 14 in 341_May_28_21_Sewraj_KS

[3967] 183:80 p 14 in 341_May_28_21_Sewraj_KS

[3968] 183:81 p 14 in 341_May_28_21_Sewraj_KS

[3969] 184:9 p 6 in 342_May_28_21_Peralta T

[3970] 186:13 p 6 in 344_May_30_21_COAST

[3971] 187:8 p 7 in 345_May_31_21_Buzingo J

information translate to actionable services, applications, policies, and decisions, this empowers us to create the future we want.[3972]

In natural systems, the production follows functions. There is an urgent need to leverage technology, diversity, and indigenous knowledge to restore the ecological sound food systems for healthy diets, sustainable living and planetary health. Technology is manured enough to make a difference which requires collective actions for system-level. transformation- it must combine resilience, conservation, and restoration with co-benefits.[3973]

There are two key drivers of technological innovations, the recent advances in earth observation systems and the increased use of mobile phones –90% of the precision decision making data comes from these two technologies. The transformation requires an "Inclusive Agroecosystems" where use of science, technology help to rich the producers-farmers, connect them to consumers through an institutional framework that uses the digital technologies, enormous agricultural research with the ecological framework - diversification of agriculture with indigenous knowledge and wisdom of the right mixer of crops, varieties, multi-purpose trees, livestock, and people to preserve soil health and biodiversity.[3974]

7. Technology can be a friend especially for the youth however it can also be an enemy. Thus, there is need to ensure that take advantage of technology for the benefit of humanity. Need to ensure that technology works for the people and keep people in the sector and so that we do not replace the people within agriculture to create another crisis.[3975]

There is need to support agri-tech start-ups for young people through flexible business models and incubation hubs.[3976]

Technology dissemination is very important – governments should also be responsible.[3977]

Inclusive approach for organizing the local institutions (farmer groups, cooperatives etc.) at grass roots level and campaigning must be initiated for increasing the level of awareness and sensitization of those institutions especially using digitization for accessing the all services across the board by ensuring "Leave No One Behind".[3978]

Digitization of the local institutions and utilization of the digital tools for increasing the awareness and access to the services.[3979]

[3972] 188:9 p 5 in 346_May_31_21_CANEUS_Multi

[3973] 188:27 p 7 in 346_May_31_21_CANEUS_Multi

[3974] 188:28 p 7 in 346_May_31_21_CANEUS_Multi

[3975] 189:9 p 6 in 347_June_01_21_Ekwamu A

[3976] 189:15 p 6 in 347_June_01_21_Ekwamu A

[3977] 190:10 p 6 in 348_June_02_21_ASF Pakistan

[3978] 190:17 p 7 in 348_June_02_21_ASF Pakistan

[3979] 190:18 p 7 in 348_June_02_21_ASF Pakistan

E-agriculture is the future for improved sustainable agriculture and food security, information access to markets, better access to climate information and higher levels of inclusion in the agriculture and rural environments.[3980]

The approach to Rural Advisory Services should integrate pluralistic, private, digital, demand driven and accountability aspects;[3981]

For the private sector, there is a need to; (a) develop commercially viable models; (b) foster development of digital services; and, (c) facilitate access to venture capital;[3982]

Digitalization – Games, apps, infographics, and social media that will shape behavioral change communication among children. The use of social media among school children.[3983]

Incorporate digital data and models into education to encourage better decision-making.[3984]

Use dash boards to help improve on-farm productivity as well as improve connectivity with and understanding of consumers (i.e. using individual digital twins to inform food choices).[3985]

Incorporate Brain to Biosphere issues into the Digital Circular Economy, communities, farms and gardens from Bega to Botswana to Brazil.[3986]

Bring the farms, digitally, into the homes, companies and labs to engage with global experts and revitalise through XCHANGE. Embellish and Visualise the Digital Sister.[3987]

Some tech solutions for building the future - High resolution, high frequency satellite data/Tools for making sense of big data/ Standardising drone and other 3D data.[3988]

2021 - X - XR Wearings and AI Robotics, use of AR wearables Location specific data - IOT Sensors, Cattle tags, NDVI, Soil Data, Tasks and Instructions, Remote Assistance End Users - Producers and their teams, consultants, corporates, government, education Digital Twins, virtual field days Agriculture + Immersive technology + Communication + Business.[3989]

Use technology to spark curiosity amongst youth and make it growing food cool again.[3990]

[3980] 191:13 p 6 in 349_June_02_21_Ekwamu A

[3981] 191:20 p 6 in 349_June_02_21_Ekwamu A

[3982] 191:34 p 7 in 349_June_02_21_Ekwamu A

[3983] 193:56 p 11 in 351_June_03_21_CIF_Multi

[3984] 194:4 p 7 in 352_June_04_21_Troughton J

[3985] 194:7 p 7 in 352_June_04_21_Troughton J

[3986] 194:19 p 8 in 352_June_04_21_Troughton J

[3987] 194:21 p 9 in 352_June_04_21_Troughton J

[3988] 194:34 p 11 in 352_June_04_21_Troughton J

[3989] 194:46 p 12 in 352_June_04_21_Troughton J

[3990] 204:19 p 9 in 363_May_26_21_Mehta_Bautista

Faith communities can play a special role in providing thought leadership and convening decision-makers to employ available technologies and listen to local knowledge to accelerate concrete action towards resilient, inclusive and sustainable food systems. Dr. Ismahane Elouafi, Chief Scientist at the Food and Agriculture Organization (FAO), thereafter stated that technology and innovation can enable the elimination of world hunger, while staying within planetary boundaries. She called for institutional innovation along the lines of a lifecycle approach, integrated policy and local empowerment.[3991]

Finally, Bishop Paul Tighe, Secretary of the Pontifical Council for Culture urged the adoption of a systemic approach to technology, capable of recognizing its impacts on social and natural ecosystems. Technology, such as artificial intelligence and big data, can help achieve a more nuanced judgement of how the use of technological innovations impact food systems as a whole by constructing data sets that comprise diverse disciplines, wisdoms and local knowledge. The adoption of this approach at global level can provide the necessary framework for local initiatives to thrive and promote an awareness of individual participation and responsibilities in food systems.[3992]

Technology, such as artificial intelligence and big data, can help achieve a more nuanced judgement of how the use of technological innovations impact food systems as a whole by constructing data sets that comprise diverse disciplines, wisdoms and local knowledge.[3993]

Currently the affected communities have limited capacity to plan and address climate change impacts. There is need to promote research and generation of technologies or adaptation practices. These may include ecosystem-specific climate resilient fish species that are tolerant to different climatic risks such as high temperatures and salinity levels, pond depth and aeration, fast growing species, integrated crop and aquatic farming practices, and promotion of cage culture.[3994]

Reform present-day technological and financial structures to support the transformation of food systems.[3995]

Among the different measures that were underlined during the dialogue were: access to rural credit, access and control over land and natural resources, technical assistance, appropriate technologies, digital marketing, and transformation processes.[3996]

International organizations, non-governmental organizations should develop projects to support farmers to apply new technologies in production, design capacity-building program for farmers, send experts to provide technical assistance.[3997]

[3991] 205:7 p 6 in 364_May_26_21_DPIHD

[3992] 205:9 p 6 in 364_May_26_21_DPIHD

[3993] 205:21 p 9 in 364_May_26_21_DPIHD

[3994] 208:16 p 8 in 367_May_27_21_Kachulu_Thilsted

[3995] 210:11 p 7 in 369_May_31_21_Holy See

[3996] 214:2 p 7 in 374_June_03_21_DG INTPA

[3997] 217:17 p 7 in 378_June_07_21_My Mai Bac

2. Agriculture, food product development and food accessibility need to be at the core of investment together with the knowledge and technologies to energize the transformation.[3998]

COVID 19 emergency plan – Vaccinations and food on the plate for all. The weakening of public policies has aggravated food insecurity. Civil society is responding to emergencies (food donations, community kitchens), and the government is failing in terms of emergency actions.[3999]

Strengthen the role of the State in the regulation of the market and production: Regulate prices, establish public purchasing policies for locally produced food, introduce technology and infrastructure to improve marketing processes, promote policies to strengthen access to markets by small producers, as well as policies for food production focused on food autonomy and internal production.[4000]

The efficiency in the use of raw materials, the reduction of the water footprint, and the use of by-products that are generated in the farms, as an organic amendment for the fertilization of soils, together with the use of renewable energies, are essential tools. The development of new technologies, within the framework of precision agriculture and livestock, will allow further progress in this objective. This technological progress, together with the awareness of the agri-food sector as a whole, guarantees the objective of achieving a neutral climate impact by 2050, in line with the provisions of the European Green Deal.[4001]

Production systems are complex in Latin America and new technologies offer solutions to increase productivity, but these technologies are not always accessible to all.[4002]

On a smaller scale, participants acknowledged the need to build capacity for the implementation of technology locally, in a way that is considerate and adapted to the resources available. Technology has to be affordable, attend to local needs and the focus of development and implementation of innovation must remain on creating value for producers if we're going to see innovation adopted in practice.[4003]

2.Stronger cooperation between members of INOFO in the promotion of agroecology and organic agriculture and for exchange of experiences, study and improving human resources. Farmers exchange and training to diagnose the problems and they are equipped with the technology & management techniques are able to assist with plant health in their communities.[4004]

Potential for companies to seed incubators to develop and grow technology solutions.[4005]

[3998] 223:17 p 8 in 384_June_09_21_Ekwamu A

[3999] 228:22 p 8 in 222a_May_11_21_FTI_ZHI_English

[4000] 234:30 p 8 in 273_May_12_21_ILC_FILAC_Multi_Eng

[4001] 237:5 p 8 in 284a_May_19_21_INTERPORC_English

[4002] 238:2 p 9 in 306a_June_05_21_Zamarano Uni_English

[4003] 240:7 p 6 in 319_June_30_21_Fredriksson O

[4004] 250:12 p 9 in 486_June_23_21_AFA_Multi

[4005] 251:22 p 8 in 487_June_29_21_Selwyn_Multi

The group felt that technology should be further embraced to help reduce food waste. Whilst each participant acknowledge technology could help them reduce waste in different ways depending on their sector, a common outcome was the fact that recent development should be embraced wherever possible to aid a reduction in food waste. This comes with questions regarding funding, as whilst it may be more profitable in the long run, investment in technical solutions to reduce food waste can come with upfront costs which can be unattractive, particular when upfront financial support or incentives are not provided.[4006]

Technologies have played a critical role in reducing food waste in China. For example, AI technology is used to track plate waste, internet delivery companies encourage restaurants to customize their menu to reduce waste, and apps have been used to share leftover food among communities. To further increase the effectiveness of technology, deeper understanding on human behaviors lays at the foundation.[4007]

Women agri-preneurs' low use of digital technologies holds them back in several areas, notably, accessing digital financial services, markets and information and prevents them from taking full advantage of social media and digital agribusiness platforms such as VALUE4HER to grow their agri-enterprise. It was emphasized that publicizing information on agriculture related tools and equipment particularly through information channels used by women producers, explore innovative ways to improve women's digital education and use of digital technologies and spaces by, for example, organizing women agri-preneurs into collectives headed by a tech-savvy leader.[4008]

6. Make life cycle analysis (LCA) software and tools more widely available, and train companies in how to use them.[4009]

Broader access to technology in the field is necessary to also reach more remote areas/small-holders[4010]

Use of technology as a means to improve productivity (e.g. high precision agriculture, biological defensives/fertilizers, machinery, and others).[4011]

• Investments in technology has been key in such development. • In the context of a growing population, which requires better quality food and want to know where it comes from, the digital transformation becomes key. • Usage of 4G to monitor the fields by applying high precision agriculture. With technology, farmers get able to better manage the fields by feeding the soils with what is needed and also by allowing for the biological control of pests.[4012]

[4006] 253:7 p 7 in 489_June_22_21_Rare China Centre_Multi

[4007] 253:15 p 10 in 489_June_22_21_Rare China Centre_Multi

[4008] 255:10 p 7 in 491_June_23_21_Dido_Otieno

[4009] 256:30 p 11 in 492_June_23_21_Liu JA

[4010] 261:35 p 6 in 497_June_24_21_Fontes_Multi

[4011] 261:36 p 6 in 497_June_24_21_Fontes_Multi

[4012] 261:95 p 12 in 497_June_24_21_Fontes_Multi

Develop a digital driven agricultural policy aimed at attracting the youth engagement in food systems.[4013]

Place more emphasis on post-harvest technologies, especially in food processing.[4014]

Improve infrastructure to make technology accessible to farmers.[4015]

Strengthen market linkages, producer organisations, information systems, market-supportive infrastructure.[4016]

Introduce labour-saving technologies.[4017]

By applying technology to make the use of seaweed-derived products more efficient, cost-effective and lucrative.[4018]

Most projects can be done within a week. Software like Mappillary can be used in the process.[4019]

Other online marketing strategies need to be quickly developed so produce or fish delivery can be done online.[4020]

…harness artificial intelligence (AI) techniques such as machine learning, digital technologies, and big data including remotely sensed data to not only fill knowledge and data gaps but to also boost agricultural productivity and address the numerous threats facing food systems;[4021]

There is then the idea of knitting together the social and technological aspects of regenerative agriculture; in western economies it is first a foremost thought of in terms of technologies and process applications.[4022]

...using innovations and technologies applied across the entire food system including labelling, traceability, food safety, use of risk based approaches, product quality, and e-commerce.[4023]

Transition to landscape approach regarding land procession, land use planning, application of new varieties/technologies.[4024]

[4013] 262:12 p 6 in 498_June_24_21_Danquah E

[4014] 262:23 p 6 in 498_June_24_21_Danquah E

[4015] 262:46 p 7 in 498_June_24_21_Danquah E

[4016] 263:39 p 8 in 499_June_25_21_GANSF

[4017] 263:49 p 10 in 499_June_25_21_GANSF

[4018] 264:32 p 8 in 500_June_26_21_Edible Issues

[4019] 264:42 p 10 in 500_June_26_21_Edible Issues

[4020] 265:17 p 6 in 501_June_28_21_Kairo K

[4021] 271:8 p 6 in 507_June_30_21_AKADEMYA2_FANPRAN

[4022] 273:93 p 13 in 509_June_30_21_FFA_Nestlé

[4023] 277:12 p 6 in 513_July_01_21_Weise S

[4024] 277:25 p 7 in 513_July_01_21_Weise S

Develop and apply advanced technologies and innovations to cope up with climate change and improve soil health.[4025]

In addition, farmers should be encouraged to adopt new technologies such as hydroponic farming and the governments to improve on data management especially concerning households to improve on planning…[4026]

It was observed that most people in rural settings do not have access to digital technology, the cost of technology is prohibitive and the youth are not involved in processes of policy making.[4027]

…it is imperative to look at the cost of emerging technology and subsidise the same for the youth and also improve on distribution of digital infrastructure throughout the region not just in urban settings.[4028]

The need to integrate technology and markets was highlighted.[4029]

Access to services to enable engagement to establish shared vision(s), action plans, participation from women/youth, conflict resolutions, technology integration, etc. It is crucial for farmers to engage in local markets, connect with cities and consumers requiring the right set of services and produce quality food, reduce losses, and engage with other actors.[4030]

In terms of technology and transfer, although it was mentioned that the Rwandan FDA is putting a lot of effort into mitigation (e.g., Government purchased mobile dryers and contracted entrepreneurs to support cooperatives), mycotoxin testing capacity remains a challenge (e.g., rapid test for aflatoxin is far from adopted). Indeed, farmers' lack of access to these technologies needs to be addressed.[4031]

What resources are most important for entrepreneurs to produce nutritious foods? 1.Infrastructure for post-harvest activities for example in storage and processing 2.Transportation is also another key area 3.There is the need for laboratories to test the nutrition of the foods being processed.[4032]

Invest in innovation for precision animal feed and improved animal digestibility (science-based).[4033]

Promotion of the use of online platforms that identify seafood sold at first sale points.[4034]

[4025] 277:69 p 9 in 513_July_01_21_Weise S

[4026] 279:21 p 10 in 515_July_01_21_EastAfricanFarmers

[4027] 279:25 p 12 in 515_July_01_21_EastAfricanFarmers

[4028] 279:28 p 12 in 515_July_01_21_EastAfricanFarmers

[4029] 281:10 p 8 in 517_July_03_21_Perera A

[4030] 299:21 p 6 in 535_July_08_UNESCO Chair on Food

[4031] 300:15 p 6 in 536_July_08_21_Musabyimana JC

[4032] 300:27 p 8 in 536_July_08_21_Musabyimana JC

[4033] 301:40 p 8 in 537_July_08_21_ANP_WWF

[4034] 301:53 p 9 in 537_July_08_21_ANP_WWF

Technology solutions that allow consumers to collect waste from outlets.[4035]

Only technologies that are resilient to climate change, gender sensitive (labor-saving) and nutritious (biofortification), will foster resilient and inclusive food systems especially in context of vulnerability aggravated by shocks such as pandemics. Digitization of agriculture is important but often women are the ones who do not have access to phones so it's important to ensure women are included in solutions. Digital tools can help the implementation of agricultural insurance systems. Cell phones can help formal and informal small-scale producers document their practices and show that crop losses are due to due to climate extremes or infestation, therefore supporting farmers claims and reassuring insurers that claims are valid (could we do the same for pandemics?)[4036]

Technology can provide an enabling environment to spatially dislocate important productive activities and services.[4037]

COVID-19 underscored the vulnerabilities of the food value chain that can be addressed through infrastructure investment, but opportunities were also identified in broadening markets, particularly in establishing digital platforms that can help producers, value chain actors, consumers, and policymakers make informed decisions.[4038]

Digitalisation is perceived to be a lever of transformation, but current gaps in implementation must be addressed in order to reap its expected benefits. Human intervention remains necessary for technology adoption, and extension and advisory services can complement digital tools in strengthening the right to information.[4039]

Identified priority areas for research and development are dependent on landscape and climatic conditions. These include the development of lower cost and scale-neutral stress tolerant rice varieties, improving rice-fish systems and polder farming, and the establishment of climate smart villages. It was also suggested that promising new technologies must be made readily available in the public domain.[4040]

Digitalisation of the food chain is seen to benefit both end-users and policymakers. End-users include farmers and value chain actors who are able to access updated tools and resources that can help them make better decisions about which crops and products to cultivate, and allow them to have a broader consumer reach. For policymakers, digitalising the value chain provides access to updated data (organized in relevant dashboards) that allows for foresighting, market analysis and development of evidence-based policies for a more inclusive agriculture sector.[4041]

Digitalisation and extension services: Digitalisation as a lever for transformation emerged as a common theme in all discussion groups, but this requires—among others—

[4035] 301:55 p 9 in 537_July_08_21_ANP_WWF

[4036] 302:23 p 9 in 538_July_09_21_IDS_Multi

[4037] 306:14 p 6 in 542_July_12_21_Prota_L

[4038] 313:12 p 6 in 549_July_14_21_Meah N

[4039] 313:13 p 6 in 549_July_14_21_Meah N

[4040] 313:18 p 7 in 549_July_14_21_Meah N

[4041] 313:28 p 10 in 549_July_14_21_Meah N

infrastructure investment and social and behaviour change communication initiatives that would address the digital generation divide. Therefore, investing in human capital, particularly in extension and advisory services, that could contribute to community organisation, knowledge exchange, and improve access to formal mechanisms is required. This would address current challenges in improving uptake of digital services for end-users. In addition, digitalising the value chain can also provide easy access to relevant and real-time data that policymakers can use for food systems governance. Digitalisation and extension services can both be viewed as transformative actions for making the food system more resilient and inclusive.[4042]

The effective and efficient implementation requires an enabling environment of governance mechanisms and technical innovations that facilitate consultation across sectors and all key stakeholders, such as Chinese governments, development financial institutions, private sectors, academia, grass-roots level farmers' cooperatives, United Nations agencies, as well as scientific research institutions.[4043]

Innovative technologies, such as green grain storage technology, cleaning drying technology and equipment, as well as grain logistics technology, play a key role in post-harvest loss practices.[4044]

Technological improvements in drying equipment could maintain moisture and nutrients of thermal-sensitive grains to minimizing deterioration and preserving higher economic value.[4045]

The cooperation and engagement among international community, national governments, private sectors, and social organizations are critical for reducing food loss and waste. More efforts could be focused on 1. Enhancing food supply chain with efficient inputs 2. Building systemic technologies achieving food loss and waste reduction through food chain covering post-harvest, storage and warehousing, processing, transportation and distribution, and consuming section. 3. Strengthening advocacy for food loss and waste reduction (e.g. global initiative) with more active engagement of UN agencies, NGOs, and private sectors.[4046]

Based on Cloud Computing, Cloud Services, Big Data, IoT and other digitalized tools with integration of information and communication technologies, packaged service aiming food loss and waste could benefit the whole food value chain. • The ICT-based toolkit remarkably improves the efficiency of grain purchasing and marketing to reduce the post-harvest loss, which provides space to attain digitalization, visualization, standardization of grain supply chain, traceability and reduce the risk of grain reserves management. • The smart grain warehouse management system enables surveillance, temperature control, nitrogen conditioning, risk monitoring and alarming to prolong grain shelf life, lower the

[4042] 313:37 p 11 in 549_July_14_21_Meah N

[4043] 315:4 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[4044] 315:7 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[4045] 315:9 p 6 in 551_July_15_21_FAO_ESCAP_Multi

[4046] 315:23 p 9 in 551_July_15_21_FAO_ESCAP_Multi

management cost, and maintain grain quality in grain warehouse, so as to reduce the food loss and waste.[4047]

E-commerce platform focusing on agricultural production with cold-chain logistics network could improve procurement efficiency from smallholder farmers to consumers, well connecting transportation and retailing, contributing to food loss and waste reduction.[4048]

Farmer-to-farmer digital technologies represented by Digital Green. Through digitalization and data farmers strengthen their position and gain voice to engage in constructive ways to change pre-existing power imbalances, such as top-down agricultural extension approaches. Farmers understand the value of their own data and have control/agency over it. Farmers use the cumulative information to make informed decisions and become empowered. This is possible through: • Targeting of elder, women, poor and landless farmers to work with them in equal pairing to build resilience and increase their empowerment. • Engage in atypical capacity building, farmer-to-farmer knowledge sharing.• Develop effective tools to help farmers to become empowered.• Ensure enabling elements such as supportive policies. • Advance a mindset of democratization of knowledge production with capacity for global scaling.[4049]

Technology as an important factor for the future of food production Another important discussion revolves around the use of technology in food production and the food supply chain. New technologies are acknowledged as important drivers of the future of agriculture. Some have raised important questions on how technologies may not yield the promised greater productivity - where methods such as agroecology argue that these more natural methods are better. Others raised the issue that while new technologies are better, the cost of using new technologies can be prohibitive and raises the cost. For older farmers, learning to use new technologies may be a significant barrier to adoption. Before these technologies can be introduced, basic digital infrastructures, such as internet and mobile connection needs to be established. This is on top of transportation infrastructures such as road network and irrigation network. Therefore, even if new technologies can benefit the farmer, basic infrastructures must be in place beforehand.[4050]

Last but not least, smart technologies and data tools are useful assets in evaluations of food systems, which can be constrained by capacities of evaluators themselves.[4051]

Technology and Knowledge Exchange: India and Africa face common challenges – among others, low volumes at individual farm gates, long and often inefficient value chains and value webs, inadequate storage capacities (especially cold storage for cold chains of perishable products), absence of efficient, transparent, well-regulated markets. India has been pioneering in developing improved agricultural technologies and improved varieties of dryland crops. Under the South-south collaboration, institutes like ICRISAT have been

[4047] 315:24 p 9 in 551_July_15_21_FAO_ESCAP_Multi

[4048] 315:25 p 9 in 551_July_15_21_FAO_ESCAP_Multi

[4049] 317:12 p 7 in 554_July_15_21_Lopez DE

[4050] 319:8 p 6 in 556_July_15_21_Von Goh_GenTan

[4051] 320:13 p 8 in 557_July_15_21_EvalForward_FSRD

playing a major role in exchanging technologies between two continents. Technology exchange should also happen amongst different States in India. Research institutions have been creating knowledge banks which could be integrated into a Global Knowledge Bank on Dryland Food Systems.[4052]

Agri data exchange: The status of agricultural data in India and African countries prompt us to initiate steps to establish state, national and global level agri data exchanges. Data lakes could turn into digital public good for data driven policy making and enable an ecosystem with intelligence on cropping and commodity marketing. The Government of Telangana and the Centre for Fourth Industrial Revolutions (C4IR) of the World Economic forum is implementing the Artificial Intelligence for Agricultural Innovations (AI4AI) project through which an agricultural data lake is currently being created and more than 30 emerging technologies developed by Indian start-ups have been carefully vetted and shortlisted for piloting and large scale deployment. Identified start-ups will use the standardised agricultural data shared from the data lake. (http://www3.weforum.org/docs/WEF_Artificial_Intelligence_for_Agriculture_Innovation_2021.pdf)[4053]

Technology integrators and affordable Emerging Technologies: Creation of an agri sandbox- a centralised hub, where the tools/technologies are available in the repository, innovative ways of farming are promoted and a diversified ecosystem is created.[4054]

Access to Data: Potential to increase value in dryland food systems requires better policies accounting connectivity and infrastructure to govern access to and use of digital technologies and related data in the agriculture sector. As data is key to digital innovations, governments may follow open data system as a means for promoting innovations which enable effective stakeholder decision making.[4055]

Start-ups need an industry partner who could help penetrate their technologies for large-scale adoption. A collaborative approach of bringing stakeholders together to implement data driven solutions and prepare a global action plan on research, technology, market and policy interventions is essential for improving dryland food systems. A Global Centre of Excellence in Biofortification could be established to develop research programs, to promote biofortified food, advocate policy amendments and contribute to nutrition security of the malnourished population.[4056]

Government and industries shall join hands to provide better marketing facilities to dryland farmers and conduct large scale awareness and PR campaigns on the available marketing and warehousing facilities and subsidy schemes.[4057]

[4052] 321:3 p 7 in 558_July_16_21_RICH_ICRISAT

[4053] 321:4 p 7 in 558_July_16_21_RICH_ICRISAT

[4054] 321:13 p 11 in 558_July_16_21_RICH_ICRISAT

[4055] 321:17 p 12 in 558_July_16_21_RICH_ICRISAT

[4056] 321:23 p 14 in 558_July_16_21_RICH_ICRISAT

[4057] 321:25 p 16 in 558_July_16_21_RICH_ICRISAT

Training and capacity building are seen as core elements to the overall success of improved Food Systems in Sub-Saharan Africa. Capacity building related to Sustainable Intensification and food security addressed to small scale farmers should consider training farmers on how to innovate and be competitive on the market and on how to link agricultural production to food and nutritional requirements. Capacity building and sensitization must be socially and culturally sensitive and shall take into consideration language and ethnicity barriers. Moreover, not only capacity building and training should focus on new technologies for Sustainable Intensification but also on traditional and local knowledge, favouring low-cost technologies and strategies, and adaptability to local farmers who do not have many practical tools.[4058]

Digital literacy and accessibility could make a difference. ICTs, especially mobile technology, could improve and overcome the constraints related to training and extending services. Technologies are available, but they do not reach those interested. A great effort must be demanded for these technologies to reach those that are most interested and in need. ICTs are helpful in teaching farmers on reproduction and preservation of seeds. People on the field and experts alike are also essential to educate farmers to new technologies in order to boost their productivity.[4059]

Participants started the discussion focusing on which innovative pre- and post-harvest technologies and practices should be applied over the next years to increase crop yields while offering safe and nutritious food, and divided them in sectors of application: • SOIL MANAGEMENT: Precision farming.

• WATER MANAGEMENT: Solar energy, drip irrigation.

• AGRICULTURE LIVESTOCK INTEGRATION: Agro-ecology.

• CROP MANAGEMENT: Neglected and Underutilized Crop Species.

• POST-HARVEST: Drying solar systems and special bags that farmers can use for storing solar energy and avoiding contamination in food.

• PEST AND DISEASE MANAGEMENT: Push-and-pull technology; "Aflasafe", natural product for minimizing aflatoxin limiting contamination from reaching dangerous level. It is used in Sub-Saharan Africa for augmenting the quality of products and quantity.

• ICT TOOLS: Sensors for monitoring the conditions of grains during the storage.[4060]

From the side of research and academia, it is important that research questions are co-developed with local communities since the early beginning of project cycles, so that results are appropriate and useful for farmers and they can continue beyond single interventions/projects. This will also reduce farmers' resistance to implement and use technologies or new ways of working. In promoting Sustainable Agricultural Intensification practices and technologies, it is important to understand the different value systems of stakeholders and take into consideration the drivers behind agricultural choices

[4058] 324:7 p 7 in 561_July_19_21_OCCAM

[4059] 324:10 p 7 in 561_July_19_21_OCCAM

[4060] 324:22 p 9 in 561_July_19_21_OCCAM

that are not only related to cash or yield but they are also social and cultural (ex. pearl millet is also used for buildings and not only for food).• All capacity building and education interventions should be accountable towards local communities and Donors.[4061]

Most of the participants felt that there was urgent need for the adoption of new technologies in agriculture, the new technologies will help in improving crop management, pest control and disease management and may include farm automation, livestock technology, artificial intelligence, precision agriculture, block chain, vertical farms and modern green houses. This will contribute greatly to the consumption of diversified diets by the general populace.[4062]

We will need to see both developed and developing countries make good use of technological improvements in efficiency and mitigation strategies that are incentivized by policy.[4063]

Ultimately climate neutrality for the sectors cannot happen without policy and markets for carbon. Programs that allow farmers to sell the energy they make from tools such as dairy biodigesters back to the grid can make the investment in the technology worth the cost. Not being able to reverse meter is a big policy roadblock. And it is not just emissions that degrade the environment and offer a market to be sold as credits.[4064]

California has credits for things like phosphorus which affect water quality. Ultimately we need engagement from industry and researchers to craft policy that meets both environmental and economic needs. Market limitations on biodigester products is one example of impediments to their widespread adoption. Policy can open up markets making mitigation strategies profitable.

There are many powerful tools available to reduce methane emissions from livestock such as feed additives, manure management, and animal efficiency. While reducing enteric methane emissions is promising it is not the only strategy. In fact, reaching 50% methane reduction will be an uphill battle with feed additives as our only weapon. There is no silver bullet for farmers. We must look at the system as a whole and make reductions along the supply chain at every chance we have. If we zoom out and look at the whole system we can begin to identify inefficiencies. We then must communicate these efficiencies to the whole supply chain.[4065]

According to him, technology is crucial to agriculture and is, in fact, the most lucrative endeavor in the world. Farmers experience food loss caused by inefficient pest control as a result of challenges arising from a shortage of processing mechanisms and insufficient storage facilities. Agricultural technology can help farmers maximize production and minimize loss via agritech opportunities such as data analytics, artificial intelligence and climate study. All these, when properly incorporated into agriculture can help farmers stay

[4061] 324:47 p 11 in 561_July_19_21_OCCAM

[4062] 325:15 p 7 in 562_July_19_21_Zombe K

[4063] 328:1 p 6 in 565_July_20_21_Mitloehner_Kebreab

[4064] 328:6 p 8 in 565_July_20_21_Mitloehner_Kebreab

[4065] 328:7 p 9 in 565_July_20_21_Mitloehner_Kebreab

one step ahead of the weather, increase productivity, farm smartly, track progress on their various farms and ensure security, pest control and crop mapping.[4066]

There is no current and compelling incentive for farmers to capture and disclose data and on-farm practice information that would enable investors to conduct "environmental accounting" at the farm and field level. And fundamentally, we do not have commonly accepted, practical, verifiable measurement tools and metrics to measure climate-smart outcomes such as improved soil health. Even as these tools are developed, many farmers and ranchers still use "paper and pen" to capture information and many can't afford the new technology for data capture and disclosure.[4067]

"Green" finance needs standards and verification to ensure credibility and trust. Whether in bonds or other debt instruments, we need technology and data that validate claims and measure impact. We need appropriate communications and storytelling to promote and reward the best actors (financial institutions and their ag customers, plus food/ag brands), sending a clear market signal about the value and importance of verified green finance value chain products, services, and practices.[4068]

As one U.S. farmer said, "technology has been the key to being sustainable for the past 50 years, and that was the key to being sustainable for my grandfather and father, too." His point was, in every generation, farmers and ranchers have learned to, as another farmer said, "do more with less" and have shifted their focus away from simply "high yield," to healthy plants, animals, soil, water, and air. Sustainability, economically and environmentally, is a continuum.[4069]

But producer participants also recognized that every system has limitations, and in order to produce in abundance and provide a diverse diet for the consuming public, large-scale production is the efficient mechanism that feeds a significant urban population. Closed farming/ranching systems reduce agriculture's environmental footprint and consolidate natural resource use to bring a product to market. Agricultural technology also builds a sturdy workforce on the front end for inventors, innovators, engineers, technicians and others.[4070]

Consumer choice should be thought of and understood differently than cost of production. Technological and scientific innovation are directly linked to a nation's average household food budget: The more advanced the systems (e.g., use of irrigation, tractors, fertilizer), the lower the average cost of food per household.[4071]

Regarding the durability and sustainability of the production systems, the principles of sustainable agriculture were presented as relevant for three levels of need: economic viability, prevention of damage to the environment, and socioeconomic equity. To arrive at those, on the one hand it is necessary to build awareness among local stakeholders

[4066] 334:4 p 5 in 389a_May_27_21_ASEF

[4067] 335:3 p 2 in 484a_June_24_21_WBCSD_USFRA

[4068] 335:7 p 2 in 484a_June_24_21_WBCSD_USFRA

[4069] 336:1 p 2 in 494a_June_23_21_US Farmers

[4070] 336:7 p 3 in 494a_June_23_21_US Farmers

[4071] 336:10 p 3 in 494a_June_23_21_US Farmers

regarding agricultural best practices (awareness-building largely using modern communications channels, adoption of shock communica6ons methods if necessary) and on the other hand to implement the means necessary to promote these sustainable and resilient produc6on methods while preserving the food security of households. To do this, the group insisted on the need and urgency to adopt measures of economic incen6ves and to promote appropriate new technologies in order to guarantee a stable offering of foodstuffs with adequate nutritional value to which the vulnerable groups will have access.[4072]

Take drastic measures to save natural resources, in particular water resources: there is no more time for diagnostics, and the participants insisted on the urgency of promoting this type of measures and technologies which respect the environment and which can adapt to climate change, which are in fact already known and used in certain regions of Tunisia, but are not sufficiently promoted.[4073]

Awareness-building and training of local stakeholders regarding agricultural best practices which are respectful of the environment: in this context, agricultural training and awareness-building on the importance of practicing sustainable agriculture will be crucial. The question of agricultural consulting will also need to be rethought in depth, for example with the use of digital approaches.[4074]

Supply • Develop technologies for FFs through co-innovation, beyond production, involving consumers and addressing organizational aspects. • Subsidize healthy FF production (prioritizing youth and women). • Discourage unhealthy food production through control of inputs, taxation, or other means. • Finance the transition to agroecological systems.[4075]

v. Develop electronic commerce connecting FA-consumers, supported by health and environmental authorities. • Provide rural areas with broadband, with high speed.[4076]

Strengthen and make affordable technology programs for clean and competitive production, especially for small and medium-scale producers.[4077]

Technology and innovation are essential for promoting agricultural development. Better-quality inputs (molecules) that can boost production and take care of our environment should be promoted.[4078]

Access to very soft credit must be generated, so that access to technology does not become an insurmountable obstacle.[4079]

[4072] 338:5 p 6 in 392a_June_01_21_Sidibe_Remy_Eng

[4073] 338:16 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[4074] 338:21 p 8 in 392a_June_01_21_Sidibe_Remy_Eng

[4075] 340:3 p 7 in 406a_June_10_21_COPROFAM_CLOC_Eng

[4076] 347:15 p 7 in 421a_June_21_21_COPROFOAM_CLOC_Eng

[4077] 350:23 p 8 in 424a_June_28_21_PROLIDER_Eng

[4078] 351:33 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

[4079] 351:34 p 9 in 552a_July_15_21_Frente_Parlamentario_Eng

…although it was considered that monitoring and compliance are always major challenges in public policy, it was suggested that statistics be gathered (originating from both the donor and the recipient), as well as monitoring in order to let donors know what is being done with their donated product. It is believed that technology such as real-time data feed apps could be a great asset. The importance of doing inventory of existing initiatives inside and outside of Costa Rica was mentioned, as well as looking at successful cases and their monitoring mechanisms for consideration in the country's own situation, and to generate protocols, norms and guides for good practices that will allow for compliance checklists. Transparency with the end beneficiary (while being careful regarding their anonymity at the public level) is also necessary because if aid "falls into the wrong hands," this would be a disincentive for the donor.[4080]

Communication and networking (digital and physical infrastructure) required to 58 ensure appropriate rural development and human health are currently limited in 59 the boreal regions.[4081]

The expansion of internet access in scarcely populated northern areas due to remote work during the Covid19 pandemic can lead to further development of these areas.[4082]

[4080] 352:10 p 8 in 567a_July_21_21_FLWRN_FBN_Eng

[4081] 353:12 p 2 in 505a_June_29_21_Borchard_UNC

[4082] 353:13 p 2 in 505a_June_29_21_Borchard_UNC