











# Unpacking the potential of STI for enhancing agricultural productivity in LDCs and LLDCs

Friday, 10 May 2024, 13:15 – 14:30

# SIDE EVENT AT THE 2024 STI FORUM CONCEPT NOTE



## **Background and Rationale**

Despite significant progress in recent decades, the least developed countries (LDCs) continue to face critical challenges in eradicating hunger, achieving food security, improving nutrition, and promoting sustainable agriculture. Over 270 million people in LDCs suffer from severe food insecurity and more than 51 million children are moderately or severely stunted in 2022. The share of agriculture value added in GDP in LDCs is 18 per cent on average<sup>1</sup>. The agriculture sector employs more than half of the population in the LDCs, constituting the primary source of income in rural areas. These figures highlight the critical need for action to improve agricultural productivity. Given the projected doubling of the LDC population by 2050, sustainable food production will be critical to reducing food insecurity.

Food security has weakened in landlocked developing countries (LLDCs)<sup>2</sup>. According to the Food and Agriculture Organization (FAO), the prevalence of moderate or severe food insecurity increased from 43.4 per cent in 2015 to 57.9 per cent in 2022 in LLDCs. During the same period, the prevalence of undernourishment increased from 15.4 per cent to 19.2 per cent. The share of landlocked developing countries facing moderately to abnormally high food prices increased to a record high of 54 per cent in 2020 yet fell to 32.1 per cent in 2021. Food insecurity has been further exacerbated by commodity dependence and high global food prices, which affected food imports in many landlocked developing countries.

Poverty, conflicts, climate change, and inadequate infrastructure are persistent barriers that worsen the situation especially for the most vulnerable in LDCs and LLDCs including women and girls, youth, people living with disabilities, and marginalized communities. The lingering effects of these challenges have highlighted the far-reaching potential and crosscutting influence of technological advancements and innovations.

The role of science, technology, and innovation (STI) is increasingly recognized in finding solutions to developmental challenges and are an essential component in enhancing agricultural productivity and transforming agrifood systems in LDCs and LLDCs. Technology plays a critical role at every stage of the agricultural supply chain, spanning from production to post-harvest handling, storage, processing, and value addition. As the world's agricultural value chains become more sophisticated, there is an urgent need to assist LDCs and LLDCs in capitalizing on the current agro-industry landscape in the global economy.

Despite the potential STI presents, several challenges hinder rapid technological catch up and development in LDCs and LLDCs. With a growing digital divide between LDCs and LLDCs and the rest of the world, the potential of emerging technologies to address prevailing challenges in

<sup>&</sup>lt;sup>1</sup> World Bank national accounts data

<sup>&</sup>lt;sup>2</sup> Over the period of the implementation of the Vienna Programme of Action for landlocked developing countries 2014-24

agriculture is constrained. In 2023, the proportion of internet users in LDCs stood at 35per cent and in LLDCs at 39per cent compared to 67per cent globally.

### **Objective and Format**

The side event will build on the insights and outcomes of the 2<sup>nd</sup> LDC Future Forum held on 5-6 March 2024 in Helsinki, Finland. The Forum explored how to harness innovation, digitalization, and technology to promote structural transformation and sustainable development in LDCs. The case studies and practical examples demonstrated that LDCs have untapped agricultural potential that can be leveraged through strategic investments and collaborations. Agricultural innovation and innovative technologies are needed for food security, nutrition, sustainable agriculture as well as for diversifying and growing the economies in LDCs. STI can lead to increased productivity and efficiency, allowing for a transition from extensive to intensive agriculture and the preservation of agricultural products in value chains. The Forum proposed market integration strategies to promote innovation and increase agricultural productivity. The discussants also presented best practices for skills development for example through STEM programs, focusing on girls.

The side event will bring together high-level participants, Permanent Representatives to the UN, policymakers, UN system, experts, and other stakeholders to discuss practical and evidence-based solutions how to harness innovation, digitalization and technology to foster structural transformation and sustainable development in LDCs and LLDCs with a focus on agriculture and agro-processing, drawing from the most inspiring case examples the LDC Future Forum. The side event will consist of high-level speakers, a panel and interactive discussion segment. The panelists will elaborate on the use of innovation for the diversification of LDCs and LLDCs economies into sectors with potential for structural transformation. Panelists will examine practical ways of developing production of nutritious food and agro-processing as innovative sectors with potential for long-term profitability and growing demand with positive spillovers to the rest of the economy.

### **Guiding Questions**

- 1. How can LDCs and LLDCs effectively utilize innovation, digitalization, and technology to drive structural transformation in their economies, particularly in the agriculture and agro-processing sectors?
- 2. What role can agro-processing of nutritious foods play in fostering economic development and improving food security in LDCs and LLDCs?

- 3. How can partnerships between governments, the private sector, and international organizations be leveraged to support innovation and technological advancement in LDCs and LLDCs, particularly in the context of agriculture and agro-processing?
- 4. What policy measures are necessary to create an enabling environment for innovation, digitalization, and technology adoption in LDCs and LLDCs, particularly in the context of agriculture and agro-processing?