High-level Thematic Debate on Digital Cooperation and Connectivity
Whole-of-Society Approaches to End the Digital Divide

Supplementary Information Note

In preparation for the High-Level Thematic Debate on 27 April 2021 convened by H.E. Mr. Volkan Bozkir, President of the United Nations General Assembly, and in support of more inclusive global deliberations and action on digital issues, this Information Note outlines key action areas and multistakeholder partnerships and initiatives, including recommendations from the UN Secretary-General's Roadmap for Digital Cooperation, to support impactful and results-oriented discussions, and facilitate upscaling implementation efforts relating to ensuring global digital connectivity, and greater cooperation for equitable and environmentally sustainable digitalization by 2030.

Global Digital Connectivity by 2030

The International Telecommunications Union (ITU) September 2020 report Connecting Humanity estimates that US$ 428 billion is required to connect 90% of the remaining 3 billion people aged ten years and above to broadband Internet by 2030, and US$ 100 billion for Africa alone. It is an ambitious goal and a major infrastructure investment challenge. Achieving it will require creating enabling policy and regulatory frameworks, upscaling basic digital skills and local content at both the global and regional levels and mobilizing unprecedented levels of financing needed to extend networks to underserved communities.

Launched in June 2020, the Secretary-General's Roadmap for Digital Cooperation outlines how the international community – Member States, the private sector, civil society, the technical community, and all other stakeholders – should cooperate to achieve universal connectivity and harness the benefits of digital technology while mitigating its challenges. UN-system entities, in partnership with ITU, are leading a number of ongoing and upcoming initiatives aimed at addressing the various 'pain points' along the road to getting the remaining half of the world connected. The Office of the Envoy on Technology works to coordinate and support ongoing multistakeholder consultations and efforts in this regard. ITU, together with UNDP and UNICEF, and the stakeholders, champions and constituencies of the Secretary-General's Roadmap for Digital Cooperation will lead related, multi-stakeholder processes and implementation efforts, including through the Roadmap's Working Groups related to Universal Connectivity and Capacity Building in the following areas:

Universal Connectivity

- Establishing a baseline of digital connectivity that individuals need to access the online space, as well as a definition of "affordability", including universal targets and metrics.

- Convening a global group of investors and financing and community experts to consider the development of a financing platform and find other new models for investment in connectivity, including hard-to-reach and rural areas.

- Promoting new and potentially transformative models to accelerate connectivity, such as the global Giga Initiative, which aims to connect every school in the world to the internet.

- Promoting the development of enabling regulatory environments for smaller-scale Internet providers, along with local and regional connectivity assessments.

Capacity Building

- Accelerating discussions on connectivity as part of emergency preparedness, responses and aid, including working through the inter-agency Emergency Telecommunications Cluster and Connect2Recover.

- Mapping on capacity building initiatives within and outside the UN.

- Establishing a multistakeholder network to provide offering on digital capacity building to countries and the community at large.

Global Cooperation for Equitable Digitalization

Harnessing the potential of accelerated digitalization, remote work and education, e-commerce and the virtual delivery of essential services to equitably benefit whole-of-societies, and not just the few, requires creative thinking and policy experimentation. It also calls for greater global and regional multi-stakeholder cooperation to avoid widening the income gap, steer away from other emerging inequalities such as those based on gender or age and promote equitable access to technology solutions for the SDGs.

In this vein, it is imperative to upscale digital skills development, including through Technical Vocational Education and Training, that can contribute to socio-economic development, and support workers as economies recover from the COVID-19 pandemic's impacts. This must include analyzing the skills needed across sectors for the short and long-term future, through social dialogue and direct interaction with stakeholders. 8.8% of working hours have been lost due to the COVID-19 pandemic in 2020, equivalent to 255 million full-time jobs. The development of digital labour platforms can provide workers with income-generating opportunities and benefits from flexible work arrangements, including for women, persons with disabilities, young people and migrant workers. In order to effectively leverage digital cooperation and new technologies, support changing industries and address structural inequalities, investments in digital skills will be needed. This is particularly true for youth, who are disproportionately impacted by the COVID-19 pandemic's disruption to education and labour markets, and yet at 1.8 billion people comprise the world's largest single population group, 90% of whom are in developing countries. Upscaled digital governance will also be vital to harness the benefits of the emerging technologies of the Fourth Industrial Revolution.

Given the tendency towards market concentration, *competition policy frameworks* need to be adapted to provide for competitive and contestable markets in the digital era. Countries also need to rethink how *taxation* rights should be allocated in a data-driven, digital economy to address the current mismatch between where profits are taxed and where and how value is created. New *data policies* are also needed to assign ownership and control over data; build consumer trust and protect data privacy, regulate cross-border data flows, and build relevant skills and capabilities for harnessing digital data for development. *Robust social safety nets and support for lifelong learning* will be needed for workers in industries facing digital disruption to ease the transition in labour markets. Various forms of bias, abuse and harassment along gender, racial and other divides have been identified as unintended consequences of the deployment of digital technologies. *Normative frameworks and specific policy instruments* will have to be developed to address them. The United Nations will need to play a central role in providing relevant

forums that can ensure inclusive dialogue among all member States and mobilize more development cooperation, including through regional and North-South, South-South and Triangular Cooperation. In this context, it is necessary to make effective use of existing mechanisms while exploring innovative and creative new pathways and partnerships. Examples of forums that could be better harnessed in this context include:

- United Nations Technology Facilitation Mechanism (TFM) including its Inter-Agency Task Team, and the annual global multi-stakeholder STI Forum
- United Nations Commission on Science and Technology for Development
- United Nations Group on the Information Society
- The Internet Governance Forum
- United Nations Committee of Experts on International Cooperation in Tax Matters.
- UNCTAD Intergovernmental Group Experts on E-commerce and the Digital Economy
- The Technology Bank for the Least Developed Countries
- UNCTAD Intergovernmental Group of Experts on Competition Law and Policy
- UNCTAD Intergovernmental Group of Experts on Consumer Protection Law and Policy
- The UNCTAD-led eTrade for all initiative
- UNESCO's initiative to Elaborate Recommendations on the Ethics of Artificial Intelligence.
- The Reskilling Revolution initiative to provide one billion people with better education, skills and jobs by 2030.
- The Generation Unlimited partnership to prepare the largest generation of young people in history for the Future of Work.
- The Economic and Social Commission for Asia and the Pacific (ESCAP) Asia-Pacific Information Superhighway initiative, and working group on establishing a Pacific Internet exchange point.
- The UN Centre for Trade Facilitation and Electronic Business (UN/CEFACT), a subsidiary, intergovernmental body of the UN Economic Commission for Europe (UNECE), for trade facilitation recommendations and electronic business standards.
- ESCWA's Proposed Arab Digital Agenda: Preliminary Framework for the Arab Information and Communication Technology Strategy for Sustainable Development and Arab e-Government Directors meetings.
- The Africa Communication and Information Platform for Health and Economic Action (ACIP), a mobile-based tool for two-way information and communication between citizens and governments.
- The Digital agenda for Latin America and the Caribbean (eLAC2022) – a platform that aims to catalyze regional cooperation efforts on digital matters.
- Intergovernmental work organized by other UN agencies, such as ILO, ITU, UN DESA and all the UN Regional Economic Commissions.

Environmentally Sustainable Digital Transformation

Data, digital technologies and related innovations are sweeping the planet at an exponential rate with the potential to unleash major structural transformations in the global economy. One of the urgent priorities is to embed and accelerate environmental sustainability through new digital channels. Digital information and communication technologies (ICT) can enable a 20 percent reduction of global CO_2 emissions by 2030

when applied to five sectors: mobility, manufacturing, agriculture, energy, and buildings. ICT solutions can help cut nearly 10 times more CO2e than they emit. Digital technologies and design can help reduce the embodied materials in goods by 90% - through efficiency and by turning products into services in a circular economy, and thereby reduce impact of material extraction on biodiversity and the environment. Digital technologies can help reduce waste & detoxify supply chains by a factor of 10-100X. There are over 150 environmental applications of artificial intelligence (AI) in agriculture, energy, transport, and water that could save up to 4% of global CO2 emissions by 2030.

An Action Agenda for Digitalizing and Scaling Environmental Sustainability

Through multilateral and multistakeholder digital cooperation we can close the digital divide, improve energy access and encode environmental sustainability across the platforms, algorithms and filters of the digital economy. Technology can help us address systemic threats such as COVID-19, climate change, biodiversity loss, land degradation and pollution – but only if we build the infrastructure, standards, digital algorithms and governance framework with this strategic intent. Multilateral and multistakeholder cooperation around a common vision and Action Agenda is key. Main actions to achieve a sustainable digital transformation include:

- Establishing an acceleration plan for digitalizing environmental sustainability, including immediate priorities and partnerships covering a 2-3 year perspective, to define and influence the digital investments, standards and infrastructure needed to close the digital divide in an environmentally sound manner while also encouraging diverse voices to contribute to innovative and impactful applications.
- Collecting and synthesizing existing research, operationalising experience and using cases on how digital technologies can accelerate environmental sustainability through a multistakeholder process.
- Helping unite various environmental sustainability and digitalization tracks under a common framework and federation umbrella to improve coordination, coherence and impact, and offer a space to unite some flagship initiatives as well as share lessons learned.
- Mobilizing the scientific community and prioritizing a research agenda. The capacity of the scientific community to mobilize in successfully addressing urgent and clearly-defined objectives through unprecedented sharing of ideas and data, across the public-private interface has been exemplified by its response to the COVID-19 pandemic. A similar sense of urgency should be sought in mobilizing a response to the challenge of the digital sustainability agenda, and in applying the community's digital toolkits to address outstanding problems as part of a major cross-sectoral effort.

To advance these goals, UNEP, UNDP, the International Science Council, the German Environment Agency, the Kenyan Ministry of Environment and Forestry, Future Earth and Sustainability in the Digital Age have joined forces as co-champions to launch the Coalition for Digital Environmental Sustainability (CODES). The co-champions will lead a multi-stakeholder process and convene a series of events to firmly anchor environmental sustainability needs within the Secretary-General's Digital Cooperation Roadmap. They will also work with several related multistakeholder environmental sustainability and digitalization initiatives including:

- One Planet Programme on Sustainable Public Procurement (SPP)

- [Greening the Blue Initiative: Promoting Sustainable management practices in the UN system](#)
- [The Inter-agency Group on Tackling E-waste](#)
- [Focus Group on Environmental Efficiency for Artificial Intelligence and other Emerging Technologies (FG-AI4EE)](#)
- [Resilience Frontiers Initiative](#)
- [Green Growth Knowledge Platform](#)
- [Policy Network on Environment and Digitalization of the Internet Governance Forum](#)
- [UN Technology Facilitation Mechanism's on-line platform, 2030Connect, for access to sustainable technologies for all countries](#)
- Global initiatives for energy access such, as [the 2021 High Level Dialogue on Energy](#)
- [Sustainable Digital Financial Alliance](#)
- [Global Enabling Sustainability Initiative (GeSI)](#)
- UNEP's new digital transformation for the environment programme, the Global Environmental Data Strategy, World Environment Situation Room and the Science-Policy Business Forum.