Special Event on STI Roadmaps: The role of digital technologies in agriculture production/consumption

20 October 2022 | 10:00 to 12:00 EDT | Virtual Event

Meeting Agenda

1. Opening (10:00-10:20 am EDT)
2. Panel I: Building Innovation Eco-System Through Road-mapping Digital Technologies in Agriculture Production/Consumption (10:20-10:55 am EDT)
3. Panel II: STI Frontiers, Opportunities, and Challenges in the Transformation of Agrifood System (10:55-11:35 am EDT)
4. Closing and the Way Forward (11:35-11:45 am EDT)

Co-Hosted by DESA, FAO, Office of Secretary-General's Envoy on Technology, UNESCO, EC/JRC

Summary:

1. Opening

Speakers: Mr. Junhua Li (Under-Secretary general, DESA); Mr. Amandeep Singh Gill (Secretary General Technology Envoy); Mr. Maximo ToreroCullen (FAO Chief Economist)

DESA thanked those present and the speakers for their commitment to the SDGs and STI. The speakers discussed how digital technologies can improve the agricultural industry and tackle the global hunger pandemic, as well as the importance of the STI roadmaps in contributing to the sustainable development goals. The impact of the COVID-19 pandemic, ongoing geopolitical tensions, and climate crisis has had on the hunger crisis was emphasized to support the need for further cooperation and collaboration on digital innovation. Speakers stressed the importance of digital innovation as the centerpiece to facilitate agricultural production and effectively tackle the hunger crisis and transform our agrifood systems. The following two panels will discuss the important role that digital technologies can play in designing and reviewing STI for SDG roadmaps, as well as, implementing policy actions to better mobilize technologies to address global challenges like food security, to accelerate research and innovative solutions to achieve the SDGs.

2. Panel I: Building Innovation Eco-System Through Road-Mapping Digital Technologies in Agriculture Production/Consumption

Moderator: Dr. José Ramón López-Portillo Romano (Un Sec. Gen. 10 Member Group) Speakers: Dr. Sarah Tione (Political Economist, Ministry of Agriculture, Department of Agriculture Planning Services, Policy Unit, Lilongwe, Government of Malawi); Prof. Wu Wenbin (Director General IARRP, CAAS, Beijing); Dr. Wilhelmina Quaye (Director of CSIR-Science and Technology Policy Research Institute, Accra, Ghana); Dr. Agnes Lutomiah (Head of Program, STI, Knowledge and Society, African Centre for Technology Studies, Nairobi, Kenya); Dr. Viktor Nedović (Director of SAIGE, Ministry of Education, Science, and Technological Development, Belgrade, Spain); Dr. Randolf B. Hackman (Application Development Analyst, Engineering for Change, Nantes, France)

There were three general consensuses between the speakers: 1. Concern regarding the asymmetry between nations as well as large and small farmers, with a specific emphasis on

ensuring small, rural farmers around the globe have access to new digital innovations, in compliance with SDG 10. 2. The need for more investment and a stronger connection between consumption and production. 3. The need for further collaboration and information sharing. Ideas were brought up about advisory platforms that can provide information and for young people to share new, innovative ideas.

It was emphasized that the digital transformation of agriculture is a gradual process that needs to combine the efforts of the government, industries, research, and education, and enable different actors to play their unique roles in the process. Several speakers also stressed how the agricultural industry has fallen behind other sectors in the adoption of new technologies and the importance of addressing this divide. This was connected back to the asymmetry between large and small farms as well as the lack of investment in agricultural technology. It was also discussed that a potential cause for this divide is the lack of knowledge of the incentives for adopting these technologies. Ways to address this divide that were discussed included the development of digital platforms or apps that provide greater business advisory services for small farms.

3. Panel II: STI Frontiers, Opportunities, and Challenges in the Transformation of Agrifood System

Moderator: Dr. Ezra Clark (Director a.i. Division of Science Policy and Basic Science, UNESCO, Paris, France) Speakers: Mr. Alessandro Rainoldi (Head of Territorial Development Unit, Joint Research Centre, European Commission, Seville, Spain); Prof. Sachin Chatuvedi (Director-General, Research and Information System for Developing Countries (RIS), New Delhi, India); Mr. Tian (Ben) Feng (Dean of Intelligent Industry Research Institute, SenseTime, Hong Kong); Dr. Vittorio Venturi (Scientific Coordinator and Head of the Bacteriology Lab, International Centre for Genetic Engineering and Biotechnology (IGCEB), Triste, Italy); Mr. Parmesh Shah (Global Lead for Rural Livelihoods and Agricultural Jobs, Agriculture, the World Bank, Washington DC); Mr. Dioscore Shikama (Executive Chairman at Food Bundles, Kigali, Rwanda)

New technologies and frontiers that were discussed included AI that can monitor crop growth and potential pests, as well as genome editing to make plants more resistant to diseases and more capable of growing in marginal environments. New cutting-edge research and fellowships for education to develop further opportunities were also discussed, with an emphasis on the potential of the private sector's role in knowledge sharing.

The consensus of the speakers was the need to align the roadmaps to a local context and better address localized challenges, as well as the need to invest in the entirety of the food system. It was stressed this cannot be achieved unless local communities are actively involved in the STI road mapping process. The challenge of ensuring new technology, knowledge, and resources, were equally distributed to small, rural farms, was brought up frequently. Another key challenge expressed was the need for better access to valuable market information such as price-crop information.

To address these challenges, speakers brought forward potential ways forward that include greater inter-agency and international cooperation, policy actions to better mobilize resources, improving supply change linkages, and expanding financial and insurance access.

4. Closing and the Way Forward

The event was closed by a statement from Richard Roehl, the head of the UN Technology Facilitation Mechanism. After thanking all those who participated he stressed the importance of continued commitment to STI for SDGs, as the benefits of innovation have vastly changed modern life, but many remained excluded from those changes, which is starkest within the agricultural sector. It was emphasized that innovation in agriculture can raise agricultural productivity by 1% a year and reduce food waste by a quarter by mid-century. He ends by reiterating a common notion heard throughout the event, that one-size-fit-all solutions rarely work and that to successfully address the hunger crisis and meet the SDGs, STI needs to be tailor-made for governments, stakeholders, and society, emphasizing the importance of the road mapping initiative, to create a clear pathway towards a sustainable future for all.