

**ESCAP-SCO Side Event:**  
***Enabling Food Systems Transformation through Climate Smart Agri-Innovation***

*16 May 2023, 12.45-13.45 Bangkok time*  
*at the 79th session of the Commission*  
*(CR-4, UNCC, Bangkok and online)*

#### **BACKGROUND AND RATIONALE**

The Food Systems Summit convened by the Secretary-General of the United Nations in 2021 recognized the vital role of agriculture and food systems in achieving the 2030 Agenda for Sustainable Development in this Decade of Action. It reiterated that all the seventeen Sustainable Development Goals rely to some degree on healthier, more sustainable and equitable food systems. At the same time, agriculture is among the sectors most vulnerable to climate change. The range of possible climate impacts, inter alia, include losses from rise in frequency and intensity of extreme weather events like droughts and floods, decline in soil health, deterioration in crop yields and quality, variation in type and incidence of pest and disease attack, changes in distribution of agroecological zones, increased spatial and temporal uncertainty regarding precipitation, and changes in availability of water resources for irrigation.

The agricultural sector in the Asia-Pacific region is suffering from a number of key constraints such as (a) use of outdated or unsustainable technologies and practices; (b) inadequate/inefficient irrigation facilities; (c) low farm productivity and incomes; (d) low investment capacity of farmers; and (e) environmental challenges including high levels of land degradation with an average rate of 24-28 per cent in many parts of Asia as compared to 20 per cent globally<sup>1</sup>. Specific sub-regions often face additional concerns like overgrazing and soil salinity in Central Asia, and small and often fragmented landholdings in South Asia. Cumulatively, these constraints are significantly worsening the vulnerability of agriculture to climate impacts in the region. It is noteworthy that in rural areas of the region, women play a large role in the economic sphere as farmers, wage earners and entrepreneurs, and climate change has a disproportionate impact on them. This further increases the vulnerability of rural women to impacts such as changes in weather patterns which affect agricultural production and yield<sup>2</sup>.

Apart from being highly vulnerable to its impacts, agriculture is also an important contributor to climate change. The agrifood sector broadly, also encompassing forestry and fisheries, is responsible for a third of the anthropogenic emissions of greenhouse gases<sup>3</sup> including through activities such as rice production, soil tillage, crop residue burning and livestock production.

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<sup>1</sup> See United Nations, <https://unstats.un.org/sdgs/report/2019/goal-15/> (accessed on 7 October 2022).

<sup>2</sup> ESCAP, *Asia and the Pacific SDG Progress Report 2022* (2022), p. 42.

<sup>3</sup> FAO, *The State of Food and Agriculture: Making Agrifood Systems More Resilient to Shocks and Stresses* (2021), p. v.

Agricultural innovation for development of more efficient and sustainable technologies and machinery holds significant promise to boost climate resilience and reduce greenhouse gas emissions. For example, use of sensors and Internet of Things through precision agriculture, robotics and other smart solutions can help in saving water and chemical fertilizers, alleviate labour shortages, reduce food loss and waste and even attract young people to enter the agricultural sector to establish profitable businesses. At the same time, there is a vital role for innovation of simple and low-cost agricultural technologies and practices for resource-poor farmers and smallholders. All these can put agriculture on a trajectory of resilient and low-carbon development.

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the Shanghai Cooperation Organization (SCO) have a long history of fruitful cooperation in different areas. They have a shared interest in promoting regional socio-economic cooperation and supporting efforts to implement the 2030 Agenda for Sustainable Development, and have recognized the importance of agri-innovation. A Memorandum of Understanding updated and signed between both parties in 2022 has identified 'ICT and Disaster Risk Reduction', as well as 'Sustainable agricultural mechanization', which are closely linked to agri-innovation, as priority areas for cooperation.

### OBJECTIVES AND FORMAT

The event aims to highlight the importance of innovation for sustainable and climate smart agricultural development in order to accelerate progress towards Sustainable Development Goal 1 (No Poverty), Goal 2 (Zero Hunger), Goal 13 (Climate Action) and Goal 15 (Life on Land), among other Goals. It will also showcase innovative approaches and technologies from the Asia-Pacific region in general and Member States of the Shanghai Cooperation Organization in particular.

The event will inform and support countries' implementation of the national food system transformation pathway, especially in the action areas of advancing equitable livelihoods, building resilience, and accelerating the Means of Implementation.

The event will be opened by remarks from senior-level speakers which will underscore the significance of the theme for the region and in some of its countries. This will be followed by a panel of experts that will illustrate pertinent approaches and technologies. The closing session will reflect on how such solutions can be upscaled in the region through multilateral cooperation.

The event will advance the understanding of policymakers and practitioners working in the areas of agriculture and climate change adaptation and mitigation on the need for promoting agri-innovation. It will be held at the United Nations Conference Centre in Bangkok, Thailand, during the 79th session of the Commission and will be open to online participation. The event will be conducted in English and simultaneous interpretation will be provided in Chinese and Russian for the online participants.

### ORGANIZERS

- United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)
- Secretariat of Shanghai Cooperation Organization (SCO)

## TENTATIVE PROGRAMME

<b>Opening remarks</b>		
12:45 – 13:05  <i>Moderator:</i> <i>Mr. Nikolay Pomoshchnikov,</i> <i>Head, SONCA,</i> <i>ESCAP</i>	<ul style="list-style-type: none"> <li>• Dr. Armida Salsiah Alisjahbana, Executive Secretary of ESCAP</li> <li>• Mr. Zhang Ming, SCO Secretary-General</li> <li>• Ministerial-level representative from member State</li> </ul>	
<b>Panel discussion:</b> <b>Innovative Approaches and Technologies for Climate Smart Agriculture</b>		
13:05 – 13:40  <i>Moderator:</i> <i>Dr. Yutong Li,</i> <i>Head, CSAM,</i> <i>ESCAP</i>	<ul style="list-style-type: none"> <li>• <i>High-tech solutions for dryland farming</i> Mr. Junliang Fan, Expert, SCO Demonstration Base for Agricultural Technology Exchange and Training, and Professor, Northwest Agriculture and Forestry University, Yangling, China</li> <li>• <i>Modern and climate smart food supply chains</i> Ms. Irina Salatina, Private sector expert in cold chain supply and food processing equipment, Kazakhstan</li> <li>• <i>Innovations in conservation agriculture</i> Dr. Hafiz Muminjanov, Technical Adviser, Office of Director, Plant Production and Protection Division, FAO</li> <li>• <i>Building climate resilience in livestock and fodder management</i> Dr. Aziz Nurbekov, Professor, Tashkent State Agrarian University, Uzbekistan</li> </ul> <p><i>Brief Q&amp;A (if time allows)</i></p>	
13:40 – 13:45	<p><b>Closing remarks</b></p> <p>Dr. Katinka Weinberger, Chief, Environment and Development Policy Section, ESCAP</p>	