

# ASIA-PACIFIC FORUM ON SUSTAINABLE DEVELOPMENT 2019

“Empowering people and ensuring inclusiveness and equality”

27-29 March 2019 | UNITED NATIONS CONFERENCE CENTRE . BANGKOK, THAILAND

## Empowering Smallholders through Agricultural Mechanization in the Digital Era

**Venue:** UNCC [Public Foyer, ground floor]

**Date:** 28 March 2019

**Time:** 12.15-13.30 (light refreshments will be provided)

### Organizers:

*Centre for Sustainable Agricultural Mechanization (ESCAP-CSAM), Food and Agriculture Organization of the United Nations (FAO), and Asian Farmers' Association for Sustainable Rural Development*

### Background:

*Countries in the Asia-Pacific region face significant challenges to achieve the 2030 Agenda for Sustainable Development. In the context of food systems and overall agricultural development, these include economic, social and environmental challenges such as persistent poverty, reduced availability of agricultural labour, demographic changes that result in a larger proportion of women in agriculture as well as an ageing agricultural workforce, inefficient agricultural value chains, degradation of natural resources and the environment, and negative impacts of climate change. Sustainable agricultural mechanization can play a key role in addressing these challenges and balancing the economic, social and environmental dimensions of agricultural development.*

### Scope:

*Smallholders are a fundamental actor in the agriculture sector of the Asia-Pacific region. About 90 per cent of the world's small farms are in this region while the average size of land holdings in Asia is only about 1 ha. In many countries, these small holdings are also fragmented in smaller plots in different locations, with limited access to relatively large farm machines. Furthermore, most smallholders usually do not have investment capacity to adopt mechanization technologies, equipment and practices. Renting equipment for hire stands as one of the best choices to face the increasing shortage of labor and ensure adequate crop yields.*

*As income from growing staple crops is very limited, smallholder farmers are diversifying into labor intensive, but more profitable activities like production of fruits and vegetables, fish and livestock: which are perishable produce that makes the farmers more vulnerable to market trends, climate related hazards and needs for investing in adequate equipment.*

*These limitations are clearly an obstacle to the achievement of the Sustainable Development Goals (SDGs), but emerging information and communication technology (ICT)-enabled sustainable agricultural mechanization solutions can play a key role to overcome some of these limitations. New technologies such*

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*as self-driving tractors, precision input application, agricultural drones, and mobile applications for hiring machinery have shown the potential to transform the agricultural mechanization sector into an agent for change, making machinery more available, precise and efficient, and providing means to respond to a larger scope of issues that are hampering agricultural production nowadays.*

*The side event will initially present how innovative solutions can enhance the climate resilience of smallholders as well as improve their working conditions, access to markets and income. Following which, speakers will illustrate different perspectives on a potential “leapfrogging into digital agricultural mechanization”, in the context of a region where large numbers of smallholders have struggled to shift from animal power to modern and efficient power sources. In particular, the side event will hear from international experts about how the application of new mechanization technologies can support and empower smallholders, and will reflect the voices of farmers on the constraints they face. It will present the perspective of the private sector, which is spearheading innovation and making value-added technology and services available to a wider platform. The role of research institutions in paving the way for a new era of digital agricultural mechanization will be linked to the institutional efforts to revitalize the development of rural areas. Government representatives will also reflect on what kind of policies can guide this development process, rebalancing the food industry toward food producers and allowing smallholders to participate in the economy from an equal standpoint.*

*In the 2030 Agenda particular attention is given to the role of technological and political innovation to foster productivity. In this context, and thanks to the benefits that smallholders can receive from the application of digital solutions, sustainable agricultural mechanization assumes a fundamental role as an enabling element of the SDGs.*

### **Key Questions:**

The key questions to be discussed in this side event are:

- *How can the application of new technologies and the automation of agricultural machinery improve the resilience of smallholder farmers facing climate-induced threats to their livelihoods? [SDG 13 (climate action)]*
- *How can new technologies applied to agriculture trigger a systemic change through which the smallholders are protected from their vulnerabilities and enabled to access and participate fully in the economy? [SDG 8 (decent work and economic growth) and 10 (reduced inequalities)]*
- *What can research institutions do to ensure that technological developments are well aligned with the needs of the rural workforce and the objective of rural revitalization? [SDG 8 (decent work and economic growth)]*
- *How important are multi-stakeholder partnerships and regional cooperation to enable smallholders to derive optimum benefit for agricultural mechanization in today’s Digital Era? [SDG 17 (Partnerships for the Goals)]*

### **Contact details:**

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TENTATIVE PROGRAMME

Time	Agenda item
12.15-12.20	<b>Moderator remarks and introduction of panelists</b> , <i>Ms. Li Yutong, Head, Centre for Sustainable Agricultural Mechanization (ESCAP-CSAM)</i>
12.20-13.10	<p><b>Improving productivity and resilience of smallholders through ICT-enabled sustainable agricultural mechanization</b>, <i>Mr. Santiago Santos Valle, Agricultural Engineer, Food and Agriculture Organization of the United Nations</i></p> <p><b>Constraints and challenges in adopting new agricultural mechanization technologies – Farmers’ voice</b>, <i>Mst. Shazada Begum, Chairperson, Asian Farmers Association for Sustainable Rural Development, Bangladesh</i></p> <p><b>Enabling policy environment for rural revitalization through new agricultural mechanization technologies</b>, <i>Mr. Xu Zhengxing, Deputy Chief, Center of Agricultural Machinery Extension, Ministry of Agriculture and Rural Affairs, China</i></p> <p><b>Smart Agriculture in the world and its application to Asian smallholders</b>, <i>Mr. Yoshiyuki Kawase, Chief of International Relations, Institute of Agricultural Machinery, National Agriculture and Food Research Organization (IAM/NARO), Japan</i></p> <p><b>Field Innovation: How Smart Agriculture technology is improving smallholders’ productivity and sustainability</b>, <i>Mr. Justin Gong, Vice-President, XAG Co. Ltd.</i></p>
13.10-13.20	<b>Round of final remarks from panel: Role of multi-stakeholder partnerships and regional cooperation</b>
13.20-13.30	<p><b>Q&amp;A</b></p> <p><b>Summary by moderator</b>, <i>Ms. Li Yutong, Head, ESCAP-CSAM</i></p>