

# UPDATES FROM CSAM

June 2018

# CSAM Activities in Focus

#### CSAM-Cambodia Workshop Advances Sustainable Agriculture in the Asia-Pacific Region



Policymakers, academics, experts, and representatives from the private sector gathered in Phnom Penh, Cambodia on 20 April 2018 for a regional workshop on how sustainable agricultural mechanization can promote the application and mainstreaming of Conservation Agriculture in Asia-Pacific.

Over the last 20 years, deforestation and expansion of agricultural land have led to large scale soil erosion and the deterioration of water quality in the region, which is home to 90 per cent of the worlds small farms. Conservation Agriculture is a more sustainable approach to farming that can improve productivity, increase profits and food security, while preserving the environment, but many smallholder farmers lack access to the equipment they need to implement these techniques.

The two-day workshop, co-organized by CSAM and the Ministry of Agriculture, Forestry and Fisheries of the Kingdom of Cambodia, identified key areas for regional cooperation among stakeholders to promote sustainable agricultural mechanization, and provided a platform to share best practices and innovations from across the region.

Mr. Veng Sakhon, the Minister of Agriculture, Forestry and Fisheries of Cambodia attended the Opening Ceremony of the Regional Workshop and reiterated the commitment of the Ministry of Agriculture, Forestry and Fisheries to continue the cooperation with CSAM and its member countries in order to promote the sustainable development and management of agricultural mechanization in the Asia-Pacific region.

The Regional Workshop attracted more than 50 participants from 14 countries in the regional as well as regional and subregional organizations, i.e. Asian Farmers' Association for Sustainable Rural Development, French Agricultural Research Centre for International Development (CIRAD), FAO Sub-regional Office for Central Asia, and South Asian Conservation Agriculture Network.

### CSAM Activities in Focus

## Coordination Workshop of International Organizations in Food and Agriculture in China



The 3rd Coordination Workshop for International Organizations in Food and Agriculture in China was coorganized by CSAM-ESCAP and the Ministry of Agriculture and Rural Affairs of China on 27 April 2018 in Beijing. The objectives of the Workshop were to understand the new developments in the areas of food and agriculture in China; to enhance information sharing among the relevant international organizations including their work plans in 2018 and to strengthen and maximize synergies between country-level international organizations; and explore opportunities for joint programming to address needs in the areas of food and agriculture in China. More than 50 participants attended the Workshop including representatives from relevant departments and institutes of the Ministry of Agriculture and Rural Affairs; Department of International Economic Affairs of the Ministry of Foreign Affairs; China Agricultural University; agricultural machinery industry associations as well as international organizations such as FAO China, WFP China, IFAD China, Centre for Agriculture and Biosciences International (CABI) East Asia Office, International Potato Center - China Center (CCCAP) and Greater Tumen Initiative (GTI).

The Workshop witnessed active deliberations and valuable exchange of information and knowledge amongst the participating organizations.

### CSAM Activities in Focus

#### **Field Visit to Nepal**

On May 15-17, 2018, a team from CSAM visited the newly founded Nepal Agricultural Machinery Testing and Research Centre in Nawalpur, Nepal, to provide technical advisory services and assist in the infrastructural and human resource upgrade of the Centre currently being undertaken by the Government of Nepal. In line with the work plan for 2018 of CSAM's regional initiative titled the Asian and Pacific Network for Testing of Agricultural Machinery (ANTAM), and based on the observations during this visit, the team elaborated a capacity building strategy to guide Nepal in the further development of the testing facilities which can enable implementation of the ANTAM standards which seek to reflect economic, social and environmental considerations during testing of agricultural machinery. After the visit, the CSAM team also delivered a short training session to guide 10 national testing engineers in the appropriate application of ANTAM and other prominent international standards for testing of agricultural machinery.



#### Joint Efforts to Reduce Loss and Waste in Harvesting and Postharvesting in Asia and Africa

In collaboration with the Nanjing Research Institute for Agricultural Mechanization of the Ministry of Agriculture and Rural Affairs of China and the United Nations World Food Programme, CSAM organized a Training Workshop on Harvesting and Post-Harvest Mechanization to Support Food Security in Asia and Africa on 21st– 27th May 2018 in Shanghai and Jiangsu in China.

The training brought together 13 delegates from 12 countries, including Cambodia, Cameroon, Lao PDR, Mongolia, Nepal, Pakistan, the Philippines, Serbia, Sri Lanka, Tanzania, Uganda, and Zimbabwe. It was conducted in the form of lectures and presentations, and included visits to research institutes, enterprises of harvesting and post-harvest machinery technologies and grain depots.

The event contributed towards strengthening capacities in Asia and Africa for promoting sustainable agricultural mechanization in support of the achievement of the Sustainable Development Goals (SDGs), particularly SDG 2 (end hunger, achieve food security and improved nutrition, and promote sustainable agriculture), and SDG 12 (ensure sustainable consumption and production patterns).



# CSAM Activities in Focus

#### 4th Meeting of the Technical Working Groups (TWGs) of the Asian and Pacific Network for Testing of Agricultural Machinery



On June 25-28, 2018, experts from 15 countries in Asia and the Pacific gathered in Penang for the 4th Meeting of the Technical Working Groups (TWGs) of the Asian and Pacific Network for Testing of Agricultural Machinery (ANTAM) to develop a coordinated set of testing Codes for power tillers, sprayers, and paddy transplanters. The meeting was organized by CSAM, with support from the Agricultural and Food Engineering Technical Division (AFETD) of the Institution of Engineers, Malaysia (IEM).

Although recent years have seen gradual progress in the modernization of agricultural production in the Asia-Pacific region, the agricultural sector continues to be one of the most hazardous industries in the region. While incidents of injuries often arise because of the inadequate safety awareness amongst practitioners in the sector, the absence of region-wide safety standards for agricultural machinery is a major hindrance to the region's sustainable agricultural development. Outdated agricultural technologies and practices not only bring about thin profit from agricultural production, but also generate high carbon emissions and pollutants, aggravating environmental problems, Accordingly, developing a set of testing Codes for the most-used agricultural machineries is crucial to the creation of a safer and friendlier working environment for sector practitioners in the region, and to the enhancement of production efficiency in a sustainable manner.

The ANTAM testing Codes were originally developed by a team of regional experts, drawing insights from international standards set by the Food and Agriculture organization (FAO), and Organization for Economic Co-operation and Development (OECD), as well as from national standards of various participating countries.





# CSAM Activities in Focus

## Workshop on Data-informed Policy-making for Sustainable Development Goals

In this increasingly digitalized world, data has been gaining greater significance in every aspect of life – so too in the realm of sustainable agricultural mechanization. Based on a well-sampled pool of data, policy-makers would have a more informed basis to identify policy priorities, assess the efficiency of agricultural mechanization strategies, and design more impactful and inclusive policies. Through the use of data, both the public and private sector would also be better positioned to identify fruitful partnerships at the national and international levels.

Having recognized the relevance and usefulness of agricultural machinery data, CSAM initiated the project titled the 'Regional Database of Sustainable Agricultural Mechanization in Asia and the Pacific' in March 2016. As part of the project, policy-makers, statisticians, technical experts, and representatives of research and academic institutions from 15 countries gathered in Penang on June 28-19, 2018 to deepen their understanding of data-informed policy-making and its contribution towards the 2030 Agenda and the Sustainable Development Goals (SDGs).

The workshop enabled participants to enhance their knowledge and capacity for making better use of agricultural mechanization data in policy-making, research and development. The 'Guideline for Regional Database', which is an overall framework to provide (1) key indicators pertaining to sustainable agricultural mechanization, (2) classification of the identified indicators and their grouping into categories according to needs, (3) definitions, data samples and update frequency of the indicators, as well as (4) scenarios where the identified indicators are linked to and can complement various SDG indicators, was reviewed and endorsed at the workshop. The workshop was organized by CSAM, with support from the Agricultural and Food Engineering Technical Division (AFETD) of the Institution of Engineers, Malaysia (IEM).



### Upcoming events

#### 4th ReCAMA Member Meetings

ReCAMA is a CSAM initiative to promote sustainable agricultural mechanization in Asia and the Pacific by strengthening capacities and networking amongst national agricultural machinery associations, thus facilitating regional trade and investment. The membership of the ReCAMA network comprises of agricultural machinery manufacturer and distributor associations from different countries. Up to date, ReCAMA has 18 member associations from 13 countries.

In accordance with the Terms of Reference of ReCAMA, a Member Meeting is convened once a year to discuss and make decisions on matters pertinent to the Council's operations and development. Since 2014, three Member Meetings have been organized in conjunction with key agricultural machinery exhibitions in 2015, 2016 and 2017 in China and India. Three ReCAMA Trainings and Study Tour have also been organized focusing on whole-process mechanization in 2015, conservation agriculture and transplanting technologies in 2016, and precision agriculture and harvesting technologies in 2017. One research paper on the Trade and Investment Polies on Mechanization of Agriculture was completed in 2017 covering China, India, Nepal, Sri Lanka, and Thailand.

In line with the agreement reached at the 3rd Member Meeting of ReCAMA in China in October 2017, the 4th Member Meeting of ReCAMA will be held on 22-24 August in Bangkok, Thailand.

The 4th Member Meeting of ReCAMA will review and consider for endorsement the work report of ReCAMA in 2018 and work plan for 2019, among other things. In order to maximize international exposure for the participants, apart from the Member Meeting, the programme will include a visit to the Agritechnica Asia 2018 – BITEC in Bangkok, Thailand.

The 4th Member Meeting of ReCAMA is expected to achieve the following objectives:

- 1) To discuss the ReCAMA Research Paper theme and Training focus;
- 2) To review and endorse the work report of ReCAMA in 2018 and proposed work plan for 2019;
- 3) To review and approve participation of member associations and applications of observers;
- 4) To discuss major administrative, financial and other matters related to the Network.

# Upcoming events

#### 6th Regional Forum

The Regional Forum on Sustainable Agricultural Mechanization is organized annually by CSAM to promote regional cooperation and high-level policy dialogue. Apart from providing a platform for assessment of regional priorities, exchange of experiences amongst countries and stakeholders, and exploring potential for synergistic action, the Regional Forum is a strategic event which enables the conception and incubation of new programmes and activities for the Centre.

As agreed at the 5th Forum in Dec. 2017 in Nepal, the 6th Regional Forum will be organized on 25-28 October 2018 in Wuhan, China during the China International Agricultural Machinery Exhibition. The theme of the 6th Regional Forum will be "Creating an Enabling Environment for Private Sector for Agricultural Machinery". Policy makers, academicians and researchers, extension workers, private sector and industry association representatives, as well as representatives from pertinent international and regional organizations will be invited to attend the 6th Forum.

#### 4th ReCAMA Training and Study Tour

Building upon the fruitful cooperation of CSAM and Centre of International Cooperation Service of the Ministry of Agriculture and Rural Affairs of China, the 4th Training and Study Tour of ReCAMA will be conducted in the second half of October 2018 in China. It will include classroom lectures, group discussion, and visits to relevant enterprises. The focus of the training will be discussed and agreed at the 4th Member Meeting of ReCAMA in August 2018 in Bangkok.

#### 2018 China Agricultural Robot Competition

The 1st China Agricultural Robot Competition (CARC) was held in Oct. 2017 in Wuhan, China by the National Engineering Degree Graduate Education Steering Committee, China Agricultural Machinery Distribution Association, China Association of Agricultural Machinery Manufacturers and China Agricultural Mechanization Association during the 2017 China International Agricultural Machinery Exhibition. It aimed to serve as a platform to encourage innovation, creativity and entrepreneurship amongst students; enhance indepth cooperation among industry, universities, and research institutes; and accelerate the process of development of smart agricultural machinery and equipment.

The 2nd CARC will be organized in Oct. 2018 in Wuhan, China during the China International Agricultural Machinery Exhibition (CIAME) (26-28 Oct. 2018). With the support of CSAM, the 2nd CARC will be open to teams from the Asia-Pacific region. CSAM's support to CARC is a follow-up action under the academic cooperation network envisaged at the 'Regional Workshop for Research and Academic Institutions on Establishing a Cooperation Mechanism for Human Resource Development on Sustainable Agricultural Mechanization' held in Nanjing, China in April 2017. It will build upon the success and experience of the 1st CARC in Oct. 2017 and enhance communication and cooperation amongst graduate and post-graduate students in this field.

### Development Trends

## Promoting biodiversity across all agricultural sectors 'fundamental'

With large swathes of the planet's surface used to grow food, raise animals or produce products such as timber; the agricultural sector — if managed sustainably — can make significant contributions to protecting biodiversity, said FAO Director-General José Graziano da Silva.

"Biodiversity is essential for safeguarding global food security and nutrition, improving rural livelihoods, and enhancing the resilience of people and communities," he said in keynote remarks.

Diversifying food sources could play a critical role in ensuring food security; such as genetically diverse plants which are more tolerant to hotter and drier conditions, he said. Similarly, more diverse livestock would allow farmers and pastoralists to breed animals which could adapt to changing environmental conditions.

This is especially important nowadays in the face of emerging challenges such as the impacts of climate change, rapid urbanization and also a growing population with changing diets. At the farm level, implementing production practices that prioritize safeguarding biodiversity can also ensure that food can be produced sustainably.

A series of working groups will also focus on avenues for mainstreaming biodiversity in agriculture, including global governance; national policies and legislation; financial incentives and investments; and supply chain measures.

Source: https://news.un.org/en/story/2018/05/1010891

# Global food price index rises for second consecutive month

Global food prices rose for the second consecutive month with the index for these commodities averaging 172.8 points in March, 1.1 per cent higher than in February, the United Nations food security agency announced.

Wheat prices increased mostly on weather worries, including prolonged dryness in the United States of America and cold wet conditions in parts of Europe. Similarly, maize – another major cereal – saw its prices rise on back of strong global demand and deteriorating crop prospects also in Argentina.

FAO also anticipates that 2018 world maize and wheat production could decline based on early forecasts. Worldwide wheat output could drop to 750 million tonnes, about 1 per cent below its near-record level of the previous year.

In 2017, worldwide cereal production, including wheat, hit a record level, up 33 million tonnes from 2016, to nearly 2,646 million tonnes globally.

Source: https://news.un.org/en/story/2018/04/1006601

### *Member Countries Snapshot*

## Republic of Korea, Ministry of Agriculture, Food and Rural Affairs

# Rural Development Administration (RDA)

Rural Development Administration

#### **General introduction**

Established in 1962, RDA is the central government organization responsible for extensive agricultural research and services in the Republic of Korea. RDA's efforts are directed towards highly competitive agriculture and efficient rural development. It endeavors to support farmers to produce agricultural commodities with better quality; advancing low-input, labor-saving and environment-friendly cropping technologies; promoting modern and automated production facilities; and nurturing future farmers.

#### Mission

Development of Agricultural R & D: The core mission of the RDA is to conduct agricultural R&D to meet the real needs of farmers. RDA enhances the value of agriculture by breeding new and good varieties that are competitive in the global market, developing technology to ensure food security, promoting technology to produce export-oriented products, and commercializing technology to serve the real needs of farms and markets. RDA has contributed to upgrading the Republic of Korea's agriculture through constant agricultural R & D and technological developments. RDA actively supports the promotion of the seed industry. To increase food production and food self-sufficiency, the RDA develops new varieties, agricultural machinery and processing technologies to enhance farm productivity and competitiveness.

Extension of agricultural technology: RDA provides customized extension services and also disseminates technologies to reduce costs and produce high-quality products. RDA utilizes various tools and methods to disseminate technology such as training, demonstration, consultation, brochures, and leaflets. The organization strengthens the capacity of agricultural specialists and farm management skills, strives to train experts in different careers and technical levels, and provides tailored agricultural technology education and management consultation. The RDA applies advanced IT to agriculture, employing the Internet, social networking services (SNS), smart phones and the latest IT to upgrade its services and technology. It works together with city and county agriculture research and extension centers to efficiently disseminate new seeds and technologies. It also expands its technology and services by collecting, processing and disseminating new information and technology as well as by upgrading its consultation systems such as management diagnosis and prescriptions.

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**RDA-affiliated Institutions Related to Agricultural Machines:** Research and development on agricultural machines is carried out in the Department of Agricultural Engineering, National Institute of Agricultural Science.

Website: http://www.naas.go.kr/english/research/dep7.do

Test and certification of agricultural machines is carried out at the Foundation of Agricultural Technology and Commercialization & Transfer (FACT), an RDAaffiliated organization. Website: http://eng.efact.or.kr

### *Meeting New People*



#### Ms. LI Qi

Ms. Li Qi joined ESCAP-CSAM on 10 May 2018. She obtained her Master in Agronomy in 2011 from Shenyang Agricultural University. She was jointly trained by the Chinese Academy of Agricultural Sciences and Shenyang Agricultural University. Prior to joining CSAM, since 2011, she had served as a Project Officer for the Center of International Cooperation Service, Ministry of Agriculture and Rural Affairs of China. Ms. Li Qi has more than six years' experience in international cooperation projects and agricultural related policy.



#### Ms. ZENG Huinan

Ms. Zeng Huinan is currently doing her MPhil in General Linguistics and Comparative Philology at the University of Oxford. She has joined ESCAP-CSAM as an intern. She has worked in administration, communication and conference planning in the UK and she is taking her internship as an opportunity to further develop her skills in these fields and to learn more about international development.



#### Ms. DONG Yanni

Ms. Dong Yanni has also joined ESCAP-CSAM as an intern. She graduated from the Penn State University in the United States with a bachelor's degree in Labor and Employment Relations as well as a minor in Psychology. She worked as a Human Resource Specialist and secretary to the CEO at Nippon Steel & Sumitomo Metal U.S.A., Inc. New York City after completion of college. Now she is working on her Master's degree in International Culture and Communication Studies at Waseda University, Japan. She is very enthusiastic about international issues and is pleased to join ESCAP-CSAM. The Centre for Sustainable Agricultural Mechanization (CSAM) is a regional institution of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), based in Beijing, China. Built on the achievements of the Regional Network for Agricultural Machinery (RNAM) and the United Nations Asian and Pacific Centre for Agricultural Engineering and Machinery (UNAPCAEM) CSAM started operations in 2012.

CSAM serves the 62 members and associate members of UNESCAP. It is guided by the 2030 Agenda for Sustainable Development and other internationally agreed development goals, as well as, the resolutions and mandates adopted by UNESCAP.

The vision of CSAM is to achieve production gains, improved rural livelihood and poverty alleviation through sustainable agricultural mechanization for a more resilient, inclusive and sustainable Asia and the Pacific.

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