

# Science and Sustainable Food Systems in Southeast Asia – Challenges and Ways Forward

July 5, 2021 | 15:00 – 16:30 Hr (GMT+8)



## BACKGROUND

Southeast Asia (SEA) is a region with diverse cultures, social practices, and different stages of economic development. Open dialogue among different stakeholders is crucial to promote the advancement and the acceptance of science, innovation, and technologies (STI). This webinar, which included presentations and panel discussion highlighted the major challenges and opportunities, current progress in harnessing STI for science-policy actions that can fast track food systems transformation to deliver on sustainable healthy diets. The event was chaired and moderated by Dr. Maria Antonia Tuazon, Nutrition and Food Systems Officer at the Food and Nutrition Division (ESN) of FAO-UN, Rome, Italy.

## PRESENTATIONS

Prof. Paul Teng, food security and agrotechnology expert at the Nanyang Technological University, Singapore, explained that COVID-19 pandemic exposed SEA to more challenges in achieving sustainable and resilience food systems due to shortage of supply in terms of inputs, labor, closure of non-essential businesses, price hikes and disruptions of supply chain, as well as the reduction from demand side with regard to reduced demand of agri-products, increase of unemployment, increase of hunger, undernutrition and etc. He shared several developments of STI which evidently increased and improved farm productivity and food & nutrition sustainability, for instance: digitalization in agriculture, biotechnology of crop, controlled environment farming, fraud prevention, novel food developments and many more. To strengthen the sustainability and resiliency of SEA's agri-food systems, Prof. Teng suggested increasing the adoption of sustainable and circular agro-food technologies, investing in research and development, and supporting smallholder farmers. He also highlighted the need to promote self-production nationally and regionally to reduce the future likelihood of food supply chain disruptions.

Prof. Brajesh Singh, soil ecologist expert at Western Sydney University, Australia, elucidated that microbiome is increasingly seen as a sustainable agriculture tool to substantially reduce over-dependency on agriculture chemicals. However, inconsistent field efficacies and difficulty in sustaining the activity of microbes have seen as their major technical challenges. Currently, experts are working on harnessing plant genome and microbiome to increase the effectiveness of microbiome tools and hence improve crop productivity. Moving forward, Prof. Singh emphasized the need to focus on SynComs to improve crop resiliency, *in-situ* microbiome engineering to increase the microbiome activity that is already present in the field, and the utilization of plant-breeding programs to activate beneficial microbes.

Mr. Adhi Lukman, Chairman of the Indonesian Food and Beverage Association pointed out that although medium and large food-and-beverage operators (FBOs) play a dominant role in retail markets across the region, most FBOs are small-and-medium enterprises (SMEs) that account for over 95 percent of food production. However, due to the lack of capital and resources, many SMEs focus on business survival and less on health and food safety. Nevertheless, with increasing government and institutional efforts, more SMEs have shown growing awareness and interest, and have made efforts to address the demand for healthier products such as functional foods. In some markets, such as Indonesia due, there have been shifts in consumer behavior amid the COVID-19 pandemic. Cultural differences have also influenced consumer preferences, while the FBOs strive to reformulate their products to provide healthier options. Mr. Lukman anticipated that the digitalization of business models will encourage SMEs to play a greater role in meeting consumer needs and reinforcing positive nutrition behavior.

## PANEL DISCUSSION

A set of guiding questions were posed to the panelists which include: how do we leverage the science to help transform food systems, what are the game changers that pave ways for food systems transformation, and the assurance of science-policy-actions nexus. Mr. Geoffry Smith, President of

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ILSI SEA Region, shared that the major hurdles in tackling the food systems transformation are communication and linkages. It is important to strengthen interconnectivity among the expertise areas, and increase the exchange of interdisciplinary science to advance the transformation of food systems. ILSI SEA Region will continue to support the advocacy of the best available science in support of policy decisions.

Prof. Emorn Udomkesmalee, Senior Advisor at Mahidol University, Thailand, highlighted the challenges, quoting from the SOFI report in Asia Pacific 2020 that a healthy diet costs four times more than a energy-sufficient diet. She noted that a healthy diet is not immediately affordable for large sections of SEA's 325 million population, resulting in significant challenges in fighting the burden of malnutrition. Nonetheless, data science and informatics have provided a range of disruptive technologies and data in real-time for decision-making. To ensure science-policy action, there is a need for high quality scientific evidence to be translated with clarity for policy decision-making.

Adjunct Assoc. Prof. Cecilia Acuin of UPLB, Philippines, elaborated on the challenges and opportunities in the food environment as part of the food systems citing that the Food value chain as categorized by FAO into traditional, transitional, and modern are all present in the SEA with traditional and transitional being mostly unstructured and unregulated. She added that a good governance that could support the people will ensure food and nutrition security. While a shorter food chain, opportunities for home-based production and fortification that will improve the nutritional values of available foods to the consumer could be short-term solutions during this crisis.

Dr. Glenn Gregorio, Center Director for SEARCA highlighted the importance of a good quality seed system to cascade the efforts in nutrition security. He pointed out that consumer behavior will dictate future production strategies. Digitalization of agriculture and financing technologies will ensure the empowerment of farmers, consumers and food systems transformation. He also reminded that the public sector must understand that government is only an enabler and facilitator, while the private sector has an essential role in making the food system sustainable.

The Panel concluded that it is important to recognize food systems as interconnected systems that both influence and are influenced by the activities from farm-to-fork or even from seed-to-mouth. Science is integral and important, but some actions need to go beyond science, not only to meet the Sustainable Development Goals, but the key goal of achieving a sustainable and healthy diet.

For more details, please visit <https://ilsisea-region.org/event/sfs2021/>.