



# *Evolving Agrifood Systems in Asia*

Achieving food and nutrition security by 2030

OCTOBER 30-31, 2019

CHATRIUM HOTEL  
ROYAL LAKE,  
YANGON, MYANMAR



*An international conference  
jointly organized by  
ReSAKSS-Asia, IFPRI, and MIID*

*with support from  
USAID and Feed the Future*

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### **Conference Proceedings<sup>1</sup>**

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<sup>1</sup> Proceedings prepared by Adam Kennedy and Xinshen Diao of the Development Strategy and Governance Division, IFPRI. This conference was made possible by the generous support of United States Agency for International Development (USAID). The authors would like to acknowledge Mr. Joern Kristensen, Mathias Nielsen, and Hnin Nwe Win (Phyu) of the Myanmar Institute for Integrated Development and Ms. Shirley Raymundo of IFPRI for their many contributions toward making this conference a success.

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## CONFERENCE SYNOPSIS

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In recent years many Asian countries have seen rapid transformation in people's diets and the underlying agrifood system that supplies food. But malnutrition remains a serious challenge for many countries in the region. Only a few Asian countries are on course to meet some of the globally adopted nutrition targets set for 2030 embodied in the SDGs, while most are likely to fall short. According to a recent report published by FAO, about 514 million people in Asia are undernourished, a figure that has remained stagnant for the last three few years after precipitous declines in the decade prior. At the same time, changing lifestyles have led to increased consumption of over-processed food and convenience products that are often less nutritious, raising rates of overweight and obesity.

To accelerate progress in reducing hunger and improve access to healthy diets, the International Food Policy Research Institute (IFPRI) and the Myanmar Institute for Integrated Development (MIID) organized a regional conference with the financial support of USAID in Yangon to share lessons on what agrifood policies have worked in Asia to reduce hunger and malnutrition and how countries can support more nutritious diets.

The nutrition transition is accelerating rapidly in much of Asia due to income growth and the evolution of agri-food systems. While the poor generally derive a large share of their energy from staple foods (such as rice), as incomes rise, diets diversify into more nutritious foods such as fruits, vegetables, and animal products but also more prepared and processed foods that can be unhealthy. However, people's lifestyles also change with income growth. Less healthy diets combined with increasingly sedentary lifestyles are driving rising rates of overweight and obesity and a surge in non-communicable diseases. Overnutrition is increasing in among all income groups and in both urban and rural areas. As food systems continue to evolve the prevalence of obesity will continue to increase at current or higher rates, having critical implications for healthcare budgets and economic development. Meeting food needs is therefore not just about quantity—quality is also important. The simultaneous rise of overnutrition with the lingering prevalence of undernutrition within the same countries, and sometimes even in the same households, has been dubbed the double-burden of malnutrition.

Myanmar presents a case in point. Recent figures from the USAID-supported, 2015 Demographic and Health Survey for Myanmar show that 29% of children under 5 are stunted, with higher rates in rural areas (32%) than urban (20%). Almost 1 in 5 children are underweight and 58% of children are anemic. At the same time, 25.5% of women are overweight or obese. Malnutrition is therefore a complex, multi-sectoral problem that presents across a continuum, from under-nutrition due to deficiencies in energy, protein, and micronutrients to problems of overweight, obesity, and noncommunicable diseases resulting from poor quality, energy-dense, and micronutrient-poor diets.

One of the contributing causes of poor diets is the cost of a nutritious diet. In Myanmar a nutritious diet costs more than twice as much as an energy only diet and approximately 60 percent of households cannot afford nutritious meals regularly. The percentage is higher in more remote areas such as the hilly / mountainous regions where production diversity is low, and the availability and consumption of protein rich foods is infrequent. Many fresh and nutrient dense foods are perishable, which limits long distance trade and makes prices largely determined by local supply and productivity. Continued investment in agriculture and diversification of production on farms, in addition to improved value chains for perishable foods, can drive food prices down while improving nutrition and economic opportunities for the poor.

Government and the private sector must work together to create an enabling environment for improved diets. Asia's transforming urban landscape may offer new economic opportunities for farmers and food processors, traders, and vendors. Most rural people today live close to cities where agricultural transformation often takes place. Farmers in peri-urban areas are expected to have greater potential to benefit from agricultural commercialization and specialization and cater to the growing urban demand. The development potentials in peri-urban and urban areas therefore deserve greater attention from agricultural policy and food security research. Additionally, much of the agri-food system lies beyond the farm, even in lower-middle-income countries. The off-farm component's contribution to the national economies is substantial. For example, in Vietnam and Bangladesh, with each dollar

generated in agriculture, another dollar is generated in the related upstream (inputs) and downstream (processing, trade) sectors. The off-farm components of the agri-food system, in terms of both value and employment, continue to expand and dominate agricultural GDP as economies grow. A comprehensive approach to agricultural policy that targets productivity improvements, but also supports upstream and downstream markets and agrifood processing will be critical to support agricultural transformation.

Progress on addressing malnutrition is possible when countries' actions reflect commitment at the highest levels. Country-level action that is context specific and well-coordinated across sectors have produced rapid reductions in hunger and malnutrition in the region. The establishment of sound nutrition policy benefits from inter-ministerial coordination that minimizes programmatic overlap and harmonizes activities across a range of sectors given the multi-dimensionality of nutrition. The establishment of milestones and strong monitoring systems that provide feedback on progress can help inform the value of programming. Lastly, there is a need for a single coordinating body at sufficiently high levels of government that can improve accountability and ensure adequate funding. Without high-level government accountability, coordination can lag, friction between ministries can arise, or there can be a lack of buy-in.

Frequently, agrifood system transformation in addition to rapid urbanization leads to new actors entering the food system. Existent governance and market institutions may not meet the concerns of these emerging private sector actors, nor the demands of a growing cadre of middle-class citizens. Consumer demands for safety and quality, and increasingly traceability, requires greater support from national governments and policy, particularly to improve the standards of laboratories that implement testing. In addition, as food systems evolve and become more complex, new technologies are introduced that may challenge existing policies. Addressing these concerns may call for the adoption of new policies and the application of modern technologies to monitor and regulate the food system and hence increased collaboration between the public and private sector.

In addition to addressing the challenge of producing enough food, biotechnology innovations may have the potential to improve resilience and lessen the risk associated with climate change. Many countries in the region have weak policy and enabling environments for biotechnology or do not have adequate strategies for their application. Others have stronger policy frameworks, but an abundance of caution has thus far limited the application of biotechnologies to food though other areas such as biopharmaceuticals have grown tremendously. In other cases, strong government support for biotechnology along with financial support for the establishment of key infrastructure (laboratories, technical skills improvements) has rapidly increased the usage and private sector participation in the agri-biotech sector. Many of the smaller countries in the region will not have the resources to pursue biotechnology development on their own, and existing regional mechanisms for collaboration and technology transfer will be needed.

Food fortification is a sound public health strategy because it can reach large segments of at-risk populations through existing food delivery systems, without requiring major changes in existing consumption patterns. The effectiveness of fortification programs is not only determined by the biological efficacy of the fortified food but also by its effective implementation, which includes, among others, monitoring, quality assurance and control, as well as compliance by industry with fortification standards. In countries where food processing is still at a nascent stage and localized in small cottage industries, implementation of food fortification policy can be hastened through transparent dialogue with the private sector, the development of clear standards and manuals, and the elimination of duties and taxes on fortificants and the equipment needed to incorporate them into food vehicles.

The conference made clear the importance of sharing lessons from across Asia that have effectively reduced malnutrition. Convening researchers, policymakers, and development partners to share successful experiences can accelerate implementation and catalyze the next era of rapid reduction of malnutrition in Asia. In many cases the policy challenges in one country may have been experienced in other countries. Understanding and re-interpreting these lessons are important channels to influence policy. Networks of policy experts who can quickly supply knowledge and experiences in these situations makes them an asset to policy discussions. The ReSAKSS-Asia Program supported by USAID is conducting cross-country policy research to accelerate growth and transformation of agriculture and food systems and creating a network of researchers and policy experts to share lessons across countries to improve policies for agriculture, nutrition, and food security.

# Day 1 (October 30, 2019)

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## OPENING SESSION

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Opening remarks were provided by Mr. U Kyaw Swe Linn, Director General of the Department of Planning, MOALI, Myanmar followed by Ms. Teresa McGhie, the Mission Director of USAID's Myanmar office. Both took note of the dietary transition that is currently taking place in Myanmar. Indeed, in recent years many Asian countries have seen rapid transformation in people's diets and the underlying agrifood system that supplies food, but malnutrition remains a serious challenge for many countries. While the poor generally derive a large share of their energy from staple foods (such as rice), as incomes rise, diets diversify into more nutritious foods such as fruits, vegetables, and animal products but also more prepared and processed foods that can be unhealthy. However, people's lifestyles also change with income growth. Less healthy diets combined with increasingly sedentary lifestyles are driving rising rates of overweight and obesity and a surge in non-communicable diseases. Meeting food needs is therefore not just about quantity—quality is also important. The simultaneous rise of overnutrition with the lingering prevalence of undernutrition within the same countries, and sometimes even in the same households, has been dubbed the double-burden of malnutrition.

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Ms. McGhie stressed that government and the private sector must work together to create an enabling environment for improved diets, a sentiment shared by U Kwaw Swe Linn. They agreed that the private sector must play an active role in transforming the Asian agrifood system. Several countries have favorable agroecological conditions, but Myanmar is uniquely positioned close to major global markets, making it attractive to private investors. There are also already medium-sized companies operating commercial farms and downstream enterprises. These companies, however, often lack access to modern technology and the "know-how" needed to meet quality standards and supply high-value, nutritious products to growing domestic and export markets. Foreign investment may help overcome certain constraints, but effective private-public sector coordination and policies to promote and incentivize local investors and businesses remain essential.

The remarks of Dr. Paul Dorosh, Director of the Development Strategy and Governance Division of IFPRI, and Joern Kristensen, Executive Director of the Myanmar Institute for Integrated Development focused on the importance of sharing lessons from across Asia that have proven effective in reducing malnutrition. Convening researchers, policymakers, and development partners to share successful experiences can accelerate implementation and catalyze the next era of rapid reduction of malnutrition in Asia. This was echoed by Emily Weeks, Senior Policy Adviser within the Bureau for Resilience and Food Security of USAID who highlighted how in many cases the policy challenges in one country may have been experienced in other countries. Understanding and re-interpreting these lessons are important channels to influence policy. Networks of policy experts who can quickly supply knowledge and experiences in these situations makes them an asset to policy discussions. The ReSAKSS-Asia Program supported by USAID is creating network of researchers and policy experts to share lessons across regions and countries to improve policies for agriculture, nutrition, and food security. It also conducts cross-county policy research to accelerate growth and transformation of agriculture and food systems in Asia.

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## KEYNOTE ADDRESS

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Dr. Emorn Udomkesmalee, Senior Advisor and Former Director of the Institute of Nutrition of Mahidol University in Thailand provided the keynote address for the conference entitled “Agrifood Systems for Nutrition—Challenges vs Opportunities”. In her talk Dr. Udomkesmalee underscored the scale of hunger and malnutrition both globally and in Asia, the rapid transition of food systems and diets, and highlighted examples of what is needed to reduce undernutrition. Her presentation set the stage for the event and highlighted the following points:

- Most children consume poor quality diets which are driving high levels of stunting and contributing to the double burden of malnutrition through overweight and micronutrient deficiencies. Nutrient dense foods (meat, eggs, milk, fruits and vegetables, fortified complementary foods) are often unavailable or unaffordable, but often poor caregiver knowledge and cultural practices can act as barriers to dietary diversity.
- Maternal malnutrition is overlooked as a key driver to child malnutrition. Many children are stunted in-utero due to pregnant women’s poor diets initiating a cycle of malnutrition.
- Diets are also changing: Rising incomes, urbanization, greater female participation in the workforce, and wider media penetration are driving the demand for high-value, processed products and convenience foods.
- Rural landscapes still produce the majority of food and nutrients around the world and 80% of the farmland in sub-Saharan Africa and Asia is managed by smallholders whom provide up to 80% of the food. Still, rural areas have higher burdens of undernutrition.
- Most successful systems that reduce hunger and malnutrition exhibit similar characteristics. These included:
  - Nutrition orientated development strategies
  - Strong political leadership and commitments
  - Strong policy and program implementation as well as investments in healthcare infrastructure
  - Equity and inclusion
  - Strong data systems and monitoring

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## PLENARY SESSION 1: FOOD SYSTEM DYNAMICS

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This session built on the keynote address to look at the region’s potential to address SDG2. It examined the dietary transformation taking place throughout Asia and challenging issues arising from it including obesity and the double/triple burden of malnutrition. Others examined the cost of nutritious foods in Myanmar and globally offering policy suggestions to lower prices for nutritious foods to increase their availability for low-income groups.

### [Achieving SDG2 by 2030 through Food Systems Transformations: Implications for Asia](#)

Anaka Aiyar, Post-Doctoral Associate, Cornell University

The prospects for Achieving SDG 2 in Asia are mixed:

- It is possible to end hunger in terms of caloric adequacy but uncertain for access to food diversity, especially micro-nutrient rich food.
- Ending all forms of malnutrition is less likely. We’ve seen steady declines in the incidence of child stunting & wasting, but there are new challenges with obesity.
- Doubling small farm productivity through sustainable production systems is possible where technology adaptation to smaller scale production is made available. It is possible to orient farmers towards crop diversification opportunities.
- It is unlikely that climate change adoption goals will be met unless coordinated efforts are made to preserve and enhance natural resources.

### [Nutrition Transition and Food System Transformation in Asian Countries](#)

Olivier Ecker, Senior Research Fellow, IFPRI

- As incomes increase, overweight and obesity increases faster with economic growth than undernutrition declines.

- There is declining undernutrition and increasing overnutrition even in lower-middle-income countries in South and Southeast Asia and in both urban and rural areas. The prevalence of obesity will continue to increase at current or higher rates, having critical implications for healthcare budgets and economic development.
- The obesity epidemic and the associated non-communicable disease burden are primarily caused by unbalanced, calorie-rich diets and the (over)consumption of unhealthy foods and beverages.
- Between 1981-83 and 2011-13, the per capita availability of total calories and calories from animal-source foods rapidly increased globally (by 13% and 32%), and especially in Asia (by 21% and 134%).
- Nearly 90% of the global *urban* population growth until 2050 will occur in Asia and Africa which may offer economic opportunities for farmers and food processors, traders, and vendors.
  - Most rural people today live close to cities where agricultural transformation often takes place. Farmers in peri-urban areas are expected to have greater potential to benefit from agricultural commercialization and specialization and cater to the growing urban demand. The development potentials in peri-urban and urban areas therefore deserve greater attention from agricultural policy and food security research.
  - Much of the agri-food system lies beyond the farm, even in lower-middle-income countries. The off-farm component's contribution to the national economies is substantial. For examples, in Vietnam and Bangladesh, with each dollar generated in agriculture, another dollar is generated in the related sectors upstream and downstream.
  - Agri-food systems expand as economies grow through the growth in the off-farm components. On average, the off-farm components exceed 50% of the agri-food systems' GDP, when countries transition from lower-middle-income to upper-middle-income status and exceed 50% of the AFS' workforce, when countries transition from upper-middle-income to high-income status.

#### Profiling Food Insecurity and Rural Diets in Myanmar

Jose Luis Vivero Pol, Head of Vulnerability Analysis & Mapping Unit, WFP Myanmar

- The cost of a nutritious diet in Myanmar is more than twice as much as an energy only diet. More than 60 percent of households cannot afford a nutritious diet in Myanmar on a daily basis. In the hilly / mountainous regions the rates are far higher where dietary diversity is low, and the consumption of protein rich foods is infrequent. In the central plains, pulses and eggs are more frequently consumed and markets are more easily accessible while in the coastal regions fish is more readily consumed.
- Livelihood profiles determine food and nutrition security. Those that are landless lack assets, do not have their own production, and frequently rely on credit to purchase food making them more food insecure and prone to debt.

#### The Cost of Nutrition in Asia

Derek Headey, Senior Research Fellow, IFPRI

- Even rural residents mostly depend on markets for consumption making market prices of nutritious foods important.
- Relative caloric prices (ie the cost of 1 egg calorie relative to 1 starchy staple calorie) is useful to measure the cost of diet diversification in a comparable way.
- We find that many fresh and nutrient dense foods are perishable limiting the opportunities for long distance trade making prices largely determined by local supply and productivity.
- A large percentage of poor people in the developing world cannot afford the EAT-Lancet recommended diet. In Myanmar, only about 41% of the population can afford the recommended diet with strong variation across regions.
- Continued investment in agriculture and diversification of production on farms can drive food prices down while improving the economic growth of the poor.
- Fresh and nutrient-dense foods are often highly perishable, so it is essential to improve value chains for perishable foods.

This session asked four panel members that currently occupy or previously served in a policy-making capacity to discuss how their countries are addressing SDG 2. The panelists provided varied responses with some focusing on policy formulation and implementation while others focused on cross-sector coordination and successful program interventions.

Ms. Hygeia Ceres Catalina Gawe with the National Nutrition Council of the Philippines discussed how the Philippine Plan of Action for Nutrition (PPAN) 2017-2022 takes an integrated approach to addressing malnutrition. Formulation of the plan includes ten government ministries and three non-government organizations, and the plan lays out three categories of interventions:

- Nutrition specific interventions that address problems of food intake or core food diet.
- Nutrition sensitive interventions that address the underlying causes of malnutrition such as behavioral change campaigns and nutrition education.
- Enabling mechanisms that address service delivery (especially at the local level), policy development, capacity building, coordination, and monitoring.

These interventions and the National Nutrition Plan more broadly are informed by the National Nutrition Survey that takes place every 5 years.

Kyaw Swe Linn, Director General of the Department of Planning, Ministry of Agriculture, Livestock and Irrigation, likewise discussed how good data from the DHS surveys is changing thinking in the country on nutrition. To provide more local-level solutions to tackle malnutrition, Myanmar is currently setting up nutrition centers to work on the development of context specific nutrition interventions. He also discussed how policy changes undertaken during Myanmar's political transition are opening new opportunities for farmers to diversify production and increase the profitability for farming given that income is closely tied with improved diets.

This was echoed by Sabnam Shivakioti, Joint Secretary, Ministry of Agriculture and Livestock Development, Nepal who discussed how the Ministry of Agriculture's activities were previously focused almost exclusively on the production of staple foods but through work under the Multi-sectoral Nutrition Plan (2018-2022) and the Food and Nutrition Security Plan of Action (2013) there is greater coordination and integration of government institutions. This manifests itself in different ways, but, for the Ministry of Agriculture, it has resulted in a renewed focus on the production of a more diverse set of staples such as millets and buckwheat that are nutrient dense. There are also new institutional mechanisms that have emerged such as the high-level Food and Nutrition Security Committee within the Planning Commission that is influencing programming and budgets and generating greater integration within government.

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## PLENARY SESSION 2: POLICY FRAMEWORKS FOR ADDRESSING SDG 2

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In this session, four speakers provided a more in-depth look at how countries across Asia are addressing food security and malnutrition. Each summarized the current nutrition situation in their country and some of the key drivers. Additionally, they highlighted some of the agri-food policies and programs used to address the food security and nutrition situation. This included units or structures within government that coordinate food security/ nutrition policy across different ministries (or at the local level) that are unique and might offer lessons for others in the region. Speakers also highlighted how, through policy, the government is creating an environment for healthy diets and markets for nutritious and safe foods.

### [Linking Agriculture, Food Systems and Nutrition for Food and Nutrition Security in Myanmar](#)

*Khin Mar Cho, International Agricultural Extension and Nutrition Specialist, Cornell University*

- Myanmar is self-sufficient in food at the national level and calories per person has increased significantly in recent years.
- Many households in Myanmar do not have a healthy, balanced diet due to either low income, limited nutritional knowledge, or a combination of the two.
- The government should consider creating a strong and independent monitoring body that reports directly to the parliament on nutrition program implementation.

- Coordinate nutrition surveys and studies centrally to ensure consistency of survey methodology in order to facilitate the interpretation of data sets from different locations, target groups and different agencies.
- Establish Food and Nutrition Security Committees at Union and State/Regional level and translate national policies into operational working plans for individual States and Regions.
- In the short-term, continue much needed vitamin supplementation to vulnerable groups. In the long-term nutrition interventions should shift from a clinical approach to a dietary approach.
- Renewed emphasis should be placed on national level awareness campaigns on proper feeding practices for infants and young children.
- Produce a more diverse range of food locally grown at state/region level by creating a nutritious food production plan for each State and Region, with the direct involvement of the Department of Agriculture, the Department of Health and the Department of Education. This will decrease transport costs and consequently food prices.

### How the Philippines Aims to Achieve SDG 2

*Roehlano Briones, Fellow, Philippine Institute for Development Studies*

- Malnutrition in the Philippines remains a problem with more than 30% children under 5 stunted and only 13.4% of children (6-23 months) meeting the Minimum Acceptable Diet. Maternal nutrition also remains a problem.
- The Philippines government has acknowledged the problem and is taking steps to address the challenge.
- First, total health expenditures are increasing, and several new laws have been passed in 2018 including the Law on National Feeding Program, The First 1000 Days Act and the Magna Carta of the Poor that enshrines the Right to Adequate Food.
- Additionally, the government has developed the Philippine Plan of Action for Nutrition (PPAN) 2017-2022. This Plan sets outcome targets along with intermediate targets to be achieved by 2022. It also complements nutrition-specific with nutrition-sensitive programs, intensifies mobilization of local government units prioritizing the 36 provinces with the highest prevalence of stunting.
- The progress made by government is very good, but the accountability and incentive/penalty system is still unclear for missed targets. The planning horizon is also still confined to election cycle with no clear plan to 2030.

### Transforming Food and Agriculture Systems to Improve Food Security and Nutrition in Sri Lanka

*Manoj Thibbotuwawa, Institute of Policy Studies, Sri Lanka*

- Stunting rates have stagnated since 2000 with rates hovering around 15-20% for children under 5. Rates are higher in the rural areas than urban and are twice as high in the poorest quintile (25%) than in the wealthiest (12%). Wasting for children under 5 is also quite high nationally (15%).
- The main focus of the past National Agriculture Plans has been self-sufficiency through increased production of a limited commodity basket without much focus on nutrition. At the same time, the National Health Plan has targeted strengthening the country's public health care system and providing supplements to address the high prevalence of micronutrient deficiencies.
- The National Nutrition Plan provides a platform for inter-sectoral coordination in order to accelerate achieving nutrition for all but there are a large number of different agencies involved in enforcing and implementing food security policies and programmes creating problems of coordination and inter-agency friction. There remains the need for a single coordinating body.

### Pakistan's Multi-Sectoral Nutrition Strategy

*Amna Ejaz, IFPRI-Pakistan*

- Pakistan is self-sufficient in cereal and grain production but 66% of households cannot afford a nutritious diet, given their current food expenditures thus leading to a high burden of malnutrition. Stunting remains high at 38 percent with limited progress since the 1970s and 1980s. The rates of underweight have made considerable progress but are still at 23%.
- The government is taking ownership having put in place the Protection of Breastfeeding and Child Nutrition Act, Food Fortification Acts as well as the Multi-Sectoral Nutrition Strategy. They have likewise expanded social safety nets.

- The Multi-Sectoral Nutrition Strategy has both nutrition-specific and nutrition-sensitive interventions representing a more coherent vision of nutrition programming. The federal government is responsible for policy and planning, coordination, standardization and overall monitoring and evaluation. Provinces have endorsed the MSNS and are responsible for implementation and have begun to design integrated programs. Still, there is the potential for challenges to arise with coordination.

#### Achieving the SDG2 in Timor-Leste

*João Boavida, Centre for Peace and Development, Timor Leste and Gianna Bonis-Profumo, PhD. Candidate, Charles Darwin University*

- Timor-Leste suffers from chronic food insecurity and underweight and stunting rates are both at or above 40% for children under 5. Dietary diversity remains an issue with most households consuming little animal sourced foods and large quantities of roots and tubers. Access to fruits and vegetables is seasonal. Only 13% of children consume the minimum acceptable diet.
- The National Council of Food Security, Sovereignty, and Nutrition for Timor-Leste (KONSSANTIL) coordinates ministries and harmonizes activities to implement the Zero Hunger National Action Plan and the Food & Nutrition Security Policy.
- The Ministry of Agriculture and Fisheries helms the presidency of KONSSANTIL which impacts the participation of other ministries. Repositioning KONSSANTIL under the leadership of the Prime Minister's office may help improve accountability and ensure adequate funding.

## Wednesday, December 13 (Day 2)

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### PLENARY SESSION 3: CREATING AN ENABLING ENVIRONMENT FOR IMPROVED DIETS

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#### Impacting at Scale: From .5% to + 40%

*Grahame Dixie, Executive Director, Grow Asia*

- Vietnam is already a relatively productive coffee producer, but benefits can be achieved by improving the efficiency of production to lower costs and reduce greenhouse gas emissions. The development of new standards helped to lower costs for farmers.
- The formation of the Vietnam Coffee Coordination Board (VCCB) created a national coffee community that included government, producers and the private sector. The forum enables strategy, policy & activities to be refined and improved in the light of feedback from producers.
- Ground level implementation of the new standards only happened at scale when local level public-private coordination units were in place. A top-down process, without being complimented by bottom-up feedback loops, may not address the real issues that farmers are facing on the ground
- Individual projects will not, in themselves, achieve scale. They are useful for piloting and proving effectiveness and credibility. Scale is dependent on creating a wider network of multi-stakeholder partners.

#### Regulatory Cooperation in ASEAN Good Agricultural Practices

*Catherine Frances J. Corpuz, Senior Program Officer, ASEAN-Australia Development Cooperation Program*

- Non-tariff barriers and technical barriers to trade, notably product standards and certification, are considered to be the most significant obstacles to expanding intra-ASEAN trade.
- ASEAN has developed Good Agricultural Practices (GAP) for fruits and vegetables, fish, and poultry which address the sustainability of on-farm processes, to ensure safety and quality of food and non-food agricultural products to help encourage trade.

- The Multilateral Arrangement for the Mutual Recognition of Agri-food Standards and Conformity Assessment (MAMRASCA) provides a framework for accepting differences in national standards across ASEAN, provided certain conditions are met by Member States.
- Each country will undergo a standards assessment process to ensure national standards are aligned with the ASEAN standards, or they may choose to adopt the ASEAN Standards.
- Each country will also be assessed to ensure that national accreditation bodies, certification bodies, labs, and testing facilities adhere to relevant international standards

#### Does e-commerce Increase Food Consumption in Rural Areas? Evidence from China

*Xiaobo Zhang, Senior Research Fellow, IFPRI*

- China has become the largest e-commerce market in the world. China's worldwide e-commerce transaction value grew from less than one percent a decade ago to over 50 percent in 2018.
- In China, e-commerce has boosted food consumption, in particular in rural areas and among the poorer households, reducing regional consumption inequality. The impact on food consumption is greater than other items except for local transportation.
- Baby food and formula are the top two package food sold online in China. We find that breast feeding is negatively correlated with e-commerce development; the correlation between food consumption and e-commerce z-score is stronger for households with young children under three years old. It seems that the poor prefer baby formula to breast feeding.

#### Traditional Versus Modern Milk Marketing Chains in India: Implications for Smallholder Dairy Farmers

*Anjani Kumar, Research Fellow, IFPRI- Delhi*

- Our studies suggest that the likelihood of selling to milk-marketing outlets is influenced by observable characteristics like family size, social caste, educational attainment, training, and farm size as well as receipt of publicly funded unemployment benefits, food subsidies, and sources of technical information.
- These findings can inform the design and targeting of policies that aim at fostering adoption of single and multiple milk-marketing outlets in India.
- Selling to formal chains should be encouraged because this outlet yields significant positive effects on Indian smallholder dairy farmers' economic welfare.
- The participation in modern milk marketing chains be facilitated by improving extension services and reducing barriers to entry based on caste and assets.

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### PARALLEL SESSION 1A: **NUTRITIOUS VALUE CHAINS- Animal sourced foods**

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#### Structural Transformation and the Livestock Revolution in Vietnam: Current Situation and Future Scenarios for the Dairy Sector

*Mai-Huong Nguyen, IPSARD*

- Vietnam is undergoing a livestock revolution driven largely by consumer demand for both meat and dairy products.
- This revolution has been supported by policy that, in the early 2000's, supported the growth of family farms with the National Dairy Development Strategy and the provision on credit, extension, and investment. After 2008, however, there has been increased growth of mega-farms with capital-intensive production supported by a more firm-orientated policy environment through the Strategy for Livestock Development to 2020 (2008), Master Plan for Milk Processing Industry 2020-2035 (2010), Plan for Restructuring Livestock Sector (2014), and other policies on: credit, encouraging private investment in agriculture, promoting hi-tech agriculture, and encouraging good agricultural practices in livestock.
- Environmental degradation has become a problem with intensive farms and small farms increasingly are trying to access more capital and credit to raise productivity. Income divergence between the two groups continues to widen.

#### The Quiet Revolution in Myanmar's Aquaculture Value Chain

*Ben Belton, Michigan State University*

- Current household expenditure surveys in Myanmar suggest that outlays on fish and meat are greater than on staples such as rice. This demand is encouraging the growth of domestic fish production and leading to increased farm commercialization, intensification, and specialization both up-stream and downstream in the value-chain.
- This shift from subsistence to commercial production is being supported by new businesses that are producing formulated feeds, introducing new species of fish, larger fingerlings, pumps, aeration, and chemicals that lead to higher yields and specialization. This development is occurring in 'clusters' that facilitate specialization, reduce costs, and increase efficiency.
- The growth of aquaculture is creating numerous livelihood opportunities both on and off-farm which has large income spillovers, especially from smaller commercial farms. It is likewise increasing the availability and accessibility of farmed fish, lowering costs for consumers.
- Liberalization of land use policy and better access to credit could spur further growth & specialization.

### Production Diversity and Market Access for Predicting Animal-source Food Consumption: Learning from Chin State, Myanmar

*Jytoi Felix, Catholic Relief Services*

- In remote areas with generally poor access to markets (like Chin State) market access appears to play a critical role in both animal sourced food consumption and overall dietary diversity – particularly for areas located closer to markets. This necessitates government investments to improve market access.
- Production diversity appears to be more important for dietary outcomes in areas located further from markets. In these areas, improving production diversity can help improve nutrition indicators.
- Nutrition education and social-behavioral change has a larger, more significant impact than either market access or production diversity. Investments in nutrition education are critical irrespective of the pathway through which access to nutritious food is improved.

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## PARALLEL SESSION 1B: NUTRITIOUS VALUE CHAINS- Pulses and horticulture

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### Soybean Value Chains for Rural Development

*Thet Htun Aung, Winrock Myanmar*

- Most soy produced in Myanmar is consumed domestically. The market for tofu and other soy products is growing with new investment in processing facilities in Yangon.
- Previously, soybean producers in rural areas sold to traders who aggregated soy at the district level and either sold to national traders or to local mills and processors. Smallholders had limited access to information on quality standards and thus often received low prices for their grain.
- The Value Chains for Rural Development project worked with farmers and processors to make more information available about the specifications needed by processing facilities. This included information on grain quality (moisture content, pests, foreign matter, etc) as well as packaging, contracting, delivery and payment procedures.

### Making Vegetable Markets Work

*Ye Htut, Grow Asia, Myanmar*

- From June 2014 to March 2018 the Myanmar Agricultural Network sought to improve the vegetable market system for 15,000 smallholder farmers in Southern Shan and Rakhine States. Shan State had more advanced vegetable businesses serving Mandalay and Yangon. Rakhine State imports vegetables from other areas in Myanmar and has struggled with inter-ethnic conflicts.
- Interventions varied across the two regions but generally focused on improving productivity and quality of vegetable production. Additionally, it provided internships and sponsorships to help train those involved with the project and supplemented this with exchange visits to help farmers learn from others. Risks were shared by both producers and companies and no one individual, group, or company had too much control or power within the project.

- The project concentrated on increasing farmer productivity through better use of inputs, technology, and practices. In doing so, it connected communities with improved, reliable support services such as extension, inputs, and seeds. Market players saw this a foundational step before more formal output market channels can flourish.

#### Farm Production, Market Access and Dietary Diversity in China's Poor Rural Households: Evidence from a Panel Data

*Kevin Chen, Senior Research Fellow, IFPRI- Beijing*

- In poor, rural China, production diversity has a positive and significant effect on the diversity of household diet.
- Market distance has a negative association with the dietary diversity. Reducing market distance by 6 km has the same effect on dietary diversity as increasing farm production diversity by one additional food group.
- Off-farm income has a positive association with dietary diversity. Increasing off-farm income by 3,565.8 yuan (~\$515 USD) has the same effect on dietary diversity as increasing farm production diversity by one additional food group.
- Better market access that increases off-farm income or increases agricultural sales could contribute to higher dietary diversity. In either case, improving market access could improve dietary diversity in poor, smallholder families.

### PLENARY SESSION 4: BIOTECHNOLOGY POLICY

Countries are challenged to provide their people with adequate and nutritious food and biotechnologies have contributed to ensuring stability and increases in crop productivity and total food supply. Biotechnology tools may also have the potential to help address problems arising from climate change. This session supports those responsible for decision making in regulatory circles and in the food supply chain by sharing country experiences in developing and implementing biotechnology policy.

#### The Biotechnology Landscape in India

*Ravi Srinivas, Research and Information System for Developing Countries (RIS), India*

- Biotechnology in agriculture in India is diversified with applications in plant biotechnology, animal biotechnology, and bioinformatics. Of these, Biopharma is the largest contributor in terms of revenue.
- The Indian biotech industry is huge with 800 companies and is currently valued at USD11 billion. In order to achieve a market size of USD100 billion by 2025, the Government of India has stepped up promoting research activities and developing infrastructure and human capital. An allocation of \$369 Million has been made towards the Department of Biotechnology, under the Ministry of Science and Technology in 2019-2020 Budget, of which \$USD 211M is for biotech R&D.
- The Department of Biotechnology sits under the Ministry of Science and Technology. Under the Department of Biotechnology sits the Institutional Biosafety Committee (ISBC), the Regulatory Committee on Genetic Manipulation (RCGM), and the Recombinant DNA Advisory Committee (RCGM). The IBSC provides the first level of approval for biotechnology products followed by the RDAC and the RCGM. If these three Committees approve, then the approval process advances to the Genetic Engineering Approval Committee for final approval which sits under the Ministry of Environment and Forests and Climate Change.
- Bt Cotton is the only approved transgenic variety. It was approved in 2002 and is cultivated on 94 percent of the area under cotton. Bt Brinjal was tested and approval for commercial cultivation was withheld under moratorium in 2010. Bt mustard and Bt chickpea are also awaiting approval.
- The rules framed under Environment Protection Act of 1989 regulate genetic engineering, field trials and genetic R&D. Field trials must be approved by respective state governments and the central government.
- The Biotechnology Regulatory Authority of India (BRAI) bill proposed in 2011 envisaged a single agency set up to co-ordinate and regulate all activities including risk assessment and monitoring of transgenic crops, but the bill lapsed in 2012 and hence the old guidelines are applicable.

#### Current Status of Agricultural Biotechnology in Thailand

*Orachos Napisintuwong, Department of Agricultural and Resource Economics, Kasetsart University*

- While Thailand recognized and responded to the potential of agricultural biotechnology earlier than its neighbors, the position of Thailand in implementing biosafety legislation and adopting genetic engineered crops is far behind other countries in the region.
- Recently, Thailand's policies on biotechnology are still uncertain although it is embedded as one of the tools in promoting the fourth industrial revolution or the so-called Thailand 4.0 policy. It is suggested that Thailand may need to review its current global situation not only because neighboring countries have already adopted the transgenic technology that could unavoidably cross the border, but also because the emerging technology such as gene editing has become more acceptable in the global market.
- Although Thailand started field trials of GM crops as early as the 1990s, due to a lack of biosafety legislation and a precautionary delay, there is presently no open field trials nor commercial production of GM crops.
- Unresolved policies and regulations have limited progress on transgenic technology even though the use of modern biotechnology, such as Marker Assisted Selection and genomic and bioinformatics, are being supported by the government.
- While restrictions on production and imports of GM crops continue, Thailand does allow importation of GM soybeans, GM maize, GM cotton, and GM processed food.
- As has happened previously in the case of GM papaya contamination, it is likely that GM seeds will cross the border creating difficulties in the regulation of unauthorized GM crops unless Biosafety legislation is enacted.

### Creating and Implementing Biosafety Regulations: The Philippine Experience

*Carlo G. Custodio Jr., Philippines Country Coordinator, Program for Biosafety Systems*

- Initial guidelines for biosafety regulation were developed by the University of the Philippines Los Banos and the International Rice Research Institute (IRRI) with participation of the Department of Agriculture in order to regulate their own experiments. This went on to be signed by the president in 1990. It created the National Committee on Biosafety of the Philippines with members of the Dept of Agriculture, Dept. of Health and Dept. of Environment and Natural Resources that were responsible for evaluating potential hazards involved in initiating genetic engineering experiments and formulating national policies and guidelines on biosafety.
- The National Committee on Biosafety of the Philippines issued guidelines in 1991 that governed the introduction and transport of GM materials and in 1998 released guidelines on field testing. These were revised in 2002 making the Bureau of Plant Industry the regulatory agency responsible for monitoring biosafety.
- The National Biosafety Framework was developed in 2006 after the Cartagena Protocol came into effect. The National Committee on Biosafety became the primary policy body while the roles of other departments were more clearly specified in biosafety monitoring. This was updated in 2016 to specify that biosafety committees were constituted within each concerned department.

### Biosafety Regulation Framework in Vietnam

*Dr. Nguyen Kim Chien, Ministry of Agriculture and Rural development, Vietnam*

- From 2006 until 2010 Vietnam began to develop the domestic biotech industry incrementally, beginning first with the establishment of key infrastructure (laboratories, technical skills improvements, etc) and the creation of new plant varieties through the application of DNA recombinant technology.
- From 2011-2015, the country began intensive application of modern biotechnologies and the release of transgenic crops for production. The country is targeting 70% of new agricultural varieties to be biotech crops of which transgenic crops will share 30-50% of growing area. Additionally, 70% of the demand of pathogen free seedlings will be met by micro propagation and 80% of the total fruits and vegetables area will be treated with bio-fertilizers and bio-pesticides.
- Biosafety is governed by a number of ministries each with distinct responsibilities. Research and development is led by the Ministry of Science & Technology (MOST) while field trials are headed by the Ministry of Agriculture & Rural Development (MARD). Biosafety Certification on biodiversity and environment are led Ministry of Natural Resources & Environment (MONRE) as is transportation & preservation/storage. Monitoring and certification of food and feed safety is led by the Ministry of Agriculture & Rural Development (MARD) as is labelling in conjunction with MOST.
- GM plants can be issued the Food, Feed Safety Certificate when it has been approved for use as food or feed in 5 developed countries (OECD/G20) and has not posed any risk in those countries, or if the Food, Feed Safety Committee concludes that there is no uncontrollable risk to human and animal health.

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## PARALLEL SESSION 2A: Food Safety in Urban Environments

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Foodborne disease is responsible for an enormous health burden and negative livelihood, nutritional, and economic impacts. There is an urgent need for technical and institutional solutions to food safety challenges, and broader policy and regulatory approaches to manage food safety risks in dynamic, developing markets. This session looked at targeted research on institutional solutions and appropriate policy and regulatory options that align public health goals with country priorities to ensure that food is both safe in formal and informal markets.

### Compliance of Producers and Adoption of Consumers in the Case of Food Safety Practices: Cases from South Asia.

*Devesh Roy, Senior Research Fellow, IFPRI*

- In general, the level of consumer knowledge on dairy food safety is low. A large majority are unaware about the sources of contamination and do not possess foundational knowledge on risk minimization strategies.
- Powdered milk consumers have more faith in the milk they consume than fresh milk consumers.
- However, a large percentage of consumers with high income believes that fresh milk is not hygienic, and it is contaminated with bacteria.
- Consumers with high income consider consumption of powdered milk is a way of avoiding food risk.

### China's Food Safety regulatory system: Achievements, Challenges and Suggestions

*Prof. Jiehong Zhou, Zhejiang University, China*

- Between the 11<sup>th</sup> (2006) and 12<sup>th</sup> (2011) five-year plans, China invested heavily in improving the infrastructure for food safety regulation.
- While the food safety regulatory system was largely decentralized prior to the 1980s, over time it has moved to a more coherent and unified structure guided by new policy frameworks. In the 1980s food safety was governed by a regulatory system dominated by the hygiene department. In 2003 the Food and Drug Administration was established but food supply supervision was segmented into multiple departments. By 2013, an integrated regulatory system was developed dominated by the China Food and Drug Administration.

### Institutional and Governance Innovation in Thailand's Food System: The Role of the Private Sector in Food Safety

*Kamphol Pantakua and Natthida Wiwatwicha, TDRI*

- Modern food safety concerns for high-value crops in Thailand is driven by consumer awareness, NGO pressure, and multi-sector shared governance. Decreasing intermediate suppliers linking retailers and producers is making for better quality control, rising innovation in management, and better coordination that allows small shareholders to access modernized marketing chains.
- In the past, the government played a stronger, top-down role in setting food safety standards, but it was largely unsuccessful in addressing food safety concerns. They now play a more supportive role by providing facilities, chemical test kits, access to information, issuing standard certification, and facilitating farmers' group formation while allowing the private sector to take the lead in quality control.
- Food safety has developed best in for high-value agriculture while lower-value staples such as rice, maize and cassava have lagged.

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## PARALLEL SESSION 2B: FORTIFICATION POLICY

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### Food Fortification Policies in the Asia Region

*Dennis Bittisnich, Food Fortification Initiative*

- Mandatory fortification programs are most successful if they use recommended nutrient compounds and concentrations, optimize coverage and consumption by choosing the right food vehicle, and are well implemented and compliance monitored.

- Currently, FFI is working with the following countries on wheat and rice fortification:
  - Indonesia has mandatory wheat fortification legislation since 2001 but their standards do not follow the WHO guidelines. They are currently being updated.
  - Malaysia has voluntary standards for wheat fortification since 2017 but these only apply to bags / containers that is less than 25kg, thus exempting much of the processing industry that works with larger containers.
  - Mongolia passed a food fortification law in 2018 mandating that salt and wheat flour are fortified. Standards are currently being formulated with implementation to begin in 2020.
  - Philippines has had mandatory wheat flour and rice legislation since 2001 though it is not inline with WHO. However, most rice consumed is not industrially milled thus exempting a large share from fortification.
  - Sri Lanka has mandatory wheat flour fortification, but standards are pending.
  - Vietnam passed wheat flour and oil fortification laws in 2016. They were to come into effect in 2018 but there is some resistance to implementation and confusion about the fortification standards.

### Wheat and Cooking Oil/Ghee Fortification in Pakistan

*Amna Ejaz, IFPRI- Pakistan*

- In the 1960s the first national legislation was introduced mandating the fortification of oil/ghee with vitamin A and D. In the 1980's voluntarily salt iodization began.
- The National Fortification Alliance (NFA) was introduced in 2003 with the National Plan of Action for the Control of Micronutrient Deficiencies. The objectives of the NFA are to support multi-sectoral policy frameworks and develop legislative instruments, acts as a coordination body for partner supported projects by guiding their development and implementation ensuring cohesion with national priorities, and to strengthen the quality control and regulatory monitoring system at all levels.
- The government passed a Food Fortification Program (2016-2021) to support the government at federal, provincial, and district levels to establish the necessary legislative and regulatory frameworks for food fortification of wheat flour produced at commercial mills with iron and folic acid, as well as edible oil/ghee with vitamins A and D. The program also provides technical assistance to the wheat and oil/ghee industries and communications campaigns to build consumer demand.
- Wheat flour and edible oil and ghee is now compulsory (or close to becoming so) in three of the four provinces and provincial fortification standards have been developed in line with national standards. Quality assurance and quality control manuals and trainings have been delivered to all stakeholders. At the federal level, the 3% custom duty, 1% additional duty and 17% sales tax have been waved for microfeeders used in the fortification process.
- Thus far, the results have been mixed. An independent evaluation found that many wheat mills (~50%) are not fortifying their products yet, while those that are do so at a level that is below the standard. Many of these mills are small, traditional mills and are hard to reach with the new standards and where application of new technologies will be difficult.
- Salt iodization was more successful because of large information campaigns. New media campaigns have begun for fortified wheat flour to help stimulate demand.

### The History of Cooking Oil Fortification in Indonesia: Government Support for the Program and Challenges

*Idrus Jus'at, Senior Lecturer, Esa Unggul University, Indonesia*

- Vitamin A deficiency is a large problem among different sub-groups in Indonesia ranging from 5-50% affected. Most diets are largely rice-based with limited animal-sourced food consumption. Previous attempts to reduce VAD have been through semi-annual Vit A capsule distribution since 1978 though approximately 30% of children 6-59months are not reached.
- About 30% of cooking oil is sold in larger quantities of branded oil in supermarkets (much of which is voluntarily fortified with 45 IU/g vitamin A = 13.5 mg RE/kg). However, about 70% of the oil is sold as unbranded and unpackaged oil in small neighbourhood shops/stalls. Consumers bring their own bottle to be filled from a bulk container or buy small plastic bags of oil.

- An effectiveness study was conducted in West Java province in 2011-12 in which the VAD prevalence (serum retinol <20 mg/dl) was reduced more than 60% for all ages, with the highest reduction seen among school children and women of reproductive age.
- In 2012 it was agreed that all cooking oil should contain 45 IU vitamin A/g. However, since this time, there has been resistance by oil companies to comply with the new directive. Most recently, new agreements have been put in place to limit cooking oil distribution in un-branded packages. From Jan 1, 2020 onwards, oil fortification with vitamin A or beta carotene will be mandated. Changing leadership in the cabinet however makes it possible that there will again be back-sliding on commitments.

## Appendix I: Conference Agenda

# DAY 1

## OCTOBER 30, 2019

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**8:00 – 8:45 REGISTRATION**

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**8:45 – 9:00 GOAL AND OBJECTIVES OF DAY ONE:**  
*Moderator: Thin Lei Win, Thomson Reuters Foundation*

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**9:00 – 10:15 OPENING SESSION** (*Chair: Thin Lei Win*)

Welcome remarks

- *U Kyaw Swe Linn, Director General, Department of Planning, MOALI, Myanmar*
- *Teresa McGhie, USAID Mission Director*
- *Joern Kristensen, Executive Director, Myanmar Institute of Integrated Development*
- *Paul Dorosh, Director, Development Strategy and Governance Division, IFPRI*

Keynote address

*AgriFood Systems for Nutrition—Challenges vs Opportunities*

*Emorn Udomkesmalee, Senior Advisor, Institute of Nutrition, Mahidol University, Thailand*

Q&A and Discussion

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**10:15 – 11:00 COFFEE/TEA BREAK AND GROUP PHOTO**

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## THEME 1: Leveraging AgriFood Systems for Better Diets and Nutrition

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**11:00 – 12:15 PLENARY SESSION 1: FOOD SYSTEM DYNAMICS**

*Chair: David Tschirley, Michigan State University*

*Achieving SDG2 by 2030 through Food Systems Transformations: Implications for Asia*

*Anaka Aiyar, Post-Doctoral Associate, Cornell University*

*Nutrition Transition and Food System Transformation in Asian Countries*

*Olivier Ecker, Senior Research Fellow, IFPRI*

*Profiling Food Insecurity and Rural Diets in Myanmar*

*Jose Luis Vivero Pol, Head of Vulnerability Analysis & Mapping Unit, WFP Myanmar*

*The Cost of Nutrition in Asia*

*Derek Headey, Senior Research Fellow, IFPRI*

Q&A and Discussion

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**12:15 – 13:45 LUNCH**

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## 13:45 – 14:45 PANEL SESSION 1: COUNTRY EXPERIENCES IN ADDRESSING SDG 2

### Panelists

- *U Kyaw Swe Linn, Director General, Department of Planning, Ministry of Agriculture, Livestock and Irrigation*
- *Dr. T. Haque, Distinguished Faculty member, Center for Social Development, India*
- *Ms. Hygeia Ceres Catalina Gawe, National Nutrition Council, Philippines*
- *Sabnam Shivakioti, Joint Secretary, Ministry of Agriculture and Livestock Development, Nepal*

**Facilitator:** Suresh Babu, Senior Research Fellow, IFPRI

### Q&A and Discussion

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## 14:45 – 15:15 COFFEE/TEA BREAK AND NETWORKING

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## 15:15 – 16:30 PLENARY SESSION 2: POLICY FRAMEWORKS FOR ADDRESSING SDG 2

**Chair:** Bart Minten, Senior Research Fellow, IFPRI

**Linking Agriculture, Food Systems and Nutrition for Food and Nutrition Security in Myanmar**  
*Khin Mar Cho, International Agricultural Extension and Nutrition Specialist, Cornell University*

### How the Philippines Aims to Achieve SDG 2

*Roehlano Briones, Fellow, Philippine Institute for Development Studies*

### Transforming Food and Agriculture Systems to Improve Food Security and Nutrition in Sri Lanka

*Manoj Thibbotuwawa, Institute of Policy Studies, Sri Lanka*

### Pakistan's Multi-Sectoral Nutrition Strategy

*Amna Ejaz, IFPRI-Pakistan*

### Achieving the SDG2 in Timor-Leste

*João Boavida, Centre for Peace and Development, Timor Leste and Gianna Bonis-Profumo, PhD. Candidate, Charles Darwin University*

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## THEME 2: Efficient and Inclusive Agrifood Value chains for Nutrition

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## 16:30 – 17:30 PANEL SESSION 2: PRIVATE SECTOR EXPERIENCES WITH NUTRITIOUS VALUE CHAINS

### Panelists

- *Ms. Ritoja Basu, Deputy Director, Food and Agriculture Centre of Excellence, Confederation of Indian Industries*
- *Dr. Toe Nandar Tin, Senior Vice Chair, Myanmar Fishery Federation*
- *Grahame Dixie, Executive Director, Grow Asia*
- *Mr. Nyantha Maw Lin, Burgundy Hills Company*

**Facilitator:** Mateusz Filipski, Assistant Professor, University of Georgia

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## 17:30 – 17:45 CLOSING REMARKS

**Moderator:** *Thin Lei Win, Thomson Reuters Foundation*

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## 18:00 – 20:00 RECEPTION AND DINNER

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# DAY 2

## OCTOBER 31, 2019

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**8:00 – 8:45 REGISTRATION**

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**8:45 – 9:00 SUMMARY OF DAY 1 AND GOAL / OBJECTIVES OF DAY 2**  
*Moderator: Thin Lei Win, Thomson Reuters Foundation*

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**9:00 – 10:15 PLENARY SESSION 3: CREATING AN ENABLING ENVIRONMENT FOR IMPROVED DIETS**  
*Chair: Paul Dorosh, Director, Development Strategy and Governance Division, IFPRI*

*Impacting at Scale: From .5% to + 40%*

*Grahame Dixie, Executive Director, Grow Asia*

*Does e-commerce Increase Food Consumption in Rural Areas? Evidence from China*

*Xiaobo Zhang, Senior Research Fellow, IFPRI*

*Traditional Versus Modern Milk Marketing Chains in India: Implications for Smallholder Dairy Farmers*

*Anjani Kumar, Research Fellow, IFPRI- Delhi*

*Regulatory Cooperation in ASEAN Good Agricultural Practices*

*Catherine Frances J. Corpuz, Senior Program Officer, ASEAN-Australia Development Cooperation Program*

*Q&A and Discussion*

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**10:15 – 10:45 COFFEE/TEA BREAK AND NETWORKING**

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**10:45 – 12:00 PARALLEL SESSION 1: NUTRITIOUS VALUE CHAINS**

### ANIMAL-SOURCED FOODS

*Chair: A. Arunachalam, Indian Council of Agricultural Research*

*Structural Transformation and the Livestock Revolution in Vietnam: Current Situation and Future Scenarios for the Dairy Sector*

*Mai-Huong Nguyen, IPSARD*

*The Quiet Revolution in Myanmar's Aquaculture Value Chain*

*Ben Belton, Michigan State University*

*Production Diversity and Market Access for Predicting Animal-source Food Consumption*

*Jyoti Felix, Catholic Relief Services*

### PULSES AND HORTICULTURE

*Chair: Aye Aye Khaing, Yezin Agricultural University*

*Soybean Value Chains for Rural Development*

*Nimish Jhaveri, Winrock Myanmar*

*Making Vegetable Markets Work*

*Ye Htut, Grow Asia, Myanmar*

*Farm Production, Market Access and Dietary Diversity in China's Poor Rural Households: Evidence from a Panel Data*

*Kevin Chen, Senior Research Fellow, IFPRI- Beijing*

*Findings from the Study on Nutrition-Sensitive Value Chains in the Feed the Future Zone of Influence in Tajikistan*

*Abduaziz Kasymov, Tajikistan*

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12:00 – 13:30 LUNCH

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## THEME 3: Agrifood System Governance and Innovations

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### 13:30 – 14:45 PLENARY SESSION 4: BIOTECHNOLOGY POLICY

Chair: Phyu Sin Thant, Senior Agronomist, Myanmar Institute for Integrated Development

[The Biotechnology Landscape in India](#)

*Ravi Srinivas, Research and Information System for Developing Countries (RIS), India*

[Current Status of Agricultural Biotechnology in Thailand](#)

*Orachos Napsintuwong, Department of Agricultural and Resource Economics, Kasetsart University*

[Creating and Implementing Biosafety Regulations: The Philippine Experience](#)

*Carlo G. Custodio Jr., Philippines Country Coordinator, Program for Biosafety Systems*

[Biosafety Regulation Framework in Vietnam](#)

*Dr. Nguyen Kim Chien, Ministry of Agriculture and Rural development, Vietnam*

[Q&A and Discussion](#)

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### 14:45 – 15:15 COFFEE/TEA BREAK AND NETWORKING

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### 15:15 – 16:30 PARALLEL SESSION 2: MAKING FOOD SAFER AND MORE NUTRITIOUS

#### FOOD SAFETY IN URBAN ENVIRONMENTS

Chair: Joseph Goeb, Michigan State Univ.

[Compliance of Producers and Adoption of Consumers in the Case of Food Safety Practices: Cases from South Asia.](#)

*Devesh Roy, Senior Research Fellow, IFPRI*

[China's Food Safety regulatory system: Achievements, Challenges and Suggestions](#)

*Prof. Jiehong Zhou, Zhejiang University, China*

[Institutional and Governance Innovation in Thailand's Food System: The Role of the Private Sector in Food Safety](#)

*Kamphol Pantakua and Natthida Wiwatwicha, TDRI*

#### FORTIFICATION POLICY

Chair: Olivier Ecker, IFPRI

[Food Fortification Policies in the Asia Region](#)

*Dennis Bittisnich, Food Fortification Initiative*

[Wheat and Cooking Oil/Ghee Fortification in Pakistan](#)

*Amna Ejaz, IFPRI- Pakistan*

[The History of Cooking Oil Fortification in Indonesia: Government Support for the Program and Challenges](#)

*Idrus Jus'at, Senior Lecturer, Esa Unggul University, Indonesia*

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### 16:30 – 16:45 CLOSING REMARKS

*Shahid Rashid, Director, IFPRI-Asia*

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