

SAFEGUARDING FOOD SYSTEMS IN SOUTHEAST ASIA AMID COVID-19

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KEY MESSAGES

The COVID-19 pandemic exposes the vulnerability of food systems in Southeast Asia that now face four main challenges: increased risk of food insecurity, changes in consumer demand, disruption of food supply chains, and issues related to inequities.

Collaboration and partnership among governments, the private sector, universities and research institutes, and other stakeholders, including women and the youth, are key to safeguarding our food systems.

The economic cost of the pandemic could reach USD 253 billion in Southeast Asia or 7.2% of the region's total GDP. Millions of poor people and workers, whose jobs are at stake due to the COVID-19 pandemic, may fall deeper into food insecurity and poverty. Social protection measures prioritizing these vulnerable groups should be strengthened.

Research will be crucial in informing policy decisions and future directions for food systems transformation. Key areas of future research include: mechanization to reduce dependency on manual labor, building resilient value chains, the future role of women and the youth in agriculture, and trade and other forms of international cooperation.

The COVID-19 pandemic presents an opportunity for Southeast Asia to collectively rethink and reformulate its shared vision of future food systems that are more resilient and adaptive to various possible shocks. Developing such a vision must ensure socio-economic and health inclusiveness and that no one is left behind.

INTRODUCTION: A BUMPY ROAD FROM PLOT TO PLATE

Since it was declared a pandemic by WHO on 11 March, COVID-19 has affected nearly 200 countries and territories around the globe. As of 14 June, the total reported cases of COVID-19 globally reached more than 7.6 million with over 420,000 deaths. In Southeast Asia, more than 110,000 people were COVID-19 positive and over 3,000 fatalities were reported. One characteristic of this pandemic is that it has moved from a local health issue to a multisector, economy-wide, global crisis. The impact of COVID-19 is felt everywhere but unevenly. Some segments of the society, particularly the poor, suffer more than the others.

Safeguarding food systems is critical to avoid greater catastrophes. However, situations differ from country to country. Some countries have more COVID-19 cases than the others (see Table 1). Measures imposed by governments, e.g., lockdown and social distancing coupled with unemployment and return of people to rural areas, make it extremely difficult to maintain well-functioning food systems in the region that is home to over 655 million people.

This brief focuses on three broad questions related to food systems in Southeast Asia: i) What are the main challenges for the food systems from the COVID-19 pandemic? ii) How can we safeguard food systems in the short- and long-term?, and iii) What policy measures should be taken to protect food systems?

To answer these questions, the International Rice Research Institute (IRRI) and the Food and Agriculture Organization of the United Nations (FAO) convened a webinar on **"The Future of Food Systems in Southeast Asia Post Covid-19"** on 5 May 2020. The seminar was attended by over 700 participants. The speakers were Dr. David Dawe, FAO; Dr. Jiangfeng Zhang, ADB; Dr. Jean Balié, IRRI;

and Mr. Grahame Dixie, Grow Asia. The seminar was facilitated by Dr. Yurdi Yasmi, IRRI. ASEAN Secretariat sent its written statement. This brief summarizes the result of the seminar.

THE REGIONS' ECONOMY HIT HARDEST AND THE PANDEMIC TO PUSH MANY INTO POVERTY

All countries in Southeast Asia have been impacted by the COVID-19 pandemic. Even Singapore, which was earlier hailed for flattening the curve, is grappling with a new wave of cases. While the reported cases in countries like Cambodia, Lao PDR, and VietNam are relatively low, the governments remain cautious and impose various measures to prevent new outbreaks. In Indonesia, Malaysia, Philippines, and Thailand, where more number of cases are being reported, governments have imposed lockdowns or large-scale social restrictions. In all countries, closing of schools, public gatherings, religious activities, and government offices are common. All countries in Southeast Asia implemented work-from-home arrangements as well although some countries have started to relax restrictions recently.

Table 1. COVID-19 cases in Southeast Asia as of 14 June 2020.

Country	Total cases	Number of deaths
Brunei	141	2
Cambodia	126	0
Indonesia	37,420	2,091
Lao PDR	19	0
Malaysia	8,445	120
Myanmar	261	6
Philippines	25,392	1,074
Singapore	40,197	26
Thailand	3,135	58
Vietnam	334	0
Total	115,471	3,377

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The region's governments' responses focused on three main aspects: health, social, and economic measures. The most immediate centered around the spread of the virus. For weeks or months, people were asked or ordered to stay home. Medical supplies were mobilized, e.g., face masks, ventilators, addition of hospital beds. The safety of medical frontliners became a top priority. Likewise, the use of face masks and limiting people's movement were enforced to contain the virus from spreading widely.

The COVID-19 pandemic has brought with it serious economic consequences in its wake. The tourism and hospitality sectors are perhaps among the hardest hit resulting in significant loss of jobs and revenues. Additionally, hundreds of thousands of migrant workers had to return home. In Cambodia, for example, 86,000 workers returned from Thailand. Most of them, if not all, do not have jobs at the moment (VOA Cambodia, 2020). This situation caused an increased economic burden. To help ease economic burdens, ASEAN Member States have implemented various social protection measures including disbursement of cash and easier access to loans, support to small and medium enterprises, tax breaks, and diverse forms of subsidies. Various voluntary schemes emerged as part of the solidarity among citizens such as community food distribution, family-to-family assistance, donations, etc.

While the full impact of the COVID-19 pandemic is yet to be determined, it is obvious that economies are hit the hardest. The ADB suggested that regional economic growth will decline sharply this year before recovering in 2021, assuming that the outbreak ends and activity normalizes (ADB, 2020a). The growth of all ASEAN Member States has been revised downward with some figures significantly lower (see Table 2). The ADB estimated that the economic cost of the pandemic in Southeast Asia could reach USD 253 billion or 7.2% of the region's total GDP (ADB, 2020b). Trade and tourism are the two most highly impacted sectors.

According to the ADB, 5.3 million workers across Southeast Asia may lose their jobs due to COVID 19 – almost equal to the entire population of Singapore (see Table 3). The informal sector upon which many countries in ASEAN rely on would probably be hit the hardest and many are already jobless.

The other group vulnerable to food insecurity are the people who live in poverty. They face tremendous issues related to access to food. There has been a significant reduction in poverty in ASEAN Member States in the last two decades. However, in many countries, poverty remains a key issue (see Figure 1). For example, in Lao PDR, Myanmar, and the Philippines, the poverty rate is still higher than 20%.

To address the issue in the short term, ensuring access to food is the most urgent task for governments. This can be achieved through multiple ways but the most immediate and obvious option is to distribute food or cash. Governments, the private sector, and individuals who have already expressed their solidarity need to renew their commitment over the medium term until the crisis is over. In the past, e.g., during the Asian financial crisis in 1997-1998, the role of agriculture in providing jobs to those who returned "home" to rural areas was significant. However, this time around, the agriculture sector has declined in importance as the region has undergone a structural transformation and rapid growth. In Thailand, 50% of rural income was derived from agriculture twenty years ago. It is only 35% today. Similar trends are found for many other countries in the region. Figure 2 shows the share of agriculture to the total GDP has declined over time in relation to manufacturing and services.

Although large numbers of people have returned to rural areas, they may not possess the necessary skills or be willing to engage in agricultural work. People's movement has become a critical issue in agriculture, too, due to enforced checkpoints that restrict the flow

Table 2. ASEAN Member States GDP Growth Forecasts for 2020 (ASEAN, 2020a).

Country	Initial forecast	Revised forecast
Brunei	1.5% Sep 2019	2% Apr 2020
Cambodia	6.8% Sep 2019	2.3% 3 Apr 2020
Indonesia	5.3% Official target, Aug 2019	4.7% to 5.0% -0.4 to 2.3% 4 Mar 2020 1 Apr 2020
Lao PDR	6.2% Sep 2019	3.5% 3 Apr 2020
Malaysia	4.8% Official target	3.2% to 4.2% -0.2% to 0.5% Feb 2020 3 Apr 2020
Myanmar	6.8% Sep 2019	4.2% 3 Apr 2020
Philippines	6.5% to 7.5% Official target	5.5% to 6.5% (if outbreak lasts until June) -0.6% to 4.3% Mar 2020 19 Mar 2020
Singapore	0.5% to 2.5% Nov 2019	-0.5% to 1.5% -4% to -1% 17 Feb 2020 26 Mar
Thailand	2.7% to 3.7% Nov 2019	1.5% to 2.5% 5 Feb 2020
Vietnam	6.8%	6.27% (if contained in Q1) 6.09% (if contained in Q2) 5.96% 5 Feb 2020 13 Feb 2020

Note: Brunei's growth outlook for 2020 has been revised upwards in anticipation of increased exports of oil and petroleum as new refineries start operations this year.

According to the World Bank, more people will fall back into poverty while those expected to escape poverty would not be able to do so in view of the situation (World Bank, 2020). Countries seem to have little option but to ensure that their economy can restart slowly and safely. However, reopening the economy is not easy as concerns over a second wave of COVID-19 infection loom.

POVERTY, JOBLESS, AND INEQUITY – MORE GLOOMY DAYS AHEAD

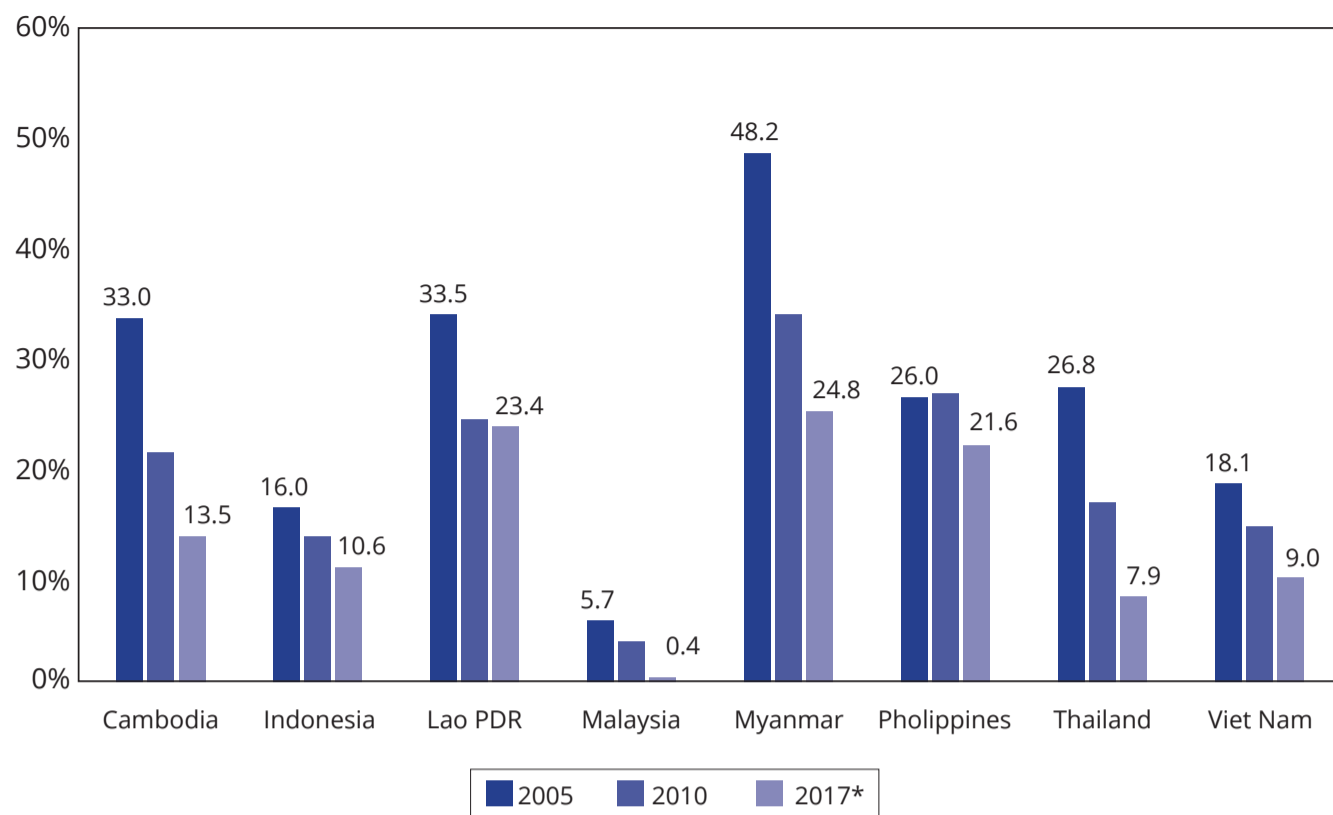
The COVID-19 pandemic is revealing some of the weaknesses in the regions' food systems that currently face four main challenges: increased risk of food insecurity, changes in consumer demand, disruption of food supply chains, and issues related to inequities.

Those who are most vulnerable to food insecurity are the people who have lost their livelihoods. Although the exact number of people in Southeast Asia that will end up in this situation is still unknown, it has been estimated to be in the tens of millions.

Table 3. Potential job loss in Southeast Asia (ADB, 2020c; The Asean Post, 2020).

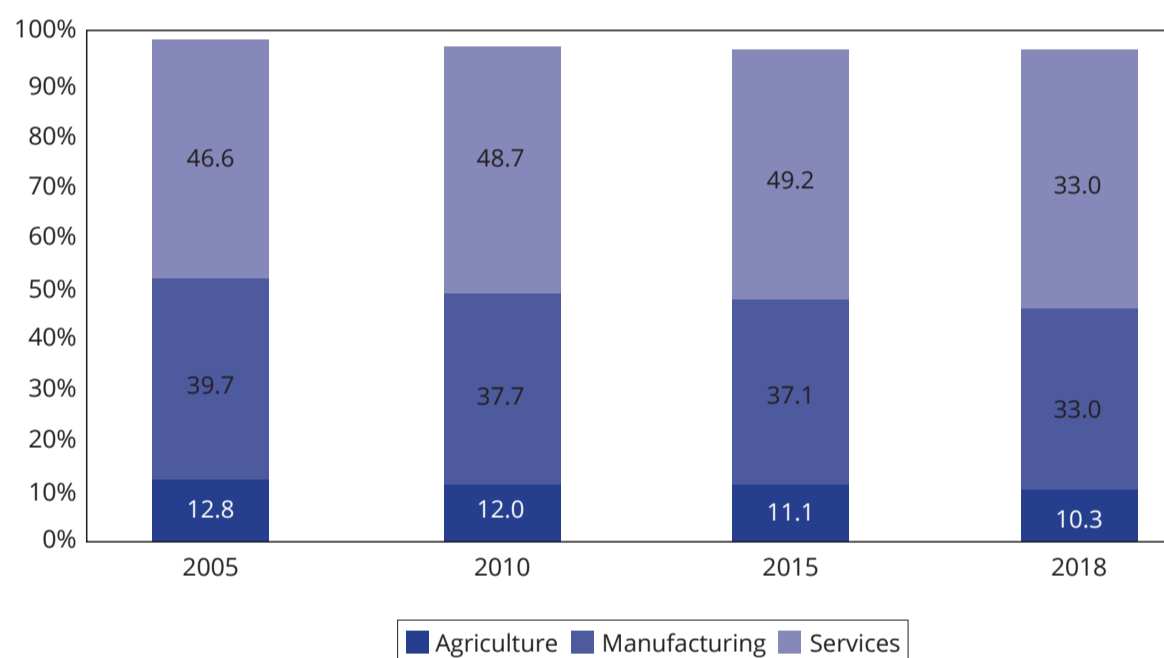
Country	Potential job losses
Brunei	2,000
Cambodia	340,000
Indonesia	739,000
Lao PDR	34,000
Malaysia	400,000
Myanmar	<i>no data</i>
Philippines	409,000
Singapore	98,000
Thailand	1,837,000
Vietnam	1,463,000
Total	5,322,000

Figure 1. Population living below the national poverty line (%) by ASEAN Member States, 2005 – 2017 (ASEAN 2020b).



Note: *The latest data available for the Philippines is 2016.

Figure 2. Shares of main economic sectors to total ASEAN GDP (%), 2005 – 2018 (ASEAN, 2020b).



Source: ASEAN Secretariat, ASEANstats database.

of local laborers. Farmers may opt for increased mechanization. Realistically, we should be aiming to create a cadre of younger and more professional farmers having access to more land where their skills and productivity can be amplified. We anticipate that they would be supported by a network of local businesses providing services to this farming community (e.g., contract machinery services, freight consolidators, labor gangs). We have seen that many of the new and innovative investors in agriculture and food systems do not necessarily come from farming backgrounds but from digital, finance, publishing, and scientific fields.

The entire chain, e.g., farm, processing, retailer, and market, is critical in maintaining a well-functioning food system. This is particularly challenging for workers while observing social distancing. No doubt that more storage will be needed to deal with disruptions although putting it in place quickly will not be easy. Food supply chains may shift to shorter links since more the links make the system more vulnerable. The implication is that food supply chains need to be more flexible to be able to deliver foods in different locations or entities, e.g., supermarkets, schools, restaurants, regular markets, and virtual platforms.

In terms of inequities, there are increasing concerns for pregnant and lactating women. A loss of income will force most of them to

reduce the consumption of nutritious but expensive food. This will harm both mothers and their children with lifelong impacts. Even when the crisis is resolved, the children may still suffer from malnutrition during key developmental stages. Where discrimination is common, women farmers may experience reduced access to inputs making it, more difficult for them to recover from the shock. Furthermore, the COVID-19 crisis has compounded the prevailing inequities felt by women who generally earn less and hold less secure jobs. Women may also face increasing gender-based violence and adverse health impact (UN Women, 2020).

THE COVID-19 PANDEMIC IS ANOTHER WAKE-UP CALL TO SAFEGUARD FOOD SYSTEMS

To keep food systems functioning effectively, the ASEAN Ministers on Agriculture and Forestry (AMAF) released a joint statement on suitable measures to overcome the challenges posed by the COVID-19 outbreak and ensure the sustainable supply of sufficient, affordable, safe, and nutritious foods that meet the dietary requirements of the ASEAN populations. Issued on 15 April, they agreed, among others, to⁶:

- Reaffirm their commitments in the implementation of the AMAF Statement to ensure food security, food safety, and nutrition in response to the COVID-19 outbreak to improve storage, preservation, transport, and distribution

⁶ <https://asean.org/statement-asean-ministers-agriculture-forestry-response-outbreak-coronavirus-disease-covid-19-ensure-food-security-food-safety-nutrition-asean/>

technologies and infrastructure to reduce food insecurity, food nutrient loss, and waste;

- Minimize disruptions in regional food supply chains by working closely together to ensure that markets are kept open and transportation of agricultural and food products are facilitated and that quarantine or other non-tariff measures do not impede or slow down the free flow of agricultural and food products in the region;
- Ensure that air, sea, and land freight trade lines remain open to facilitate the flow of agricultural and food products and critical infrastructure such as air and seaports remain open to support the viability and integrity of supply chains.

Box 1. Rice availability in ASEAN countries

Rice is a staple food in Southeast Asia. Fortunately, rice is available this time around. The virus will probably not cause a rice shortage in the short term (between April and July) as there is sufficient rice going around. Indonesia and the Philippines, the two biggest importers in Asia, are in good shape supply-wise and won't need much in the next few months. Indonesia just finished its main harvest, and the Philippines has good stocks and is in the middle of a substantial dry season harvest. However, in the long run (after July) things can change. The measures set to curb further COVID-19 outbreaks can cause disruptions to the supply chain critical to food security. This includes drops or shifts in demand, supply disruptions, labor shortage, trade restrictions, among others. Ongoing efforts to curb further outbreak have also severely affected the availability and accessibility of farm supplies needed in food production. If the next planting season can be secured and labor can get their inputs and work in the rice fields, there will probably be no rice shortage this year. However misdirected policy decisions, e.g., rice export bans, could result in rice price spikes which can eventually lead to rice shortage in some countries. Again, it all depends on how the situation evolves in the coming months.

The three pillars of food systems that need to be safeguarded are availability, accessibility, and affordability. Food availability relates to food production. In this regard, supporting farmers and smallholders at the farm level will be necessary. Production requires quality inputs and sufficient labor. In some countries having access to inputs and labor can be an issue due to disruptions in the transport of logistics or labor shortage as many of them have returned to their home villages or countries. Countries like Thailand and Malaysia that depend on migrant agricultural workers may face serious challenges.

Food accessibility requires reliable logistical infrastructure to ensure that foods reach the markets and consumers. However, the COVID-19 pandemic has exposed the weakness of rural logistics. In many countries, storage is often insufficient which can result in food waste. Additionally, poor road networks and infrastructure slow down the distribution of food. Labor shortages in food logistics or checkpoints at villages or district borders may further disrupt food distribution and delays can lead to increase in food prices.

The affordability of foods during the COVID-19 pandemic is another important issue. However, the price of rice, the main staple food in the region, has been relatively stable. The initial step by some countries to ban rice export created a concern but this policy has been revoked. Despite this, the purchasing power of people may decline as many of them lost their jobs. This has forced them to buy only essential agricultural produce. During the COVID-19 pandemic, it is also apparent that consumers are changing their behavior. They cook their own food and prefer fresh produce. They also go to different shops or opt for local supplies. If possible, they also tend to buy products online. Cash flow is key to food affordability because amid the pandemic cash flow along the value chains may be disrupted for various reasons.

THE REGION FACES DIVERGENT FUTURES AND NEW TECHNOLOGIES ARE TRANSFORMING OUR FOOD SYSTEMS

The COVID-19 pandemic taught us that our food systems are vulnerable to shocks. The interdependencies of activities across value chains should not be overlooked. Some value chains in our food systems may be quite long before reaching the markets or consumers. This reality reminds us that any disruptions to certain parts of the value chains will have significant impacts on food systems' services.

This provides us with an opportunity to rethink our food systems. Developing a shared vision of the future and realizing that similar shocks will certainly happen again is necessary. With population growth, urbanization, aging farmers, resource degradation, and climate change we must ask ourselves what kind of foods we want to grow and eat to nourish people in the next decades. If there are fewer farmers, we must ensure that they are more efficient farmers. Technology and innovation will be required to increase productivity and lower production costs. In short, imagining and rethinking our future has never been more urgent. This thinking process must involve all stakeholders and ensure that no one is left behind.

As people appeared to rely more on local supply chains during the pandemic due to disruptions of logistics, there is an opportunity to promote local small and mid-size enterprises (SMEs) in the food systems. However, because SMEs are not immune to shocks, governments will need to support them with the right policies and regulations. The extent to which SMEs can engage in the local food chains more effectively and how they can build their business model to cope with various future shocks should be addressed.

The change from the conventional agricultural system can be accelerated. Mechanization was already underway in much of the region and, given the imperative of social distancing, that trend may accelerate. The use of artificial intelligence could help shape the agriculture of tomorrow. We need to critically question which parts of "past normal" we want to retain and define our "new normal" of farming. Whatever choice we will make for our future agriculture will have repercussions. Therefore, weighing the pros and cons should be part of building a common vision of the future.

Technology adoption, such as the application of a similar level of innovation that has been applied to urban logistics to rural logistics (e.g., consolidation of loads, better utilization of backhauls), can help to increase the income of smallholder farmers' income during the COVID-19 pandemic and perhaps beyond, especially for the first-mile collection. Mobile banking will open the way to facilitating the flow of cash to the farming community and new marketing options. Digitally enhanced marketing, e.g., for farmers and their organizations to sell directly to agribusinesses, restaurants, and consumers would also help smallholders.

Box 2. ADB investment in food systems in Southeast Asia

Potential key differences in investment portfolios before and after the COVID-19 pandemic:

1. Stronger private sector linkage with market-oriented production and crop diversification in systematic approach considering food-water-energy nexus.
2. Stronger attention to food safety and nutrition with linkage to health. For example, ADB is developing a GMS Cross-border Livestock Health and Value Chains Improvement Project in Cambodia, Lao PDR, and Myanmar, which will help improve animal, human, and environment health.
3. Application and dissemination of new technologies, for example, remote sensing, drone, LIDAR, e-commerce, and precision farming.
4. New financing modalities such as results-based lending, project design facility, small expenditure financing facility, etc.

The agriculture sector is an integral part of society. Now, more than ever, we recognize the significant contribution of research in forming policy measures that ensure no one is left hungry. Some key topics that would be important to explore include: accelerating mechanization to reduce dependency on labor, building more resilient value chains to guarantee the supply of inputs like seeds and fertilizers, the future role of women and the youth as entrepreneurs in agriculture, and refocusing the role of trade and other forms of international cooperation.

ROBUST POLICIES AND ACTIONS ARE NEEDED TO SHAPE STRONGER FOOD SYSTEMS

Social protection measures need to be expanded as there are many who have lost their jobs due to the COVID-19 pandemic and have problems accessing food. In ASEAN countries, the 5.3 million people who fear losing their jobs need specific attention in addition to the millions more in the informal sector. Social protection should also cover the poor, many of whom already struggle to access foods even before the pandemic.

Effective policy measures are critically important during a pandemic. These may be divided into two main areas. The first relates to the immediate measures to quickly address the situation and the other to long-term policies geared toward developing a more sustainable food systems. Experience tells us that unilateral policy actions, such as export bans, are not the most appropriate measure. It can exacerbate the situation. Policymakers in ASEAN countries should work together and consider regional issues.

Regional cooperation to address issues around food systems in ASEAN countries during the pandemic is becoming more important. As a region, there are strong linkages and interdependencies among ASEAN member countries and food systems are no exception. Working together would provide better decision-making at the regional level. It allows countries to learn from one another and exchange lessons learned. Fostering south-south cooperation is perhaps more important than ever.

There is so much that we do not know about the virus and its long-term impact. By working and learning together, we will strengthen our knowledge and the way we react to the situation. It must be highlighted that it is not just governments that need to work together. Literally all of us need to work together. The public and private sectors, for example, need to enhance their cooperation. The private sector, like SMEs and big enterprises, has a strong role in food systems.

When we separate the COVID-19 symptoms from the causes, we see four top issues: (i) Rural logistics, partly about improving the execution and operation of green/food lanes but in the longer term catalyzing the innovation we have seen in urban logistics to rural logistics (ii) Better enabling of cash to flow into the rural economy (e.g., mobile money using an extensive network of local agents such as Wing Cambodia and Wave Money in Myanmar). With farmer registration, this would enable precisely targeted e-vouchers to buy next season inputs to operate without crowding out the private sector, (iii) The COVID-19 pandemic has exposed interest and opportunities for new digitally enhanced marketing options. As farmers learn how to sell directly to agri-businesses and consumers, it would enable more flexibility and resilience in market chains, (iv) We need to communicate productivity, marketing, and health messages to millions of farmers-preferably without physical contact. There may be emerging solutions, such as leveraging farmer usage of Facebook, WhatsApp, and other social media platforms by creating a cadre of "agricultural influencers" to inject agronomic and other advice into conversations.

Infrastructure investments for enhancing agriculture productivity; improving resource (water, land, labor, energy, etc) use efficiency; reducing pre- and post-harvest losses; improving farmer-market linkage and agri-food logistics; strengthening food safety and quality control; facilitating cross-border trade; and enhancing climate and disaster resilience will remain key.

The pandemic also highlights the importance of the application of technologies for and by the farmers and other agri-food value chain stakeholders. For example, e-marketing platforms, food traceability systems, and remote sensing and earth observation services to improve land and water management, climate-resilient rice varieties, and water-saving technologies.

Finally, we need to invest in strategic research on the region's food systems. New shocks will certainly emerge again (e.g., another pandemic, economic crisis, natural disasters, political instability, and political conflicts between countries) research should enhance our understanding on how to build more resilient food systems, well-prepared communities and societies at large.

Disclaimer

The content of this brief is those of the authors and does not necessarily reflect the views of their respective organizations. Any error in the content is solely the responsibility of the authors.

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