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How Can ASEAN Ensure Food Security amidst Increasing Global Supply Chain Disruptions?

By Barbora Valockova

Food security has become a critical challenge for ASEAN, encompassing concerns about food availability, accessibility, utilisation, and stability—all **fundamental to regional development and social stability**. As climate change intensifies and geopolitical tensions rise, ASEAN's food systems face mounting pressure.

Recent years have witnessed unprecedented disruptions to global food supply chains. The COVID-19 pandemic exposed significant vulnerabilities through border closures, labour shortages, and transport restrictions, which **severely impacted** the movement of agricultural products. The Russia-Ukraine conflict further

cont'd p2

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Counterpoint Southeast Asia is published regularly by the Centre on Asia and Globalisation at the National University of Singapore's Lee Kuan Yew School of Public Policy. It seeks to answer major questions of strategic significance for Southeast Asia by bringing in diverse voices from around the region. Each issue will tackle one question from three different perspectives.

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destabilised global food networks, as these two countries jointly account for 25–30 percent of global wheat exports and 15 percent of corn exports. More recently, the escalating US-China trade tensions and proposed tariffs have threatened to further distort market prices, **affecting** the availability and affordability of essential commodities across Southeast Asia.

Climate change presents another challenge to regional food security. Increasingly frequent extreme weather events have endangered agricultural production across the region. Cropland area in Indonesia, Malaysia, Philippines, and Vietnam is projected to decline by more than **10 percent by 2028** due to climate impacts if no action is taken. Rice production is projected to decline by **19 percent in Vietnam and 7 percent in Thailand**, compared to 2021 levels. Additionally, **studies** have found that even a 1 percent rise in temperatures could increase food prices by 1–2 percent in four ASEAN countries and by as much as 6 percent in the Philippines.

ASEAN's heavy reliance on imports for critical commodities makes it especially vulnerable to international trade disruptions. Despite the growing regional demand for these commodities, domestic production remains insufficient to meet the rising needs. Furthermore, uneven technological adoption across member states complicates coordinated responses. Recognising these vulnerabilities, ASEAN has implemented several measures, including the ASEAN Comprehensive Recovery Framework adopted in 2020, and expanded the ASEAN Plus Three Emergency Rice Reserve. However, as the region navigates this complex food security landscape, policymakers must balance immediate crisis management with long-term strategic planning.

Given this background, it is necessary to discuss a fundamental question: How can ASEAN ensure food security amidst increasing global supply chain disruptions? Specifically, what innovative and sustainable solutions should ASEAN put in place to enhance its food security? To address these questions, the Centre on Asia and Globalisation (CAG) invited four experts for its **14th Counterpoint Southeast Asia (CSA) public webinar** on 18 March 2025: Elyssa Kaur Ludher (ISEAS-Yusof Ishak Institute; MORROW Intelligence), Genevieve Donnellon-May (The Red Line; Oxford Global Society; Indo-Pacific Studies Center), Mae Chow (Centre on Asia and Globalisation, LKYSPP, NUS), and Jose Ma Luis Montesclaros (S. Rajaratnam School of International Studies (RSIS), NTU).

Elyssa Kaur Ludher emphasises the need for ASEAN to transition from policy to tangible action as the Vision and Strategic Plan on Food, Agriculture, and Forestry 2016-2025 concludes. She identifies four priority areas for implementation: increasing intra-regional trade, which is currently stagnant at under 30 percent; enhancing cross-sector enablers like research and development for climate-smart agriculture and digital inclusion; diversifying food stockpiles beyond rice; and protecting regional environmental commons, such as the coral triangle.

Genevieve Donnellon-May presents a multifaceted strategy centered on building resilience through diversification. She recommends transforming the ASEAN+3 Emergency Rice Reserve into a comprehensive regional food reserve system that includes staples beyond rice, such as wheat, soybeans, and maize. She also emphasises the importance of deepening partnerships with agricultural powerhouses like Australia and New Zealand while encouraging stronger intra-ASEAN trade to shield the bloc from external shocks.

Mae Chow focuses on three strategic areas: strengthening local food systems through improved production and reduction of food waste, fostering regional trade and cooperation through the removal of trade barriers, and leveraging technological innovations, particularly Artificial Intelligence (AI). She highlights that AI could increase global food productivity by up to 67 percent and reduce food prices by nearly 50 percent by 2050, providing a transformative tool for ASEAN to enhance climate resilience and supply chain efficiency.

Last but not least, **Jose Ma Luis Montesclaros** revisits ASEAN's principle of "collective self-resilience" as a foundational framework for regional food security. He examines how ASEAN member states can balance their dual mandates: contributing to regional food security while also protecting their domestic constituents from food-related threats. He proposes upgrading existing mechanisms, like the ASEAN Plus Three Emergency Rice Reserve, and developing coordination mechanisms for production to provide farmers with consistent price and demand signals.

A key takeaway from this issue is that ASEAN must move beyond policy frameworks to achieve a coordinated implementation across multiple fronts. The complementary perspectives presented in the essays in this issue highlight the multidimensional nature of food security. While ASEAN has made significant progress through initiatives such as the ASEAN Food Security Information System, the current trajectory of climate impacts and geopolitical tensions necessitate more robust regional cooperation. Therefore, looking forward, ASEAN's pursuit of food security will require balancing the sovereign responsibilities of individual states with the imperative for collective action. Strengthening production capacities, diversifying supply sources, enhancing intra-regional trade, leveraging digital technologies, and protecting ecological commons will be essential components of resilient regional food security architecture.

The challenge ahead lies not in conceptualising solutions but in mobilising the political will, financial resources, and institutional capacities necessary for effective implementation across diverse national contexts. By embracing the principle of collective self-resilience and adopting a multi-pronged approach, ASEAN can build a more secure and sustainable food future for its population amidst increasing global supply chain disruptions.

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Guest Column

ASEAN's Next Plan for Food, Agriculture and Forestry Needs to Prioritise Action

By Elyssa Kaur Ludher


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As ASEAN faces escalating food insecurity from trade disruptions and climate impacts, immediate implementation is essential in four key areas: boosting intra-regional trade, enhancing cross-sector enablers like channelling research and development (R&D) to climate-smart and digital inclusion, diversifying food stockpiles beyond rice, and protecting regional environmental commons.

As ASEAN's Vision and Strategic Plan on Food, Agriculture, and Forestry (FAF) 2016-2025 concludes, the region faces heightened food insecurity amidst global trade disruptions and escalating climate risks. While ASEAN has established a robust policy framework aligned with global sustainability goals, the imperative now is to transition from policy to tangible action.

Currently, global supply chains are being upended by hefty trade tariffs by the US and subsequent reciprocal responses. ASEAN is not immune, particularly in the food and agriculture sector. The US is ASEAN's **second largest destination market** after China, principally for palm oil, coffee, rice, and seafood. It is also ASEAN's **largest external import origin** for food and agricultural products, particularly **soybeans and wheat**.

Concurrently, climate change poses a severe threat to food production. The **ISEAS Yusof Ishak Southeast Asia Climate Outlook Survey** has found that seven in ten indicated they experienced some form of food insecurity in 2024, compared to six in ten in 2023. Furthermore, vegetable and legume production- key to a healthy diet—could **reduce by up to 35 percent by 2100** at current greenhouse gas (GHG) emissions trajectories. In Southeast Asia, arable croplands could reduce by **minimally 10 percent** by 2028 due to climate change. This underscores the urgent need for enhanced regional resilience.

Under the abovementioned Plan, ASEAN has made **substantial strides in policy development**, including guidelines for sustainable agriculture, decarbonisation, responsible investment, agricultural insurance, and agroecology transition. The ASEAN Plus Three Emergency Rice Reserves

(APTERR) and the ASEAN Food Security Information System (AFSIS) have also been strengthened. While there is a myriad of action items, ASEAN's unique position makes it the prime body to address these four areas: increase trade, institute cross-sector enablers, diversify stockpiles and protect the commons.

Four Priority Areas for Implementation

Increased trade, particularly intra-ASEAN trade, is vital for mitigating supply chain vulnerabilities. The potential goal could be to increase intra-ASEAN trade from its current **stagnant level of under 30 percent** to levels comparable to the **EU's at 70 percent**. Achieving this requires greater harmonisation of quality standards, certification and accreditation to improve flow, particularly; those pertaining to halal, sanitary and phytosanitary measures, and pesticide minimum residue level (MRL). Expanding Good Agricultural Practices (GAP), Good Animal Husbandry Practices (GAHP), and Good Aquaculture Practices (GAqP) among the region's $100 million smallholder farmers is also crucial. Facilitating multilateral trade agreements with provisions against non-tariff barriers/ measures and unilateral export bans can further stabilize the sector.

Secondly, ASEAN could expand cross-sector enablers to hasten climate-smart adoption and market inclusion. One enabler for climate smart adoption is channelling R&D funding towards resilient inputs, regenerative solutions, and waste reduction. Currently, potential adopters face choice paralysis with the myriad climate solutions; ASEAN could channel funds to identify those most effective to help make the choices easier. Market inclusion could be hastened through digitalisation. ASEAN's Guidelines on Promoting the Utilization of Digital Technologies for ASEAN Food and Agricultural Sector (2021) provides valuable solutions, but it misses inclusion of generative AI architecture or Large Language Models (LLMs) contextualised to Southeast Asia. These would democratise knowledge for millions of non-native English-speaking farmers, allowing greater access to valuable information and services in their preferred languages. Initiatives like the Southeast Asian Languages in One Network (SEA-LION) are a step in the right direction, but ASEAN should also lead to put robust safeguards in place.

Thirdly, ASEAN needs to promote stockpiling diversification in the region. Currently, ASEAN lacks strategies beyond rice security; in times of stress, the region will require a diversity of food products for the health and well-being of the population. ASEAN also then needs to work on simplifying the protocols for release of emergency food reserves.

A fourth area which ASEAN is uniquely placed to lead is that of safeguarding the region's commons—terrestrial and marine forests, mangroves, and coral reefs—which are vital for mitigation, adaptation, and biodiversity protection. One way is to promote a collective ASEAN pride and identity towards some of the region's irreplaceable treasures. The first could be the coral triangle, also known as the

Amazon of the Sea and home to 75 percent of the world's coral species. Its greater part sits between Indonesia, Philippines, and Malaysia; it is crucial to the region's fisheries but is highly **at risk**. ASEAN's designating it a collective common may raise responsibility (and perhaps funding) to conserve it. ASEAN's Study on Nature-based Solutions (NbS) across forest, bare land and coastal ecosystems (2023) also provides a foundation for engaging various ministries to protect these "commons," and ASEAN may wish to promote collective agreements to identify, secure, monitor and conserve these commons.

Moving Forward: Resources and Urgency

Implementing these strategies requires substantial resources. ASEAN should explore funding mechanisms beyond member state contributions, including partnerships with dialogue and development partners, as well as the private and people sector. A drawcard could be that these efforts would contribute to global food security.

Time is not a luxury that ASEAN has, and it must implement measures to stave off the growing challenges to food security. By focusing on trade, enablers, stockpiling, and protection of the commons, ASEAN can build a resilient and sustainable FAF sector.

Ms Elyssa Kaur Ludher is a food security expert and urban planner. She is currently a Visiting Fellow at ISEAS- Yusof Ishak Institute and concurrently an advisor at MORROW Intelligence, a data-driven, foresights urban solutions company.

Guest Column

Fortifying ASEAN's Food Security in an Age of Crisis

By Genevieve Donnellon-May


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ASEAN should strengthen regional food security through diversified import networks, collaborative reserves, and climate-adaptive agriculture to address current trade uncertainties and supply chain vulnerabilities affecting Southeast Asia's population.

Global food systems have faced increasing strain in recent years, with crises like the COVID-19 pandemic, the Russia-Ukraine war, and ongoing Middle Eastern conflicts exposing vulnerabilities in global supply chains. Southeast Asia, home to more than 670 million people, is particularly vulnerable due to its reliance on imports of staples like wheat, soybeans, and maize. These disruptions have left ASEAN countries exposed to the shocks of fluctuating global markets, supplies, and (geo)political tensions. With regional vulnerabilities compounded by climate change and the US-China trade tensions, the need for a comprehensive food security strategy has never been more urgent.

ASEAN's food security challenges are varied. ASEAN's current production levels are highly unsustainable and remain insufficient to meet its own demands. Indonesia imports all of its wheat, leaving it vulnerable to global price and supply fluctuations and shipping delays. Singapore and Timor-Leste, which import around 90 percent and 70 percent, respectively, of their food, are similarly exposed to any disruptions in trade. Vietnam's Mekong Delta, a vital rice-producing region, faces saltwater intrusion from rising sea levels, while Thailand struggles with erratic monsoon seasons. These vulnerabilities highlight the urgent need for a diversified and resilient food security strategy which can be tailored to local contexts.

Economic Consequences and Vulnerabilities

The resurgence of US protectionist policies poses dual risks and opportunities for ASEAN, as the US is the bloc's second largest export market and a top food import source (e.g., soybeans, wheat). New measures risk key domino effects: surplus American/Canadian crops flooding ASEAN markets, undercutting farmers; redirected trade flows inflating prices via bottlenecks; and currency volatility

raising import costs in Southeast Asia. ASEAN exporters like palm oil producers may gain US market share amid rising domestic prices, but overreliance risks production cuts for smallholders and surplus "dumping" in non-U.S. markets. Meanwhile, Beijing's tariffs on U.S. goods could redirect American farmers to alternative markets like ASEAN, heightening competition with locals.

ASEAN's Responses to Food Insecurity Concerns

ASEAN has implemented various regional initiatives to enhance food security. Key efforts include the ASEAN Emergency Rice Reserve under the ASEAN Food Security Reserve and the ASEAN Food Security Information System. Yet more can be done.

Strategic Responses for Regional Resilience

Building on existing efforts like the ASEAN+3 (China, South Korea, and Japan) Emergency Rice Reserve, ASEAN must promote a multifaceted regional food reserve system, diversifying staples beyond rice to include wheat, soybeans, and maize. This buffer would mitigate global market volatility, supply chain disruptions, and external shocks while ensuring stable access to critical imports during crises.

To complement local production (boosted by artificial intelligence, agricultural technologies, and biotechnologies), ASEAN should deepen partnerships with agricultural powerhouses like Australia and New Zealand —key exporters of grains and oilseeds (the backbone of food security) —to build alternative supply chains and strengthen regional reserves. These reserves should be regularly monitored, reviewed, and adjusted when necessary to reflect shifting needs. Strengthening regional ties reduces reliance on distant suppliers, insulating Southeast Asia from global instability.

Furthermore, encouraging stronger intra-ASEAN trade and efforts could further help shield the bloc from geopolitical and climate shocks and also supply chain volatility, providing a buffer against external shocks. To this end, the region's bigger food producers, like Thailand, Vietnam, the Philippines, and Indonesia, could lead the way. With intra-ASEAN trade under 30 percent, there is significant potential to increase this. At the same time, coordinated investments in regional supply chains and early warning systems for climate risks, food chokepoints, and price volatility would enable more proactive responses to (sudden) disruptions as well as adaptation to any long-term changes.

Diversifying suppliers is critical for ASEAN to reduce overreliance on specific regions for agricultural imports like grains and fertilizers. The urgency of this strategy was starkly highlighted by the outbreak of war between agricultural powerhouses Ukraine and Russia that together accounted for 25 to 30 percent of global wheat and 15 percent of corn exports. The Russia-Ukraine war exposed Southeast Asia's food vulnerability, particularly in Laos, which sourced 98 percent of its wheat from these countries.

The conflict triggered food shortage fears, price inflation, and fierce competition as ASEAN nations scrambled to secure limited alternative supplies, pitting them against buyers from East Asia and the Middle East. ASEAN can draw lessons from Singapore, which hedges risk by sourcing food from over 170 countries. Such strategies highlight the power of proactive diversification to buffer against geopolitical shocks.

The Path Forward

ASEAN's food security is increasingly at risk due to external shocks, climate change, and geopolitical tensions. However, by adopting a more integrated and diversified approach, the region can build resilience and protect its citizens from future crises. Boosting local production, regional cooperation and concomitant investment in climate adaptation technologies combined with stronger trade networks, including inter-ASEAN trade, are key to ensuring food security. In a world of overlapping crises, ASEAN must act now. Only a united strategic vision can provide the stability and resilience needed to secure the region's food future.

Ms Genevieve Donnellon-May is a geopolitical and global strategy adviser interested in regional resource governance (land, energy, water) and environmental conflict in Asia. Currently, she is the Asia-Pacific analyst at The Red Line, a researcher at the Oxford Global Society, and a fellow at the Indo-Pacific Studies Center.

Guest Column

Building a Sustainable Food Future: Addressing ASEAN's Food Security Challenges

By Mae Chow


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ASEAN faces mounting food security threats from geopolitical disruptions and climate change, requiring coordinated implementation of comprehensive solutions. By enhancing local production, strengthening regional cooperation, and leveraging technological innovations, ASEAN can build resilience across its food systems while reducing external dependencies.

Food security remains a critical challenge for the ASEAN region, with approximately **22.1 million people** in Southeast Asia suffering from acute malnutrition. The rise of geopolitical disruptions from the Russia-Ukraine war and the outbreak of the coronavirus pandemic to socio-economic challenges such as trade tariffs and the re-shoring of global supply chains, has further complicated the accessibility and affordability of food. This puts a further strain on food security, which has already been impacted by growing global demand and climate impacts on food production. As the region strives to ensure food security, there is a pressing need to revitalise ongoing regional and national efforts as well as to develop innovative solutions that can enhance the resilience of agricultural systems. To address the growing challenges of food insecurity in Southeast Asia, ASEAN must adopt a holistic approach that combines enhanced agricultural practices, technological innovations, improved regional cooperation, and strategic global partnerships.

ASEAN has implemented various regional initiatives to enhance food security. Key efforts include the ASEAN Emergency Rice Reserve (AEER) under the **ASEAN Food Security Reserve (AFSR)** and the **ASEAN Food Security Information System (AFSIS)**, which manage rice stockpiles for emergencies and provide critical food security data. AFSIS also publishes the ASEAN Agricultural Commodity Outlook (ACO) and Early Warning Information (EWI) to monitor food security trends. In 2015, ASEAN adopted the **ASEAN Food Safety Policy** to ensure food safety and consumer protection. It has also collaborated with partners like the **ASEAN Plus Three Emergency Rice Reserve (APTERR)** for crop reserves and emergency

aid, and the Global Climate Fund for food security strategies. These initiatives have helped ASEAN countries to adopt a unified approach to food security, effectively reducing the percentage of undernourished people from around 31 percent in the early 1990s to 7.8 percent in 2015 and 6.1 percent in 2023.

Key Vulnerabilities: External Dependencies and Information Gaps

Nevertheless, the success of APTERR, from funding to donations of rice reserves, has been largely dependent on external regional actors. ASEAN's current production levels are highly unsustainable and remain insufficient to meet its own demands. This makes the ASEAN countries highly vulnerable to external disruptions, such as shifts in political will, economic downturns, or supply chain trade interruptions, which could hinder their ability to respond effectively to food security crises. As such, it is crucial that ASEAN strengthens its own capabilities to manage its food security interests.

Furthermore, effective food security policies rely on accurate, timely data. However, information gaps and reporting delays, especially in rural areas with poor infrastructure and low digital access, hinder decision-making and resource allocation. Impoverished smallholder farmers, who form the majority of the agricultural workforce in Southeast Asia, often lack the tools and knowledge to report data, weakening national and regional food security assessments. This exclusion also limits their access to essential support, including financial aid, climate-resilient technologies, and market opportunities.

Considering the fundamental challenges that have continued to undermine ASEAN's food security policies, it is crucial that these gaps are addressed to strengthen data collection systems, improve rural infrastructure, and enhance digital access for smallholder farmers. These actions would ultimately bolster regional food security and resilience.

Strategic Solutions: Local Systems, Regional Integration, and Technology

Firstly, to strengthen local food systems, ASEAN should focus on improving food production, especially in agricultural countries. Enhancing the sustainability of farming practices is essential and requires greater support from both governments and the private sector to bridge the rural and digital divide. Efforts should also focus on bringing small-holder farmers together to pool resources and boost efficiency. Additionally, a significant amount of food waste occurs due to perishables being damaged during transport, storage, and retail. This can be addressed by modernising food storage facilities to extend shelf life and implementing education campaigns on proper food handling and sustainable dietary patterns to reduce waste.

To further support local food systems, ASEAN can foster regional trade and cooperation by advocating for policies that remove trade and non-trade barriers,

creating a more resilient food supply chain. Through initiatives like AEER and APTERR, ASEAN should increase and regularly review rice reserves to ensure they are sufficient to meet demands during emergencies. Improving communication and decision-making can strengthen trust, enhance interoperability, and promote regional cooperation. To prevent major disruptions, ASEAN should diversify its global partnerships with regional powers, creating a more resilient and flexible food supply chain that can withstand external shocks.

Lastly, Artificial Intelligence (AI) offers a transformative opportunity to improve agricultural efficiency, optimise food supply chains, and enhance climate resilience. The **International Food Policy Research Institute predicts** that AI could increase global food productivity by up to 67 percent and reduce the price of food by nearly 50 percent by 2050. ASEAN can leverage AI to mitigate the effects of global disruptions and create a more sustainable, self-sufficient food system. In line with the **ASEAN Digital Masterplan 2025**, AI can bridge knowledge gaps, provide timely advice and optimise conditions **during the farming process**, and **support post-harvest activities**, such as improving storage and delivery efficiency to reduce food waste. Beyond food production, AI can strengthen **supply chain resilience** by explaining legislation more comprehensively, optimising transport routes, improving storage management, and minimising food waste. Another way AI can enhance food security is through the **digitalisation of agricultural finance.**

AI-powered systems can monitor real-time demand and can also be used to analyse supply fluctuations and assess regulatory changes to improve feedback for financing and investment. However, implementing AI is costly and involves a steep learning curve.

To overcome this, governments must collaborate with the private sector, international organisations, and local communities to build capacity, share knowledge, and ensure equitable access to AI technologies. ASEAN must work together towards a coordinated, region-wide approach that actively integrates AI-driven solutions into ASEAN's ongoing food security frameworks, strategic partnerships, and policy initiatives. Investing in AI literacy programs, advanced infrastructure, and research on optimising agricultural production is essential to fully harnessing AI's potential in strengthening food security across the region.

Looking Forward: Collaborative Action for Regional Resilience

Overall, food security is a quintessential aspect of national and regional security. It is the building block for the well-being and development of the ASEAN community. Yet, global supply chain disruptions stemming from a multitude of reasons threaten to undermine this. It is crucial for ASEAN to strengthen its defences and protect their food security interests. By modernising farming practices, addressing food waste, and leveraging technology, ASEAN can build a more resilient and efficient food system.

Additionally, enhancing regional trade, diversifying global partnerships, and increasing rice reserves will provide the flexibility needed to navigate external shocks. While there is much to be done, it is imperative that ASEAN works together to develop multi-faceted and future-ready strategies to attain long-term food security and sustainable development in the region.

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Guest Column

ASEAN's Principle of Collective Self-Resilience: Foundation for Better Preparing Collectively for Future Crises?

By Jose Ma Luis Montesclaros

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ASEAN's existing mechanisms need to be strengthened and complemented with new coordination approaches to effectively balance national sovereignty with regional cooperation in preparing for future food crises; this calls for a revisit of the principle of collective self-resilience as a foundational framework for regional food security.

Regional Challenges and "Non-Cooperative" Responses

Food security was a critical concern for Southeast Asia even before the COVID-19 pandemic, or the Russia-Ukraine war. A regression could already be observed in achieving the second Sustainable Development Goal of Zero Hunger, particularly, a **"U-turn"** in addressing undernourishment. Whereas undernourishment used to follow a downward trend from 101.7 million people in 2005 to 60.6 million in 2014, it eventually **reversed** into an upward trend to 63.6 million in 2016. This owed to climate impacts that led to slowing land productivity growth in the recent three decades (1990–2020), which were at half the growth rates of the earlier three decades spurred by the Green Revolution (1960–1990).

Apart from this longer-term trend, the region has also been prone to abrupt disruptions in food supplies owing to **"non-cooperative behaviour"** in food trade. This trend surfaced earlier during the 2008–2009 global food crisis, where the key exporters of rice as a staple (Thailand and Vietnam) restricted their exports with the hopes of reaping larger export prices, alongside India. Adding to this, the key importer (Philippines) bid to purchase rice at significantly higher prices than those in the markets, thus enabling the upward spiral in prices to double-to-triple the pre-crisis price levels. **Export restrictions** could also be observed amid the COVID-19 pandemic, when Vietnam, Cambodia and Myanmar restricted their exports of rice, and Thailand banned egg exports. During the Russia-Ukraine war, Indonesia restricted its oil palm exports, twice.

Both sudden onset and long-term challenges are interrelated as they both relate to the explicit goal of states to ensure the food

security of their constituents. When supply chain disruptions from outside the region emerge, their effects worsen the underlying long-term challenges, thus prompting such "non-cooperative" behaviours among regional actors.

Problem Framing: Double Mandate of ASEAN States and Collective Self-Resilience

On one hand, export restrictions represent attempts by these ASEAN member states to guarantee the food security of their constituents, guarding against domestic shortages that drive inflation up. At the same time, they effectively "export" their domestic food price inflation to the rest of the region, and the world over, in doing so.

This leads to a valid question on what the ideal mode of behaviour of ASEAN member states should be amidst disruptions, in light of their **"dual mandates"** to contribute to regional food security while protecting their own domestic constituents from food related existential threats as part of their sovereign responsibilities.

It is helpful at this point to recall the principle of "collective self-reliance," enshrined in the **Agreement on an ASEAN Food Security Reserve** which envisions that an economically resilient region is one that builds on each country's own national resilience. This assigns not only individual responsibility, but also common responsibility, to all ASEAN member countries in the "**assurance** of food security in the ASEAN region," combining a balance of solidarity (common regional goal) but also subsidiarity (individual country accountability) in achieving the objective of a food secure region.

Collective Self-Resilience in Action

Having framed the issue thus, we now explore what the available ASEAN mechanisms today are that would allow for addressing regional food insecurity without imperilling domestic food security amidst crises or disruptions from beyond the region. The argument can be made at this point that ASEAN's regional resilience can be improved by helping each state to realise their individual self-resilience, in particular, by upgrading their respective agricultural sectors. Initiatives such as the **digitalisation** of the food sector enable climate smart agricultural practices for improving agricultural productivity, for instance.

The notion of collective self-resilience can be the better starting point for regional collaboration to achieve greater food security resilience to disruptions. Consider that the existing chief mechanism in Southeast Asia for preventing price spirals is the ASEAN Plus Three Emergency Rice Reserve (APTERR) for supply stabilisation. This mechanism focuses currently on food supply stabilisation for countries in emergencies, but it could very well be leveraged and expanded to be used for **regional supply stabilisation** as well.

A further step to upgrading APTERR is to move beyond reserves and to develop a coordination mechanism for production as well. This should focus on rice procurement,

since this allows for providing farmers with consistent price and demand signals to improve their productivity. Providing this type of constant demand will **nudge** greater technology adoption, since then these farmers will be nudged economically to increase their production if the incentive is high enough.

This support is already adopted in other geographical settings whether at the country level (India) or regional level (EU) through its Common Agricultural Policy as a means of **securitising** regional food production. It is even more critical now that ASEAN countries, and ASEAN as a whole, are seeing significant **structural transformation** away from agriculture and into higher value-added manufacturing activities.

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