



GREATER MEKONG
SUBREGION
CORE AGRICULTURE
SUPPORT PROGRAM

Theme 1: Food Safety Discussion Paper No. 2

Increasing the Safety and Quality of Food Products from the Greater Mekong Subregion*

The Discussion Paper Series of the Greater Mekong Subregion's (GMS) Core Agriculture Support Program Phase 2 (CASP2) is a platform for stakeholders of the GMS to examine the current and emerging development concerns affecting the subregion especially on but not limited to, food safety and quality assurance, environmental sustainability, and inclusive agro-based value chains. The papers are posted at the GMS Working Group of Agriculture's (GMS WGA) website (www.gms-wga.org).

The information and views expressed in the papers are those of the author/s and do not

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Abbreviations

AINS	—	Agriculture Information Network System
ASEAN	—	Association of Southeast Asian Nations
CASP 2	—	Core Agriculture Support Program Phase 2
GMS	—	Greater Mekong Subregion
ICT	—	information and communications technology
SDG	—	Sustainable Development Goal
SOP	—	standard operating procedure

Executive Summary

Improving the control of foodborne hazards and threats important to trade are priorities for each of the Greater Mekong Subregion (GMS) countries. There are efficiency and efficacy advantages to the GMS countries acting collectively to manage risk in food control systems due to the contiguous nature of the subregion and the high volumes of intraregional trade. Increased coordination and cooperation among the GMS countries on risk mitigation and management will help to establish the subregion as a global hub for the supply of safe food products. This can ensure that agriculture continues to support rural livelihoods and contribute to national economic development within the GMS.

The GMS countries also recognize that the focus of food safety strategies and pilot initiatives must shift from export markets to domestic markets. Improving food control systems at home will benefit domestic populations and economies, mitigate risks across borders, and lead to increased access to international markets.

Developing and institutionalizing a “quality culture” and common internal control systems for food safety that reflect standards of the Global Food Safety Initiative is the stated goal of each GMS country. In line with global norms, GMS-wide adoption of risk-based approaches that address whole supply chains is necessary.

The GMS countries will need to jointly address three priority hazard categories of importance to domestic consumers and industries and to market access under the terms of the World Trade Organization Sanitary and Phytosanitary Measures Agreement:

- foodborne hazards, including pathogens and toxic residues;
- pathogens of importance to production and trade; and
- pests of importance to production and trade.

To this end, three key issues in GMS food control systems that will best be addressed through coordinated efforts have been identified:

- (1) Establish mutually agreed GMS-wide approaches and entry points—in terms of products, locations, and flashpoints in supply chains—for improving food control systems.
- (2) Establish greater coordination and cooperation between the GMS countries toward harmonization and mutual recognition of equivalence in food control systems in the areas of legislation, regulation and policy, knowledge and data sharing, and capacity sharing and building.
- (3) Prioritize investments in human and institutional capacity building and key infrastructure at the GMS-level.

To address these issues, the following initiatives are proposed:

- (1) Agree to promote the adoption of locally, nationally, and subregionally appropriate and rigorous risk-based systems that address priority hazards the length of supply chains, with the domestic markets and cross-border areas as entry points to strengthening systems across the subregion.
- (2) Agree to increase coordination and cooperation toward harmonization of systems and mutual recognition of equivalence, which will be initiated by:

- (a) developing and sharing objective and science-based national food safety status assessments;
 - (b) establishing mechanisms for joint review of current national legislation, regulations, and standards and a pathway to mutual recognition of equivalence;
 - (c) establishing mechanisms for sharing laboratory capacity within the GMS, and agreeing to jointly draft standard operating procedures relating to chains of custody, roles and responsibilities, confidentiality, and intellectual property rights;
 - (d) developing joint emergency response simulation exercises, focused initially on priority land borders and economic corridors within the GMS; and
 - (e) promoting adoption of ICT-based e-commerce specifically in relation to cross-border trade.
- (3) In alignment with the GMS Strategy and Action Plan for Promoting Safe and Environment-friendly Agro-based Value Chains 2018–2022, jointly develop a subregional investment plan for increasing GMS food control system capacity, including prioritization of both institutional and infrastructural investments and the development of coordinated national food safety pilot projects.

Three actions have been identified for immediate implementation to kick-start achievement of the above proposals:

- (1) Establish food safety data sharing and risk communication through the Agriculture Information Network System (AINS) version 2.0. This initiative is led by the Core Agriculture Support Program Phase 2 (CASP2 TA-8163), is reliant on the program's staff, and is immediately actionable. The system can be used as a platform for building and strengthening food safety at domestic levels through the open sharing of information from around the subregion and as a mouthpiece for risk communication. A pilot application of AINS to food safety data sharing and messaging in one cross-border area can commence immediately. Priority information includes sharing of hazard lists for key commodities where available; sharing of best practices on food safety and quality; and making risk information available to the public, policymakers, suppliers and retailers, and current and potential trading partners.
- (2) Establish collaboration between GS1 and the GMS Working Group on Agriculture on facilitation of trade in food and agricultural products, initially focusing on piloting barcode/quick response (QR) code based traceability and broader data collection systems in cross-border food trade situations.
- (3) Pursue further public–private dialogue on capacity building for increased food safety, commencing with the Food Industry Asia, Global Food Safety Initiative, and other GMS@THAIFEX 2017 participants. A broader private–public dialogue will be hosted during the GMS Second Agriculture Ministers meeting in September 2017.

1. Introduction

Improving food safety and increasing market access for food and agricultural products are national priorities for each of the Greater Mekong Subregion (GMS) countries. Inducing the development of improved food control systems and the control of hazards of importance to trade is essential to meet rising consumer and buyer requirements, to achieve public health objectives, and to unlock potentially lucrative export markets for the subregion's produce. At the same time, improving the effectiveness of risk management systems can protect and support rural livelihoods and contribute to national economic development. These activities can contribute to the achievement of the Sustainable Development Goals (SDGs), specifically,

- SDG2 (zero hunger), by enhancing food security and improving nutrition; and
- SDG17 (partnerships for the SDGs), by strengthening and deepening partnerships for promoting the development of sustainable agriculture.

Given the nature of the GMS—notably its porous land borders and high volumes of intraregional trade in food and agricultural products—strategic and coordinated policies and investments are needed at national and subregional levels. This can better protect consumers and industries and will serve to build trust in food products sourced in the GMS in an inclusive and sustainable manner.

The political will to address the challenges of food safety and non-foodborne hazards in agriculture in the GMS is strong. In addition, the GMS Economic Cooperation Program and the high volume of intra-GMS trade provide firm bases for GMS-level coordination and cooperation in addressing these issues. More broadly, the advent of the ASEAN¹ Economic Community (AEC) will facilitate further

increases in intraregional trade, and the *ASEAN Economic Community Blueprint 2025*² includes specific reference to improving food safety, meeting international food safety and quality standards, and promoting the ASEAN as a supplier of organic food.

Developing robust food and broader agricultural hazard control systems is complex and requires a continuous iterative process of improvements. However, strategic initiatives can catalyze progress.

Building on extensive secondary data review, this paper presents a synopsis of the key points and discussions from the GMS food safety events at the THAIFEX 2017 in Bangkok, Thailand. The events brought together diverse food and agriculture stakeholders from the private sector, public authorities, development partners, and research institutions from across the GMS. This paper outlines some of the high-priority issues related to both foodborne and non-foodborne (i.e. other agricultural) hazards of importance to public health, agricultural production, and trade that can best be addressed collectively by the GMS countries. The paper then recommends an approach and proposes feasible and politically attractive initiatives to address key issues.

This paper has been developed within the ambit of the Core Agriculture Support Program Phase 2 (CASP2). The program's vision is for the GMS to become a leading producer of safe and environment-friendly agriculture products. This document is closely aligned with, and strongly endorses, the GMS Strategy and Action Plan for Promoting Safe and Environment-friendly Agro-based Value Chains 2018–2022, currently being developed by the GMS Working Group on Agriculture for endorsement by the GMS ministers of agriculture.

¹ ASEAN = Association of Southeast Asian Nations.

² ASEAN Secretariat, Jakarta, 2015.
<http://astnet.asean.org/docs/AEC-Blueprint-2025-FINAL.pdf>

2. The key issues

Historically, food safety has primarily been the concern of exporters in the GMS. However, with increasing consumer awareness and demand, changing supply chain and retail mechanisms, and recognition of the economic costs of breakdowns in food safety, food safety in domestic markets is increasingly being prioritized. Aside from frequent outbreaks of foodborne diseases, individual GMS countries have suffered from specific food safety failures—such as melamine in the People’s Republic of China, and antibiotic and hormone residues in livestock and fishery products in Myanmar, Thailand, and Viet Nam—to name but a few.

The nature of GMS agriculture is such that hazards in one country threaten the subregion as a whole. This is exemplified by the frequent transboundary disease outbreaks. Key foodborne hazards in the GMS include a wide variety of pathogens and chemical residues, such as antimicrobials, synthetic growth hormones, pesticides, and heavy metals. In addition, various non-foodborne zoonoses, infectious diseases of animals, pests, and residue levels limit market access for GMS products. The GMS countries recognize that they must strive to increase food quality assurances in line with domestic and international demand and market requirements. However, addressing food safety and hazard management must be prioritized as the foundation for improving the quality assurance systems: “food quality is food safety plus more.” [powerpoint presentation of L. Annovazzi-Jakab at the GMS Policy Forum that was held at the THAIFEX World of Food Asia trade fair in Bangkok, Thailand, from 30 May to 1 June 2017].

Although much has been achieved through the establishment of food safety laws and supporting policies and regulations in the GMS countries, gaps remain and there are considerable disparities within and between

countries. Many areas of the GMS are hampered by limited infrastructure and human and institutional capacity—leadership, technical, and operational—to operate effective food control systems that protect consumers, suppliers, and buyers. Moreover, consumer trust in current systems is generally low due to frequent scandals and reports of food safety failures implicating various certified products.

Establishing robust food control systems is inherently complex due to the nature of the products and the numerous actors and processes typically involved in supply chains. Therefore, food control systems must be continually adapted in response to the many influencing factors: for example, changing hazards and populations at risk, such as the (re)emergence of hazards, hazard presence and prevalence, potential for exposure and susceptibility of populations; scientific advances; consumer demand and buyer requirements; and political priorities. This complexity means that the establishment of reliable, robust food control systems that earn trust requires considerable technical capability, considerable financial resources, strong decision-making processes, and systems able to adapt to changing circumstances. Experiences internationally show that food systems that reliably deliver safe and quality assured products must develop through ongoing improvement built on effective feedback loops and the sharing of best practices. The opportunities to catalyze the development of such systems in the GMS through strategic actions and investments is addressed in subsequent pages.

Limited risk analysis capacity

Risk-based approaches that address value chains holistically are needed to ensure product safety and to meet the requirements of current and potential export markets in accordance with the Sanitary and Phytosanitary Measures Agreement. However, the capacity to effectively implement risk analysis for hazards of

importance to food safety, production, and trade varies considerably across the GMS. The institutional capacity to implement effective and efficient systems is often hampered by limitations in leadership; availability of capable risk assessors, risk managers, and risk communication specialists; access to and quality of infrastructure; and availability of resources for the day-to-day operation of essential activities. This leaves current systems some way from demonstrating equivalence between GMS countries, let alone in wider international markets.

Broad disparities in capacity to adequately assess risk associated with specific hazards exist both within and between GMS countries. Hazard lists have not been developed universally across the subregion, even in relation to major global commodities such as pest lists for rice. For example, (1) surveillance systems vary in design, implementation, and reliability; and (2) the use of information and communications technology (ICT)-based/e-commerce systems employing barcoding or quick-response (QR) codes is increasing but they are optimally employed in only the most advanced settings. Technical constraints are commonly amplified by a lack of managerial capacity and operational budget.

The ability to identify outbreaks and outbreak strains is limited by surveillance system capacity. Furthermore, much of the GMS suffers from nonexistent or embryonic traceability systems, severely limiting capacity to conduct source attribution investigations. This hampers implementation of effective controls, such as establishing and enforcing movement bans, vaccinations, destruction campaigns, and product recalls. At present, emergency response plans for food safety hazards, zoonoses, and other infectious diseases are varied in their level of elaboration and capacity to be effectively implemented.

Current approaches to the communication of risk information to the public, policymakers,

suppliers, and current and potential trading partners are limited in all but the most advanced areas of the GMS. This impacts the effectiveness of risk mitigation messaging and risk management activities. Moreover, nonexistent or inconsistent messaging harms consumer, retailer, and trading partner trust, thus affecting market preferences, demand, and access.

Trust issues and disparities in standards

Numerous scandals have engulfed various certifications related to food safety in the GMS, whereby supposedly certified produce has been proven to be unsafe, damaging perception and trust among consumers, retailers, and wider stakeholders. Building or rebuilding trust is likely to require greater coordination of certification systems within and between countries. Benchmarking and sharing of best practices within the region could help the establishment and enforcement of trustworthy risk-based guidelines and standards that are related to food safety and that minimize the risk of food safety failures. This might include standards such as national, regional, and global good agricultural practices. This process would facilitate addressing other needs and concerns in future, such as food quality standards, standards specifically related to environmental protection, animal welfare, and so forth.

The variability in technical requirements in national standards relating to food safety and quality and in their implementation and enforcement hampers demonstration and recognition of equivalence between suppliers and across GMS borders. Moreover, the feasibility of employing recognized certifying bodies varies considerably between countries and types of supplier. Many smaller suppliers, especially in the less-developed GMS countries, are often incapable of receiving certifications due to a combination of lack of awareness, difficulties in physically accessing certifying bodies, and the associated costs of certification.

Internationally recognized process control systems, such as good management practices and hazard analysis and critical control points, are generally confined to larger processors or export-oriented suppliers. Greater coordination with universities and research institutes is needed to develop fair, GMS-appropriate, harmonized, and robust standards for food safety.

Ensuring the safety of produce at the retail (consumer) level requires controls throughout the supply chain. Therefore, standards and transparency must be improved from inputs through to retail. At present, considerable quantities of inputs used in the GMS are of uncertain provenance and composition. Inputs present a potential source of hazard contamination in production while input quality issues may hamper productivity and present risks to users' health. Limited transparency also leads to inappropriate input use, which can promote the pathogens' and pests' development of tolerance of and/or resistance to inputs.

Facilitating trade across GMS borders and improving the environment for enabling business

The requirements for export/import of produce within the GMS and to markets beyond the GMS have been notably reduced, yet there is room for further improvements, particularly among the less-developed GMS countries. Reducing the direct costs and opportunity costs of fees, red tape, and times in transit can help sustain the current growth in the trade of GMS agricultural products. It can also support improvements in risk management of important hazards at borders, thereby reducing risks to consumers and suppliers, and can reassure current and potential trading partners. Other issues that could occur in cross-border areas, though not uniquely, include intentional human failures, fraud, informal payments, and rent seeking behavior by any number of

stakeholders including suppliers, retailers, regulators, and border personnel.

Creating more enabling terms and conditions for business in the agri-food sector can encourage investment and drive progress in food safety. By setting the right institutional and regulatory framework, governments can help increase the competitiveness of farmers and agricultural entrepreneurs, enabling them to integrate into regional and global markets and reduce risk for potential investors. At present, opaque systems and contradictory and/or unnecessary regulations and laws impede the ease of doing business in the agricultural sector in many areas of the GMS. Businesses are often affected by high transaction and opportunity costs, rent seeking behavior, and lack of clarity in corporate and personal liability, with subsequent effects on investment risk.

3. Recommendations

The GMS countries are diverse in their stages of development, populations, and capacity to implement food safety systems. Therefore, while the ultimate goal is the same for each country, it must be recognized that a step-by-step process must occur based on national context. The iterative process of developing food and agricultural hazard control systems can be accelerated by establishing GMS-wide approaches, prioritizing entry point products and locations (such as key border points and economic corridors), and sharing knowledge, best practices, skills, data, services, and capacity between countries.

GMS-wide agreement on applying risk-based approaches based on international best practice is required. Addressing domestic markets and cross-border trade are essential entry points for developing optimal systems. Approaches must address supply chains holistically and be in line with global norms.

Risk-based approaches

Adoption of improved risk-based approaches can upgrade GMS food safety and broader agricultural hazard management systems cost efficiently. Effective implementation will increase transparency and accountability of food safety measures, which can increase trust between customers and suppliers. Moreover, risk-based approaches form the basis of the Sanitary and Phytosanitary Measures Agreement and are essential to maintaining and increasing international market access for GMS products.

Whole chain approaches

“Whole chain” approaches are essential to improve the sensitivity of surveillance systems; to better mitigate and manage risk; and to respond effectively to food safety breakdowns, disease outbreaks, and related events. It is in every player’s interest that issues are identified early and dealt with fairly, efficiently, and effectively. Yet at present, smallholders and small- and medium-scale enterprises are too often excluded. All stakeholders have a role to play in developing locally appropriate approaches to assessing, mitigating, and managing risk in food supply and identifying hazards and risky behavior.

Domestic markets and cross-border trade as entry points

The GMS has made exceptional advances in terms of food availability and security in recent decades. However, the economic costs of food safety failures are now well-recognized. Consumer awareness of foodborne hazards and demand for assurances also are increasing rapidly. Therefore, the political and economic drivers for investment in improved food control systems for domestic markets are well-established. Additionally, the value of cross-border trade in food and agricultural raw materials in the GMS is high and increasing. Cross-border sourcing typically increases the

length and complexity of supply chains, which typically increases risks related to foodborne hazards and hazards of importance to trade and introduces the risks associated with the reliability of food control systems in neighboring countries.

Addressing cross-border trade, therefore, lends itself easily to establishing greater coordination and cooperation between GMS countries on the basis of protecting domestic interests. Targeting key border points can help to build constructive working relationships and facilitate sharing of data and expertise and mutual recognition of systems among GMS member countries. This can also help to increase transparency and accountability, which might reduce unethical and illegal practices. Moreover, the development of effective and equivalent systems in domestic markets and at borders will support the demonstration of equivalence to current and potential trading partners.

Policies and investment

Investment and policy support is needed throughout the length of supply chains. Input supply safety and quality assurances need to be made more transparent through legal and regulatory systems. Investment in on-farm surveillance systems and communication of best practices and risk mitigation and risk management strategies are needed. Post-farmgate, process control systems are in their infancy in much of the GMS and vary widely between supply chains of different scales. Ease of transport and reduction of losses is often impeded by variable access to adequate storage facilities and the availability and quality of cold chains; movement is further impeded by unnecessary border requirements and inefficient mechanisms. Investments in expediting consignment movement by reducing red tape and investing in transport hub services and improved access to deep-sea ports can reduce losses in transit and minimize the likelihood of contamination and/or multiplication of hazards in or on product. Retailers’ food

handling may be improved by communication of better practices and risks. Promoting safer consumer steps in the handling and preparation of foods is also needed. Finally, systems for identifying a problem early and addressing it via alerts to all stakeholders, product recalls, movement bans, vaccination campaigns, culling, and the like, are required.

The CASP2 presents a platform on which to establish a collegiate GMS approach to addressing hazards in food supply within the subregion. The GMS countries with more advanced risk analysis systems, in terms of technical capacity and infrastructure, can help to develop systems in neighboring countries for mutual benefit. To this end, a comprehensive review of laws, regulations, and capacity related to food safety is needed to help develop measures to ensure adequate protection without overburdening suppliers in terms of direct and/or opportunity costs. Greater transparency, accountability, and predictability in enforcement is essential to reduce risk to businesses and encourage further private investment. Moreover, excessive regulatory systems can push players toward the informal economy, hampering the development of transparent and accountable systems. Poorly designed regulations may impose overly high transaction costs and reduce productivity and interest from investors.

Based on the above analysis, the GMS countries are well positioned to share resources, capacity, facilities, and services in relation to food safety and broader risk analysis. In particular, encouraging the establishment and accreditation of sustainable, accessible certification bodies, and facilitating access to accredited laboratories across the subregion is needed. Standard operating procedures (SOPs) that make explicit the chains of custody, ownership of samples and strains, intellectual property rights, confidentiality, and roles and responsibilities will need to be developed and established. Data sharing and risk communication within and between GMS

countries can be quickly and effectively improved, again with mutual agreement and SOPs. Government-to-government sharing of surveillance data can raise the speed of responses to the benefit of all GMS countries—the quicker an outbreak is identified, the more cost-efficient and effective the responses are likely to be. This is essential for establishing a rapid alert system at the level of the GMS, which would provide considerable efficacy and efficiency advantages. There are also opportunities to increase business-to-government and government-to-business data sharing on hazards and risks, with the added benefit of bolstering collaboration between the public and private sectors. This can rapidly improve the quality of risk assessments and the effectiveness of risk management and risk communication strategies.

Joint emergency simulation exercises can form the basis of future coordination, cooperation, and knowledge sharing between countries. Effectively run joint simulations present an opportunity to improve emergency response plans; to build leadership; and to test and strengthen decision-making processes, response strategies, operations, and communications, while learning from and contributing to other systems. Simulation exercises present a good opportunity to (1) strengthen collaboration between regional stakeholders through sharing of knowledge, technical expertise, and data; and (2) harmonize systems. Such exercises provide benefits to all and a step toward mutual recognition of equivalence in risk management between countries.

Coordinated and unambiguous national and regional risk communication messaging is needed to mitigate risk, build trust, and reassure export markets. Awareness-raising initiatives about high-priority hazards, risks, and best practices must be dynamic, timely, and targeted at consumers, retailers, and all other supply chain stakeholders to be effective.

Greater coordination and harmonization of food safety standards, and potentially other food-related standards in future, is needed among GMS countries. Variation in national standards and enforcement hampers mutual recognition and implementation. Mutual recognition within the subregion will help to build trust and increase bargaining power for suppliers in both domestic and export markets. Harmonizing current standards through benchmarking can facilitate demonstration of equivalence. Research institutes and the private sector must be engaged in establishing the standards, guidelines, policies, and regulatory systems, for them to be effective. These institutions also have essential roles to play in providing technical expertise in risk assessment and the design and implementation of risk management systems.

Improving the terms and conditions for business and facilitating trade within and beyond the GMS countries will save industries billions of dollars through cost reductions. Moreover, the costs to health systems, of lost labor and of tourism dollars, are likely staggering in terms of national economic growth. Building trust among consumers, retailers, potential trading partners, and other stakeholders is essential to remain competitive in the modern food market, where competition is high, differentiating products can be challenging, and margins are typically very low. A supportive and transparent policy environment will reduce investment risk and encourage better practices. ICT-based systems can support functioning of effective food safety systems that build trust. The adoption of ICT-based/e-commerce systems employing barcodes/quick response (QR) codes—“smart” trade supporting “smart” food safety—is increasing and should continue to be promoted. The benefits of ICT-based systems will be substantial in terms of consumer and buyer trust, speed in transit, efficient supply chain management, traceability, and ability to target responses efficiently and effectively. Moreover, ICT-based systems lend themselves to data sharing in business-to-government, business-

to-business, and government-to-government arrangements, which is of great value to risk assessment and the development of optimal risk management strategies.

Food testing laboratories and related transport and logistics infrastructure are typical infrastructural gaps. The GMS has few food testing laboratories and those that exist often lack accreditation by relevant international bodies. Some GMS countries do not have laboratories that meet international standards for detecting key hazards—meaning suppliers remain uncertified or must export samples at considerable costs in time and resources.

Transport and trade infrastructure such as road quality, transport hubs, storage facilities, and cold chains can mitigate risk, particularly in perishable products, but are often inadequate. Disease control infrastructure, such as quarantine facilities, are also inadequate in much of the GMS. Investment in risk management infrastructure can begin at key high-volume border points with investment in product handling facilities, quarantine stations, and broader infrastructure needed to improve surveillance and risk management. Adequate budget and cost recovery mechanisms for operating and maintaining systems are also essential.

Investment in institutional and human capacity is equally if not more pressing. Leadership and mentoring from more advanced systems are needed in areas with less-developed systems. Aside from the need to invest in technical expertise—in epidemiology, risk analysis, laboratory proficiency, and so forth—leadership, management, and operational skill sets are essential and often inadequately accounted for.

Establishing effective, dynamic, and sustainable food safety and broader risk analysis systems will require investment of resources in physical and human capacity from both the public and private sectors. There are strong incentives for both sectors to build lasting

partnerships that benefit consumers and businesses, in domestic and export markets. These arrangements must be inclusive and draw in smaller players. Identification of public and private sector “champions” can drive the development of these mechanisms for management, decision making, and cost coverage.

4. Proposed initiatives

First and foremost, it is essential that each GMS country produces and shares a candid and objective, science-based national food safety status assessment, based on a common approach and methodology. This assessment must describe chains of command and roles and responsibilities in relation to foodborne hazards and hazards of importance to trade. The document must candidly describe relevant legislation, regulations, and policy; national standards, trust marks, logos, and labelling; testing facility accreditations and capacity; and surveillance system design and capacity. The document must provide a frank assessment of national capacity to support, implement, monitor, and certify safe food standards and respond to emergencies.

The GMS countries should jointly seek to address three hazard categories of importance to domestic consumers and industries and to market access under the terms of the World Trade Organization Sanitary and Phytosanitary Measures Agreement:

- foodborne hazards, including pathogens and toxic residues;
- pathogens of importance to production and trade; and
- pests of importance to production and trade.

To this end, three key issues in GMS food control systems that will best be addressed through coordinated efforts have been identified:

- (1) Establish mutually agreed GMS-wide approaches and entry points—in terms

of products, locations, and flashpoints in supply chains—for improving food control systems.

- (2) Establish greater coordination and cooperation between the GMS countries toward harmonization and mutual recognition of equivalence in food control systems; legislation, regulation, and policy; knowledge and data sharing; and capacity sharing and building.
- (3) Prioritize investments in human and institutional capacity building and key infrastructure at the GMS level.

To address these issues, the following initiatives are proposed:

- (1) Agree to promote the adoption of locally, nationally, and subregionally appropriate and rigorous risk-based systems that address high-priority hazards across the length of supply chains. Specifically, agree to address issues of domestic markets and cross-border areas as entry points to strengthening systems across the subregion.
- (2) Agree to a time-based plan to increase coordination and cooperation toward harmonization of systems and mutual recognition of equivalence, which will be initiated by:
 - (a) developing and sharing truthful national food safety status assessments;
 - (b) establishing mechanisms for joint review of current national legislation, regulations and standards and a roadmap to mutual recognition of equivalence;
 - (c) establishing mechanisms for sharing laboratory capacity within the GMS Agreement by jointly drafting the SOPs relating to chains of custody, roles and responsibilities, confidentiality, and intellectual property rights;
 - (d) developing joint emergency response simulation exercises,

- focused initially on priority land borders and economic corridors within the GMS; and
- (e) promoting adoption of ICT-based/e-commerce specifically in relation to cross-border trade.
- (3) In alignment with the GMS Strategy and Action Plan for Promoting Safe and Environment-friendly Agro-based Value Chains 2018–2022, jointly develop a subregional investment plan for increasing GMS food control system capacity; the plan should include prioritizing institutional and infrastructural investments and the development of coordinated national food safety pilot projects.

Three actions have been identified for immediate implementation to kick-start achievement of the foregoing proposals:

- (1) Establish food safety data sharing and risk communication through the Agriculture Information Network System (AINS) version 2.0—led by the CASP2 TA-8163. Because this relies on CASP2 staff, it is immediately actionable. The system can be used as a platform for building and strengthening food safety at domestic levels through open sharing of information from around the subregion and as a mouthpiece for risk communication. A pilot case of applying AINS to food safety data sharing and messaging in one cross-border area can commence immediately. Priority information includes sharing of hazard lists for key commodities; sharing of best practices on food safety and quality; and communication of risk information to the public, policymakers, suppliers, retailers, and current and potential trading partners.
- (2) Establish collaboration between GS1 and the GMS Working Group on Agriculture on facilitation of trade in food and agricultural products, initially focusing on piloting barcode/quick

response (QR) code based traceability and broader data collection systems in cross-border food trade situations.

- (3) Pursue further public–private dialogue on capacity building for increased food safety, commencing with Food Industry Asia, the Global Food Safety Initiative, and other GMS@THAIFEX 2017 participants. A broader private–public dialogue will be hosted during the GMS Second Agriculture Ministers meeting in September 2017.

5. Conclusions

Each of the GMS member countries recognizes the need to address current deficiencies in food safety control systems and the management of hazards of importance to trade in food products. The GMS countries also appreciate that a focus on food safety in domestic markets must first be prioritized and that protecting domestic consumers and suppliers is essential and will, in turn, support future access to export markets. Moreover, the GMS countries recognize the potential advantages of acting collectively to address hazards in food and agricultural systems, due primarily to the close ties between the GMS countries, the porous borders, and the high and increasing volumes of cross-border food supply chains within the subregion. Therefore, it is essential that cross-border areas be considered a priority for protecting domestic and subregional consumers and suppliers.

The increased adoption and improved implementation of consistent risk-based approaches across the GMS is needed to mitigate and better manage food-related threats. Effective design and implementation of risk-based systems can increase efficiency, mitigate risk to consumers and businesses, and facilitate recognition of equivalence between GMS countries, regional neighbors, and wider global markets. However, current GMS food control and risk analysis systems are highly varied in their technical, leadership, and operational

capacities. Furthermore, key infrastructure, such as accredited laboratories, trade infrastructure, and data sharing and risk communication platforms, are often inadequate. To address these constraints and to catalyze the improvement of food systems across the GMS, greater coordination, collaboration, and harmonization of GMS systems is needed.

In the medium-term, the GMS countries can

- openly assess their current systems and gaps,
- facilitate the free movement of samples within the subregion by developing SOPs,
- address cross-border areas bilaterally/collectively,
- establish mentoring/technical capacity building programs,
- run joint emergency response simulations, and
- harmonize systems and standards toward recognition of equivalence.

To stimulate achievement of these goals, the immediate action will be to leverage the AINS platform to facilitate data sharing and risk communication among food stakeholders, including consumers, across the GMS. The platform can be leveraged immediately, the AINS is led by CASP2 TA-8163. The activities will also facilitate public–private dialogue on food safety and the development of pilot initiatives, which are currently being discussed with program partners.

About the Core Agriculture Support Program

The Core Agriculture Support Program (CASP) supports the GMS in attaining its goal of being a leading producer of safe food using climate-friendly agriculture practices. Now on its second phase, since 2012, CASP2 is committed to increasing the subregion's agricultural competitiveness through enhanced regional and global market integration and subregional connectivity.

The agriculture ministries of the six GMS countries supervise the implementation of CASP2 through the GMS Working Group on Agriculture (GMS WGA). A technical assistance (TA 8163) with financing from the Asian Development Bank, the Government of Sweden, the Nordic Development Fund, and the Water Financing Partnership Facility supports the CASP2 implementation. The GMS WGA oversaw the development of the discussion papers.

About the Asian Development Bank

ADB's vision is an Asian and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to a large share of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

Core Agriculture Support Program Phase II

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