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## The ASEAN Economic Community Blueprint: Implementation and Effectiveness Assessment for Philippine Agriculture

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Philippine Institute for Development Studies  
*Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas*

The ASEAN Economic Community Blueprint:  
Implementation and Effectiveness  
Assessment for Philippine Agriculture

*Roehlano M. Briones and Danilo C. Israel*

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# THE ASEAN ECONOMIC COMMUNITY BLUEPRINT: IMPLEMENTATION AND EFFECTIVENESS ASSESSMENT FOR PHILIPPINE AGRICULTURE

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**Abstract:** The ASEAN Economic Community (AEC) Blueprint states the plan of ASEAN countries to unify into a single market and production base. A priority focus for integration is enhancement of trade among ASEAN member countries and long-term competitiveness of food and agriculture products produced within ASEAN. Based on key person interviews, this study identifies the specific gaps in the implementation of the Blueprint for the case of Philippine agriculture, and makes appropriate recommendations.

The widest gaps in AEC blueprint implementation appears to be in cooperation areas related to private sector linkages, agricultural cooperatives, R&D, and technology transfer. For the private sector, a key factor accounting for the gap is preference for own networking and business arrangement. Development of producer cooperatives is at a nascent phase within the country. Considerable progress has been made in GAP, GAHP, GHP, and GMP; in general harmonization is most advanced where foreign markets have imposed stringent standards, i.e. the case of HACCP.

The following measures are recommended: First, to re-examine objectives and targets for cooperation with the private sector, agriculture cooperatives, R&D, and technology transfer. Trade standard harmonization is relatively easily justified; however the collective rationale for cooperation in the other areas need to be better articulated. Second, within trade standard harmonization, a couple of action items are: i) Expedite completion of the ASEAN GAqP; and ii) Highlight the issue of small producer inclusion. ASEAN-wide mechanisms towards inclusion of small producers hold a long-term potential for uplifting livelihoods of millions of small farmers and fishers in Southeast Asia; however this cannot follow the same modality as standards certification for large exporting companies. The Blueprint objectives for cooperatives, including other types of producer associations, should be re-examined towards more collective approaches to gain approval and certification.

**Keywords:** Market integration, trade harmonization, product standards, producer linkages

## **1. INTRODUCTION**

The ASEAN is moving towards a single economic community based on an ASEAN Economic Community (AEC) Blueprint, which calls for a single market and production base. A priority focus for integration is enhancement of trade among ASEAN member countries and long-term competitiveness of food and agriculture products produced within ASEAN. By harmonizing their standards and quality and by standardizing their trade certifications, ASEAN agricultural products are expected to become more competitive in the global market.

Progress has been made towards standardizing practices and food safety systems such as adoption of Good Agriculture Practices (GAP), Good Aquaculture Practices (GAqP), Good Animal Husbandry Practices (GAHP), Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP), and Hazard Analysis Critical Control Point (HACCP)-based systems. The blueprint emphasizes agricultural cooperatives, as they are seen as a means also to enhance market access of agricultural products.

Currently (and consistent with Paragraph 77), a midterm review (MTR) of the AEC Blueprint is underway. The review shall focus on areas considered essential and to contribute most towards the realisation of AEC by 2015. In this context, the MTR shall assess the gap between the implementation status and targets set as well as provide recommendations to enhance the implementation of the AEC Blueprint.

The Philippine agriculture study aims to assess the effectiveness of the integration measures implemented by the Philippines at the national level, in compliance with the AEC Blueprint. Gaps in implementation and effectiveness would be identified, as well as the need to address these gaps. The assessment also covers the contributions of the proposed AEC to

economic growth, employment, competitiveness, and social welfare. Data for the analysis would be obtained from a survey of respondents in the relevant government agencies, based largely on subjective rating by key informants. Based on the analysis, the study would lastly state recommendations towards enhancing implementation of the AEC blueprint on agriculture.

The rest of this report is organized as follows: background and issues of ASEAN integration for Philippine agriculture are reviewed in Section 2. The method for data gathering is presented in Section 3; findings from the survey are presented in Section 4. Section 5 summarizes and states recommendations.

## **2. INTEGRATION: ISSUES AND CONCERNS FOR AGRICULTURE**

### **Integration initiatives**

In 1992, ASEAN member states established the ASEAN Free Trade Area (AFTA), which implements a comprehensive program of tariff reduction under the Common Effective Preferential Tariff (CEPT). Tariff lines within the CEPT are restricted to a 0 to 5% band within a timetable. Tariff lines under the Inclusion List fall under fast-track reduction, while lines under the Sensitive List provides a longer timetable. Lines under the Highly Sensitive List are given a higher tariff by end of timetable.

Tariff reduction was further accelerated under the ASEAN Trade in Goods Agreement (ATIGA). Under ATIGA, 99% of tariff lines under the Inclusion List would fall to zero-duty. The ATIGA retains the Sensitive and Highly Sensitive Lists; in the case of the Philippines for example, rice tariffs are expected to be reduced to 35% while sugar tariffs should fall to 5% by 2015.(Bureau of International Trade Relations, 2012). By 2010, 99% of tariff lines of the ASEAN-6 (Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand) in the Inclusion List were within the 0-to-5% band; likewise, 46% of tariff lines under the Inclusion List for CLMV countries (Cambodia, Laos, Myanmar, and Vietnam ) are within the band. By 2015, tariffs on 98 to 100% of all tariff lines for all countries would be included (Tantraporn, 2011).

In addition to tariff reduction, the ATIGA provides for “AFTA plus”, involving elimination of non-tariff barriers, customs harmonization, and common certification standards. For crops, the ASEAN GAP was launched in 2006 to cover production, harvesting and post-harvest handling of fresh fruits and vegetables in the ASEAN region. Its purpose are to enhance

the harmonization of national GAP programs within the ASEAN region, enhance fruit and vegetable safety for consumers, ensure sustainability of natural resources and facilitate the trade of fruits and vegetables regionally and internationally.

ASEAN GAP consists of four modules covering food safety, environmental management, workers' health, safety and welfare, and produce quality. The national government in each ASEAN country is responsible for carrying out the certification process. This also becomes an opportunity for the less developed ASEAN members to develop their own national GAP as the ASEAN GAP includes guidelines like the code of recommended practices (ASEAN Secretariat, 2012a).

Another set of standards relates to Maximum Residue Limits (MRLs). ASEAN has thus far established 802 harmonized maximum residue limits for (MRLs) 63 pesticides. Among the fruits that have common standards adopted, which ensure freshness and quality, are mango, pineapple, durian, papaya, pomelo and rambutan (ASEAN Secretariat, 2012b) ASEAN has also identified Guidelines on the Risk Assessment of Agriculture-related Genetically Modified Organisms (GMOs), as well as establishment of an ASEAN Genetically Modified Food Testing Network (ASEAN Secretariat, 2012c).

For livestock products the GAHP was developed primarily to promote animal health and food safety. GAHP includes use of appropriate vaccine for the animals, disinfection of the barn/premises, proper clothing of the personnel, and proper disposal of dead animals. Meanwhile for fisheries, HACCP has been identified as the quality management system to ensure food safety and support competitiveness. The HACCP system is based on a systematic and scientific approach of identifying and eliminating hazards throughout the food chain, focusing on preventive measures, thus reducing need for inspection and testing of end-products (FAO, 1998).

The AEC blueprint also aims at joint approaches and technology transfer among member countries. These involve, among others, collaborative research, strategic alliances with the private sector, combating illegal logging and fishing, strengthening and networking of agricultural cooperatives to enhance market access, together with establishment of business linkages.

## Agricultural trade of the Philippines

The following discussion on agricultural trade is based on the Trade Map database ([www.trademap.org](http://www.trademap.org)), which permits disaggregation by direction of trade. We average statistics over a three-year period to smoothen out the data. First we report shares of imports (exports) in total trade by commodity, as well as shares of imports (exports) in trade with ASEAN by commodity.

Agricultural imports of the Philippines averaged \$4.7 billion over the period 2008-2010 (Table 1). Imports are dominated by rice, followed by other cereals and miscellaneous edible preparations. Other major imports are rubber and rubber products, cereal and dairy products, fats and oils, sugar, and tobacco.

**Table 1: Imports and import shares of agricultural products, average of 2008-2010**

	Value of imports, \$ millions	Share of product in total imports (%)	Share of commodity imports from ASEAN (%)
Rice	1,553	33.7	93.6
Other cereals	703	15.3	0.9
Miscellaneous edible preparations	473	10.3	46.9
Rubber and articles thereof	245	5.3	40.6
Cereal, flour, starch, milk products	220	4.8	42.3
Animal, vegetable fats and oils	186	4.0	81.4
Sugars and sugar confectionery	185	4.0	45.4
Tobacco	182	4.0	14.4
Cotton	152	3.3	10.8
Fish, crustaceans, molluscs, etc	143	3.1	13.9
Oil seed, oleagic fruits, grain, etc	131	2.8	24.7
Vegetable, fruit, nut, etc food preparations	102	2.2	21.2
Edible fruit, nuts, peel of citrus, melons	97	2.1	2.0
Maize (Corn)	69	1.5	30.8
Edible vegetables, roots and tubers	61	1.3	21.9
Coffee	44	1.0	99.3
Lac, gums, resins, etc	27	0.6	7.9
Live animals	15	0.3	1.2
Products of animal origin	12	0.3	2.3
Meat, fish and seafood food preparations	7	0.2	28.8
Vegetable products	0	0.0	20.7
<b>Total</b>	<b>4,607</b>	<b>100.0</b>	<b>50.1</b>

Source of basic data: [www.trademap.org](http://www.trademap.org).

Imports from ASEAN total about \$2.3 billion (about half of imports). Rice imports are primarily from ASEAN, as are fats and oils; ASEAN is also a major source of miscellaneous preparations, rubber and cereal products.

Table 2 presents the export side. The Philippines' top export commodities are coconut oil, followed by fruits, vegetable food preparations, meat and related preparations, and fish. ASEAN is a key market only for exports of minor products such as coffee and cereals, although over than 40% of tobacco exports end up in the ASEAN market.

**Table 2: Exports and export shares of agricultural products, average of 2008-2010**

	Value of exports (\$ millions)	Share of product in total exports (%)	Share of ASEAN in product exports
Coconut	967	26.8	3.3
Edible fruit, nuts, peel of citrus, melons	635	17.6	3.9
Vegetable, fruit, nut, etc food preparations	336	9.3	8.3
Rubber and articles thereof	329	9.1	17.4
Meat, fish and seafood food preparations	319	8.8	2.5
Fish, crustaceans, molluscs, etc	305	8.4	7.7
Tobacco	220	6.1	42.3
Sugars and sugar confectionery	132	3.7	32.5
Cereal, flour, starch, milk products	113	3.1	26.3
Lac, gums, resins, etc	100	2.8	3.7
Miscellaneous edible preparations	89	2.5	19.8
Oil seed, oleagic fruits, grain, etc	30	0.8	21.7
Edible vegetables, roots and tubers	18	0.5	14.7
Cotton	8	0.2	6.5
Live animals	4	0.1	8.9
Products of animal origin	2	0.1	10
Cereals	2	0.1	63.7
Vegetable products	2	0.1	2.6
Coffee	0	0.0	69.0
<b>Total</b>	<b>3611</b>	<b>100</b>	<b>10.3</b>

Source of basic data: [www.trademap.org](http://www.trademap.org).

Next we examine trends over time. We take the ratio of import (export) share by country and commodity in the recent period over the same import (export) share in a base period. select the average of 2001-2003 as the base (2001 being the earliest year for the Trademap data).

The import ratios are shown in Table 3. The first column presents the product share of the recent period as a ratio to the base period; the second column presents the trade share of ASEAN



in the recent period as a ratio of the base period. Rice, the biggest import item, also gained the most, gaining import share by over eightfold over the decade. The other major import items also registered the largest import share gains, except for coffee and maize. ASEAN has emerged as an increasingly important source of maize, vegetable preparations, oil seed, and meat preparations.

**Table 3: Import share ratios by agricultural product, 2001-2003 and 2008-2010**

	Ratio for total imports	Ratio for imports from ASEAN
Rice	8.1	1.4
Animal, vegetable fats and oils	3.3	1.1
Edible fruit, nuts, peel of citrus, melons	3.0	0.2
Products of animal origin	2.8	0.2
Coffee	2.7	1.1
Fish, crustaceans, molluscs, etc	2.4	0.6
Miscellaneous edible preparations	2.2	1.1
Sugars and sugar confectionery	2.0	1.5
Cereal, flour, starch, milk products	1.8	1.0
Maize (Corn)	1.8	2.1
Vegetable, fruit, nut, etc food preparations	1.7	2.7
Lac, gums, resins, etc	1.7	0.6
Edible vegetables, roots and tubers	1.5	1.8
Rubber and articles thereof	1.3	1.4
Other cereals	1.2	1.7
Oil seed, oleagic fruits, grain, etc	1.0	3.0
Tobacco	0.8	0.4
Cotton	0.3	1.7
Meat, fish and seafood food preparations	0.2	5.8
Live animals	0.2	0.6
Vegetable products	0.1	0.4

Source of basic data: [www.trademap.org](http://www.trademap.org).

The export ratios are shown in Table 4, which is interpreted in a similar fashion as Table 3, but this time for exports. Cereals grew five-fold, as did tobacco. Other significant market share gainers are rubber, vegetable products, meat and seafood preparations, as well as coconut. Significant gains were observed for Philippine exports to ASEAN for vegetable, fruit and nut food preparations. ASEAN as a market destination is gaining in importance for some commodities, but these tend to have small product shares in total.

**Table 4: Export share ratios by agricultural product, 2001-2003 and 2008-2010**

	Ratio for total exports	Ratio for exports from ASEAN
Cereals	5.2	1.0
Tobacco	4.7	1.2
Rubber and articles thereof	3.6	0.8
Vegetable products	3.1	0.5
Meat, fish and seafood food preparations	2.6	0.3
Lac, gums, resins, etc	2.2	0.9
Coconut	2.1	0.3
Cereal, flour, starch, milk products	1.8	0.6
Sugars and sugar confectionery	1.7	1.5
Miscellaneous edible preparations	1.6	1.3
Vegetable, fruit, nut, etc food preparations	1.4	17.4
Coffee	1.2	4.1
Edible fruit, nuts, peel of citrus, melons	1.2	3.4
Live animals	1.0	0.4
Fish, crustaceans, molluscs, etc	0.9	2.0
Oil seed, oleagic fruits, grain, etc	0.6	2.4
Edible vegetables, roots and tubers	0.5	1.0
Products of animal origin	0.4	4.4
Cotton	0.1	0.3

Source of basic data: [www.trademap.org](http://www.trademap.org).

### **Key agencies for implementation of the AEC Blueprint in the Philippines**

The implementation of harmonization measures for agricultural products is under the regulation of various government agencies. The DA is the principal agency that implements food safety and quarantine of agricultural products that are fresh, live and semi-processed. The Department of Health-Bureau of Food and Drugs (DOH-BFAR) is tasked with ensuring that processed food and agricultural products are safe for human consumption. The Bureau of Agriculture and Fisheries Product Standards (DA-BAFPS) is tasked by the Agriculture and Fisheries Modernization Act (AFMA) to formulate as well as enforce standards for fresh, primary and secondary processed agricultural products (Bondad, 2012). It conducts research on product standardization, including alignment of local standards with international standards.

DA-BAFPS is the national inquiry point for Codex Alimentarius and other food safety regulatory bodies. It is the lead agency for ASEAN harmonization of standards on horticultural

produce and other food crops, as well as for food safety management and certification systems. It conducts national food safety and quality trainings to disseminate standards to stakeholders. Thus far there are 110 Philippine National Standards (PNS) covering cut flowers, vegetables, fruits, cereals, beverages, coconut and by-products, fishery and fishery products, and sugar.

DA-BAFPs is chairperson of GAP certification, as well as co-chair and secretariat for GAHP. Certification is harmonized throughout ASEAN for GAP and GAHP; harmonization is in process for GAqP, which has likewise been developed for the Philippines based on HACCP.

Under BAFPS oversight are frontline regulatory agencies of DA. The Bureau of Fisheries and Aquatic Resources (BFAR) regulates the fisheries industry and is responsible for issuing HACCP certification as well as food safety regulation for fish processing plants, as well as imports and exports of fish (BFAR, 2012). The Bureau of Plant Industry (DA-BPI) is tasked to prevent entry and spread of plant pests and enforce phytosanitary measures on plant and product exports. The Bureau of Animal Industry (DA-BAI) regulates animal feeds, prevent and control infectious animal disease, and controls the movement of animals and animal products, via certification, quarantine clearances, and permits (BAI, 2012). The National Meat Inspection Service (NMIS), under RA 9296 or the Meat Inspection Code, serves as the sole national controlling authority to implement policies, programs, guidelines, and rules and regulations pertaining to meat inspection and meat hygiene to ensure meat safety and quality from farm to table (NMIS, 2012).

Aside from standards harmonization, the AEC blueprint also refers to collaboration in research and among agricultural cooperatives. Agricultural research in the Philippines under the DA is within the purview of the Bureau of Agricultural Research (DA-BAR); the body overseeing the national agricultural research system is the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (PCARRD), under the Department of Science and Technology (DOST). In charge of registration, regulation, and support for cooperatives in the Philippines is the Cooperatives Development Authority (CDA), under the Department of Finance.

### **Issues in implementation**

A number of issues have been raised about implementation of commodity and production and processing/distribution standards (Lacson, 2005). One problem is the overlapping of

functions and tasks of the concerned agencies, particularly between BAFPS, BPI, BAI, and BFAR. Another is the sequencing of import clearance: the Bureau of Customs (BOC) typically undertakes initial clearance, with quarantine procedures following. Tariffs and duties are already collected *prior* to inspection for SPS measures implemented by DA, which may raise problems for some importers; furthermore traders who seek to evade customs duties (smugglers) would perforce also evade quarantine.

Few studies have examined the impact of standards and certification systems of the Philippines. Bathan and Lantican (2009) show that in the case of pineapple, Philippine standards were consistent with global standards, and there was no deterioration in competitiveness of pineapple exports under the Sanitary and Phytosanitary Measures (SPS) regime of the World Trade Organization (WTO).

A more detailed study of the impact of HACCP certification for fisheries is provided by Ragasa et al (2011). Using survey data of seafood exporters, the study compares costs and benefits from continued or discontinued EU HACCP certification. It finds statistically significant differences between certified and decertified firms, mainly in the form of increase in sales associated with certification. In particular, certified firms are able to increase the share of exports going to EU. However there are costs associated with certification, particularly those related to price and acquisition of quality raw materials. De-certified firms cited budget constraint and the prospect of not being able to recover costs of compliance. The study found that for certified firms, certification is a rational decision as benefit exceeds cost; net benefit is about 0.8% of production value. Meanwhile for de-certified firms, cost exceeded benefits owing to decreasing ability to sale to the EU market, hence the decision to de-certify is likewise rational choice.

### **3. METHOD**

This study combines desk review with primary data based on assessments by key informants (i.e., a form of expert opinion). The desk review covers reports and past studies on regional integration, a broader context in terms of salient features of Philippine agriculture, and related background information (such as relevant private and public sector institutions). Meanwhile, key informants are drawn from heads of the relevant line bureau and agencies concerned with implementing the AEC Blueprint for agriculture, mainly from the Department of

Agriculture (DA) and related agencies (DA-BAFPS, DA-BPI, DA-BFAR, DA-BAI, DA-BAR), as well as CDA.

Interviews were conducted according to a structured questionnaire on food and agriculture sector developed a regional study team under the Economic Research Institute for ASEAN and East Asia or ERIA (see Annex). The questionnaire covers intra- and extra- ASEAN trade, the long-term competitiveness of ASEAN's food and agriculture commodities, and assessment of the implementation of HACCP-based systems. It also looks into the harmonization of quarantine and inspection procedures, MRLs, issues related to GAP, GAHP, GHP, and GMP. It also focused on the cooperation in R&D, technology transfer, among agricultural cooperatives, and the private sector.

#### **4. FINDINGS FROM THE SURVEY**

Interviews were conducted one-on-one, though on one occasion the respondents met with the interviewer as focus group. Due to the comprehensiveness of the questionnaire many items were skipped in any single interview session, with the respondent(s) deferring to officers whose function was more directly involved with the skipped item. Their interpretation and explanation of responses was also captured, and is incorporated into the discussion below. Another clarification referred to the scope of impact and cost being assessed. Most of the respondents assessed impact and cost *in terms of affected stakeholders*, not in terms of universe of stakeholders in the Philippines.

##### **Implementation framework**

Fisheries. Based on modal responses (Table 5), for fisheries the Philippines has been pursuing all of the items in the AEC blueprint, except for two items, namely: application of quality and safety standards for small enterprises; and networks and linkages between (fisheries) cooperatives. The major initiative is HACCP. The Federation of Fishing Associations and Allied Industries of the Philippines (SFFAAI) formally adopted in 2004 the HACCP system for the local fishing industry to ensure the competitiveness of locally-produced tuna in the world market. BFAR has been recognized by the European Union (EU) as the competent Certification Authority to ensure safety of fish and fishery products exported from the Philippines to EU member countries. Meanwhile, the HACCP program in aquaculture in the Philippines constitute

mainly of the National Residue Monitoring Program. Recently an information and education campaign has been conducted for fisheries technicians, planning officers, aquaculture centers, extension officers and health/quarantine officers as prospective farm inspectors.

On the import side, all importation of fishery products satisfies the Permit to Import and Sanitary and Phytosanitary (SPS) requirements as provided under Section 67 of Republic Act No. 8550, the Hazard Analysis and Critical Control Points (HACCP) Standards. Fish and fishery/aquatic products must meet the consumer product quality and safety standards imposed under the Consumer Act of 1992.

**Table 5: Modal responses for AEC blueprint initiatives for fisheries**

Item	Modal response
HAACP Certification (implementation, validation, verification)	Yes
Quality and safety management for small enterprises	No
Quarantine and inspection procedures	Yes
Maximum residue limits for fishery products <sup>a</sup>	Yes
Good Aquaculture Practices/Good Manufacturing Practices	Continuing
Aquaculture chemicals	Yes
Technical cooperation	Many
Private sector cooperation:	
Food safety	Strong
Joint venture	Fair
Promotion and market access	Strong
Combating illegal fishing	Major progress
R&D cooperation	Continuing
Alliances between cooperatives	No
Linkages between cooperatives	No

<sup>a</sup>Question 4 was rephrased in terms of "aquaculture products" in lieu of "crops".

Source: Authors' data.

The quarantine and inspection/sampling procedures of the Philippines is harmonized with ASEAN and international standards. Upon arrival, the consignment shall be subjected to the following inspection requirements:

- a. The importer shall submit the original copy of the import permit, photocopies of the pro-forma invoice, packing list and airway bill (bill of lading) to the BFAR Fisheries Quarantine Officer for low, medium and high risk species. In the case of medium and high risk species, a copy of the health certificate shall accompany each consignment/shipment. This shall also

apply to hand carried shipments. Consignments not accompanied by import permit and/or health certificate shall be confiscated and destroyed.

- b. The Fisheries Quarantine Officer shall check the species identify and conduct visual inspection. If the fish is clearly unhealthy, he shall require the consignee to treat the shipment in the importer's holding facility under the supervision of a fish health officer or if the unhealthy fish poses high risk of contaminating healthy stocks, the shipment shall be confiscated and destroyed. A laboratory examination of the shipment shall be conducted by the BFAR Fish Health Officer at the expense of the importer.

One exception for fisheries is the application of quality and safety standards for small enterprises. In general, small scale fisheries enterprises cater only to the domestic market and do not have to adopt HACCP and other international quality and safety management systems beyond what are required by the local authorities. Nevertheless authorities recognize that quality and safety are concerns that are important to both producers and consumers in the local market.

Crops and livestock. In the case of crops and livestock, the trade-related requirements (quarantine, good practices, MRL) have all been harmonized (Table 6). This may need to be qualified though with respect to quarantine: according to one officer, the same protocols are followed and ideally the same procedures; however owing to high cost, lack of equipment, and lack of staff, some of the more involved technical sampling and testing procedures are not being implemented. In fact the government invests heavily in product sampling and testing for some out-bound export commodities to meet certification requirements in Japan, US, and other discriminating yet lucrative markets (i.e. for mango, and selected vegetables). Among ASEAN countries, SPS are similarly strict for Singapore – however owing to its low import volume requirements, fruit and vegetable exporters are less interested in selling to the city-state.

Meanwhile cooperation in the area of technology transfer, R&D, private sector linkages, and cooperative linkages, are much more mixed. In the case of the private sector for instance, one major constraint is lack of interest among the major players to convene and engage with government and other private sector entities, preferring their own networking. In the area of technical cooperation and R&D, participation is limited to the ASEAN TWG on Agriculture R&D, which has convened annually since 2004. This TWG is concerned mostly with information exchange, though it is preparing some joint research projects for the region, such as

on climate change. Most countries in the region prefer to cooperate with broader R&D networks linked to the international agricultural research centres, e.g. the International Rice Research Institute, the Asian Vegetable Research and Development Centre, etc. The last bilateral activity was with Thailand, but stopped short of formalization due to some bureaucratic tangles.

For cooperatives, participation is limited to NEDAC (Network for the Development of Agricultural Cooperatives), whose membership is Asia-wide, and which include other ASEAN member countries. The NEDAC is meets annually and mainly devoted to information exchange and technical cooperation among cooperatives. Networking however has not matured to the level of international business linkages among or between cooperatives.

**Table 6: Modal responses for AEC blueprint initiatives for crops and livestock**

<b>Item</b>	<b>Modal response</b>
Quarantine and sampling procedures	
Crops	Yes
Livestock	Yes
Processed food	Yes
GAP, GAHP, GMP, GHP	Yes
Maximum Residue Limits (crops)	Yes
Technical cooperation	Seldom
Private sector cooperation:	
Food safety	Strong/Fair
Joint venture	None/fair
Promotion and market access	Strong/fair
R&D cooperation	Sporadic
Alliances between cooperatives	Yes, multilateral
Linkages between cooperatives	No

Note: where two responses are tied for highest frequency, both are reflected above.

Source: Authors' data.

### **Impact and cost: fisheries**

With respect to fisheries, on average impacts are assessed to range from Substantial to Much; likewise costs are assessed to lie within the same range on average (Table 7).

Respondents' explanation of impact and costs is as follows:



**Table 7: Impacts and cost of AEC blueprint implementation for fisheries, average over actual responses**

	HACCP	Quarantine	Maximum residue limits	Good Aquaculture Practices	Aquaculture chemical	Technical cooperation	Private sector linkages	Illegal fishing	R & D cooperation
Impacts	<b>3</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>4</b>
Producers	3	3	3	3	4	4	4	3	4
Processors	3	4	4	4	4	4	4	3	4
Traders	3	4	4	3	3	4	4	3	4
Competitiveness	4	4	5	3	4	4	4	3	4
Consumers	3	4	5	4	4	4	4	3	4
Costs	<b>4</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>
Producers	4	2	3	3	3	2	3	3	3
Processors	5	3	3	4	3	3	3	3	3
Traders	3	3	3	3	3	2	3	3	3
Competitiveness	4	3	3	3	3	3	3	3	3
Consumers	3	3	3	4	2	2	3	3	3

Note: scale of benefit and cost are as follows: 1 – None; 2 – Minor; 3 – Substantial; 4 – Much; 5 – Very much. Averages are rounded off to the nearest whole number

Source: Authors' data

*HACCP* - The fish processing industry members who meet the standards benefit from the higher export prices brought about by improved product quality. At the start however, some processors did not meet the standard and thus lost money. Over time, more and more processors have been able to comply and subsequently benefit. The fish traders who were able to have their products certified, benefit with the higher export prices even more than the processors since they do not have to invest in HACCP as fish traders unlike the processors who have to put up real HACCP investment. Over time, the export competitiveness of the fisheries industry has improved since they have to meet HACCP standards or perish in the international market.

Early on, fish consumers benefit from the low class and rejected fish export products that end up in the local market. Otherwise, since HACCP is not required locally, then the effect is minimal. Foreign consumers definitely benefit from improved quality and safety even though they have to pay higher prices. Costs to fish producers and processors go up because of the investment while cost to traders do not increase so much. Costs also rise with product competitiveness. Local consumers do not have to endure rising costs due to HACCP, unlike foreign consumers.

*Quarantine* - Fish producers, processors, traders, product competitiveness and fish consumers all benefit from improved quality of fish imports. However, there are shipments that pass through the backdoor of the country as smuggled shipments and do not pass through quarantine and inspection. There is also the possibility that quarantine and inspection personnel are bribed allowing entry for unwanted, unsafe, and unhealthy fishery shipment.

The cost of quarantine and inspection as part of overall fisheries trade administration is not just borne by participants in the fisheries industry but society in general. However, some of the cost can be passed to fisher consumers in the form of higher prices of imported fish commodities and thus fish consumers may bear some of the costs in this case.

*Maximum residue limits* - MRLs for fish products have been harmonized in accordance with international standards/guidelines. With the Asean community blueprint developed for the possible establishment of an Asean Economic Community in 2015, the MRL is just one of the standards harmonized among ASEAN countries. In the case of tuna, The EU submitted a notification that they will be reducing the MRL of lead in tuna from the 0.5 ppm limit outlined by the internationally accepted Codex Alimentarius to 0.2 ppm. The reason was the negative effect of excessive lead on children's Intelligence Quotient (IQ). As much as 35.12 percent of

Philippine tuna exports go to the EU. Hence, this stringent directive alarmed the Philippines. Since the EU was unable to present strong scientific basis for the proposal, the Philippines submitted a formal position paper claiming that the prevailing standards (Codex) is sufficient to address EU's concern. The canned tuna industry admits that an MRL of 0.2 ppm will force some exporting companies out of the trade business since natural conditions in the quality of Philippine waters would prevent them from attaining a lower level of lead content.

Costs to participants in fisheries will also increase when they try to meet the MRL and more particularly when their products get rejected because they have not meet the standard. The cost to the local consumer in terms of consuming rejected fish will go down. The cost to the foreign consumer will go up since products that pass the MRL will carry in their prices the additional costs of meeting the standard.

*Aquaculture* - The Philippines as a matter of policy, follows a general rules in complying with both the domestic and foreign product requirements in terms of quality and bio-safety procedures which are outlined and prescribed in guidelines under the Fisheries Administrative Order (FAO) No. 214, otherwise known as the Code of Practice for Aquaculture. The Code lays down the generic guidelines in adapting the Best Aquaculture Practices (BAPs) in the country which also serves as reference point to Total Quality Management (TQM) in aquaculture farming practices. The BAPs concept as provided for in this Code of Practice was equivocally and derived mainly from the provisions of the FAO Code of Conduct for Responsible Fisheries as interpreted and unanimously adapted under the Regional Code of Conduct for Responsible Fisheries (RCCRF in Aquaculture) by the SEAFDEC member countries in 2002.

Implementation of this code in the local industry, however, takes a hard time due to arbitrary issues and claims that the code is not equitably designed for small enterprises, but rather for commercial operators who are engaged in the export trade who could afford to redesign and meet the international demand of the industrialized countries. In fact formal certification is still in process, as work on ASEAN Harmonization for Good Aquaculture Practices is still pending (Bondad, 2012).

Good aquaculture practices should benefit all participants but will also increase their costs. The local and foreign consumers will benefit from higher quality and safer fish products but will also have to pay higher prices if the good aquaculture prices require higher production costs.

Government policies regulating or prohibiting certain chemicals for aquaculture have helped curtail the harmful consequences of using these chemicals. Moreover, research institutions have geared their studies towards discovering environmentally safe drugs and other alternatives to disease control. Organic aquaculture has been promoted. For instance, the use of tobacco dust instead of chemical pesticides has been tried. Tobacco dust also serves as fertilizer in fishponds. The elimination of the use of chemicals should benefit all sectors in aquaculture except the traders of chemicals and pesticides. The cost of production may actually decrease since organic pesticides tend to cost less.

*Illegal fishing* - The authorities have made serious efforts to crack down on illegal fishing by both Filipino fishers and foreign fishers (mainly Chinese), at the national and regional levels in the country. Problems faced by the authorities include persistent cyanide fishing, corruption by local officials, and links to serious crime, which have resulted in a number of murders of those enforcing the laws. However, some regions have seen a dramatic fall in illegal fishing activities as a result of tighter controls. Coral reef ecosystems are a major victim of illegal fishing through the use of obnoxious substance called sodium cyanide, explosives, and illegal fine-meshed nets with weighted scare-lines known as *muro-ami*.

The new BFAR director pronounced that the annual budget for fisheries enforcement has been increased from P5million to P100 million. This will allow the recruitment of more enforcement personnel and the acquisition of equipment. At present, BFAR only has 4 personnel nationwide who are directly involved in enforcement.

There is not much progress in efforts to curb illegal fishing and the costs and benefits are not so apparent. Illegally caught fish are not competitive internationally and not acceptable for exports. Illegal fishermen when caught are imprisoned only if they have no connections but the big time illegal fishers buy their way out of imprisonment. The financial penalties are also low and do not discourage violators.

*Technical and R&D cooperation* - Through the Southeast Asian fisheries Development Center-Aquaculture Department (SEAFDEC AQD) and the National Aquaculture Centers for Asia (NACA) and the various national fisheries and aquaculture research and development institutions, the Philippines have undertaken R&D with all ASEAN countries and most if not all Asian countries. R&D cooperation covers all areas from production, processing, marketing, research, extension, technology transfer and other related areas. Benefits should be high for all

fisheries subsectors while costs are low since these are borne commonly by the international organizations, countries involved, and society in general.

*Business and cooperative linkages* - There are four strong group of private sector national organizations representing the major commercial commodities produced from the aquaculture industry. The Bangus Council of the Philippines (BCP) which is a recent alliance of the Bangus Association of the Philippines represents the coalition of eight major stakeholders of milkfish producers in the country composed of the hatchery subsector, fry gatherers and importers, freshwater fishpen producers, mariculture subsector, brackishwater subsector, feed millers/suppliers subsector and the processing subsector.

The tilapia sector on the other hand has organized themselves into one association known as the Philippine Tilapia, Incorporated (PTI) mostly composed of small-medium and large-scale producers of tilapia including the hatchery and post-harvest processing sectors. Among the major coalition members in the association is the GIFT Foundation and the GENOMAR producers together with the GET-Excel BFAR accredited operators.

The tiger shrimp producers in the country has on its own the PHILSHRIMP allied with the SHRIMPEX and PHILFRY respectively representing the *Penaeus monodon* growout farm producers, the shrimp exporters and the fry hatchery operators. For seaweeds, the Seaweed Industry Association of the Philippines (SIAP) has organized into a farm-producers group, along with traders, and processors who are also the major exporters carageenan products. There are also members of the Philippine Chamber of Agriculture and Food, Inc. (PCAFI) representing various sub-sectors of the fisheries industry. PCAFI indicated its support to the resource conservation approach to increasing fish production, strengthening of R & D capability, and restoration of degraded coastal waters.

On the other hand, fishery cooperatives lack in government support in the past years. Unlike other sectors such as small farmers, transport, market vendors, consumers, and credit, the fishery coops were generally not provided systematic and continuing education and training, sustained financing, skills/capability building or marketing/processing assistance program. Problems of fisheries cooperatives include the proliferation of small and very small-scale weak cooperative organizations with narrow activity and membership base, lack of government funding support, and the absence of a centralized coordinating or integrating institution on capacity building and continuing education and training as well as promotion of integrated

cooperative marketing and production systems. Other problems include lack of education and training, lack of capital, inadequate volume of business, lack of loyal membership support, vested interest and graft and corruption among coop leaders and weak leadership and mismanagement.

### Impact and cost: crops and livestock

With respect to the trade harmonization measures, the impact ranges from Substantial to Much (Table 8). Meanwhile costs (where they could be evaluated) lie within the same range. For quarantine and MRL, benefits and costs tend to be borne equally across stakeholders; however, gains for competitiveness and costs for producers are rated as Much.

Benefits for good-practice measures are Much, but so are the costs (except for consumers). Bondad (2012) observes that three are GAP-certified, namely Basic Necessities (lettuce), Del Monte (pineapple), and TADECO (banana). These tend to be high value/large-scale operations. Currently a few small farms are under evaluation. For GAHP there is one certified farm (in Southern Philippines) and 32 farms under evaluation. Clearly certification coverage is very small, but expected to grow over time. Smallholders can certainly be certified, but most likely under some collective arrangement, i.e. as a cooperative following identical farming or animal husbandry practices.

**Table 8: Impacts and cost of AEC blueprint implementation for crops and livestock, average over actual responses**

	Quarantine	MRL	GAP, GAHP, GHP, GMP	Private sector linkages	R&D	Cooperatives
Impacts	3	3	4	3	--	--
Producers	3	3	4	3	5	5
Processors	3	3	4	3	na	na
Producers	3	3	4	3	na	na
Competitiveness	3	4	4	3	na	na
Consumers	3	4	4	3	na	na
Costs	--	3	4	3	--	--
Producers	1	4	4	3	2	2
Processors	na	3	4	3	na	na
Producers	na	3	4	3	na	na
Competitiveness	3	3	4	3	na	na
Consumers	3	3	2	3	na	na

Note: scale of benefit and cost are as follows: 1 – None; 2 – Minor; 3 – Substantial; 4 – Much; 5 – Very much

Source: Authors' data

For the cooperation measures, private sector cooperation provides substantial benefits but commensurate cost – which may account for low levels of participation of private sector players. With respect to technology transfer and R&D, engagement with other ASEAN member countries is on a multilateral basis. There is ASEAN Technical Working Group (TWG) on Agriculture R&D. The TWG meets annually, mostly to exchange information status, trends, breakthroughs. The focus has recently been on rice, soybean, and corn, though certainly all major agricultural commodities in the region are of interest. The TWG is considering region-wide research on climate change for ASEAN under the lead of Indonesia.

Bilateral initiatives with other ASEAN countries has been sporadic. In 2008 there was a technical exchange on rice with Brunei as both countries were seeking to raise their respective self-sufficiency targets owing to a volatile international market. The Philippines also engaged Thailand with information and germplasm exchange in the 1990s, but this was mired in a bureaucratic tangle and was ultimately shelved.

Lastly, for cooperatives, Filipino cooperatives in NEDAC have benefited Very much from their participation, particularly in terms of information and building capacity through observing good governance practices in other successful organizations. Costs are minimal as these can be shared over a large cooperative membership; the CDA also funds the Network by hosting (on rotation basis) the NEDAC annual meeting (at government expense).

## **5. CONCLUSION AND RECOMMENDATIONS**

### **Gaps in AEC blueprint implementation**

The widest gaps in AEC blueprint implementation appears to be in cooperation areas related to private sector linkages, agricultural cooperatives, R&D, and technology transfer. For the private sector, a key factor accounting for the gap is preference for own networking and business arrangement. Where government is offering support, say for market access, the private sector is engaged only if they have a direct interest and if there are few or no viable alternatives, as in the case of HACCP certification which is required by developed country markets.

Similarly for R&D and technology transfer, ASEAN member countries are already pursuing wider regional and global networks, hence specific Southeast Asian or bilateral ties are seen as less necessary for mainstreaming. Meanwhile development of producer cooperatives

is at a nascent phase within each country, hence participation in international commercial linkages is a tall order. There is nonetheless an active international alliance (though membership is not specifically confined to ASEAN).

As for trade-related harmonization, considerable progress has been made in GAP, GAHP, GHP, and GMP. In general harmonization is most advanced where foreign markets have imposed stringent standards, i.e. the case of HACCP. The other aspects have not been as mandatory hence interest in these is lower. For some key markets the Philippines has worked out bilateral arrangements, e.g. mangoes for Japan and the US, with standards specifically tailored for these markets. Conversely there is less interest for market access for developing countries and ASEAN itself, given lack of mandatory requirement, and relatively low levels of trade integration with these markets.

While the Philippines is monitoring aquaculture activities intensively, work on ASEAN GAqP is yet to be concluded. This is certainly one area where ASEAN work should be expedited. Another major gap is implementation of HACCP for small enterprises. The costs for small enterprises are simply too high, and few are expected to export; hence there is no reason for small enterprises to invest in certification. In general, aside from HACCP, quality and safety standards are expected to tighten in the medium to long term. This raises concerns about exacerbating the dual development structure of agricultural production in developing countries. One mechanism to open up market access is to engage cooperatives and other collective arrangements among small producers in the trade harmonization. Such a prospect appears to not have been mentioned in the cooperatives and related sections of the AEC blueprint.

## **Recommendations**

The recommendations are fairly straightforward based on the aforementioned gaps:

- Re-examine objectives and targets for cooperation with the private sector, agriculture cooperatives, R&D, and technology transfer. To avoid unnecessarily raising expectations, objectives and targets for these areas of cooperation should be specific, and based on rationale for collective action across member countries. Note that trade standard harmonization is easily justified given that acceptance by outside importers of ASEAN standards *ipso facto* carries over to domestic certification. However the collective rationale for cooperation in the other areas need to be better articulated.



- Within trade standard harmonization, a couple of action items are:  
 Expedite completion of the ASEAN GAqP;  
 Highlight the issue of small producer inclusion. ASEAN-wide mechanisms towards inclusion of small producers hold a long-term potential for uplifting livelihoods of millions of small farmers and fishers in Southeast Asia through improved market access and value addition. Such inclusion cannot follow the same modality as standards certification for large exporting companies. To this end, the blueprint targets and objectives for cooperatives, including other types of producer associations, should be re-formulated towards collective modalities of approval and certification.

## **ACKNOWLEDGEMENTS**

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**ANNEX: QUESTIONNAIRE**



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**Questionnaire on Food, Agriculture, and forestry sector:  
 National Level**

**I. Intra- and extra ASEAN trade and long term competitiveness of ASEAN's food, agriculture and forestry products/commodities**

**1. Have the Hazard Analysis Critical Control Point (HACCP)-based systems and improved laboratories practices for fisheries products been :**

**- Implemented in your country?**

Yes                       No

**- Validated in your country?**

Yes                       No

**- Verified in your country?**

Yes                       No

**If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. Have the quality and safety management systems of fisheries been adopted and applied to small enterprises in your country?**

Yes                       No

**If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. Have the quarantine and inspection / sampling procedures in your country been harmonized with ASEAN or international standards/guidelines, specifically for :**

**Crops?**

Yes                       No

**Livestock?**

Yes                       No

**Fisheries?**

Yes  No

**Food Processed products?**

Yes  No

**Forestry Products?**

Yes  No

**If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. Has the Maximum residue limits (MRLs) of commonly used pesticides for widely traded crop products been harmonized in accordance with international standards/guidelines?**

Yes  No  In Progress

**If the answer is “Yes” or “In progress”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Has your country established/adopted/implemented the following for agricultural and food products with significant trade / trade potential?**

<b>Details</b>	<b>Established?</b>	<b>Adopted?</b>	<b>Implemented?</b>
<b>Good Agricultural Practices</b>	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing
<b>Good Aquaculture Practices</b>	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing
<b>Good Animal Husbandry Practices</b>	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing
<b>Good Hygiene Practices</b>	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing
<b>Good Manufacturing Practices</b>	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing
<b>Hazard Analysis Critical Control Point</b>	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing	<input type="radio"/> No <input type="radio"/> Started <input type="radio"/> Continuing

If the answer is “Started” or “Continuing”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Have the use of chemical in aquaculture and measures to eliminate the use of harmful chemical been harmonized in accordance with international standards / guidelines in your country?

Yes                       No                       In Progress

If the answer is “Yes” or “In progress”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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7. Has the capacity building for the implementation of the Guideline on phased approach to forest certification been conducted in your country?

- Yes                       No                       Started and continuing

**II. Promote Cooperation, joint approaches and technology transfer among ASEAN member countries and international, regional organizations and private sector**

1. Has your country undertaken collaborative research and technology transfer with other ASEAN member countries, especially for following sectors ?

Sector	NO	Yes		
		Frequency		
		seldom	Many times	Often times
Crops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fisheries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Livestocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food processed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forestry Products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate here which country :

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If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not
	1	2	3	4	5	



						<b>Applicable</b>
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. Has your country undertaken strategic alliances and joint approaches with the private sector, especially in these following subjects?**

Areas	No	Yes (degree of relationship)		
		Weak	Fair	Strong
Promoting food safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investment and joint venture opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promotion of agricultural products and market access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. Has your country strengthened the efforts to combat :**

**Illegal logging and its associated trade?**

- No    Yes, Minor Progress    Yes, Major Progress

**Forest fire and its resultant effects?**

- No    Yes, Minor Progress    Yes, Major Progress

**If the answer is “Yes, Minor Progress” or “Yes, Major progress”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. Has your country strengthened the efforts to combat illegal fishing?**

- No    Yes, Minor Progress    Yes, Major Progress

If the answer is “Yes, Minor Progress” or “Yes, Major progress”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Has your country strengthened its linkages with regional networks of agricultural research and development in ASEAN and East Asia Countries?

List of networks (specify the country, if any)	Status		
	Continuing	Sporadic	Not yet Started
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate here which areas :

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If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Farmers / producers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing industry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traders?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III. ASEAN agricultural cooperatives

1. Has the strategic alliance between agricultural cooperatives in your country with those in other ASEAN countries been strengthened, especially for following modes of cooperation?

Degree of cooperation	No	Yes			List of country (if any)
		Degree of relationship			
		Weak	Fair	Strong	
Bilateral	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Regional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

<b>Multilateral</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
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Please indicate here which areas of cooperation :

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If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Agricultural producers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Agricultural producers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Have the business linkages among the potential agricultural cooperatives within ASEAN member countries been established in your country?

Yes                       No

If the answer is ‘yes’, please specify the answer based on following table :

List of country	status		
	continuing	sporadic	settled

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please indicate here which areas of business linkages :**

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**If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :**

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Agricultural producers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Agricultural producers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. Have direct investment and strategic partnership been established among your agricultural cooperatives with those in other ASEAN member countries, especially with following types of agricultural cooperatives?**

Type of agricultural cooperatives	No	Yes		
		Degree of relationship		
		weak	fair	strong
Agricultural producers cooperatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If the answer is “Yes”, please indicate the degree of benefit and / or cost for the following stakeholder (1 means none, 5 means very much) :

1 = None; 2 = Minor; 3 = Substantial; 4 = Much; 5 = Very Much

Indicators	Scale					Not Applicable
	1	2	3	4	5	
<b>Has it benefited :</b>						
Agricultural producers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Did it cost</b>						
Agricultural producers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural consumers cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural traders cooperatives ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
product competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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***Thank You Very Much!***