Mutual Recognition Agreements embedded in Integrated Food Control System For Fishery Export in Myanmar

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Food Control and Food Control System

- **Food Control**: “the **Mandatory Regulatory Activity** of enforcement by national or local **Authorities** to provide consumer protection and ensure that all foods during production, handling, storage, processing, packaging, transportation, distribution and sale are safe, wholesome and fit for human consumption; **conform to safety and quality requirements**; and are honestly and accurately labeled as prescribed by law”

- **Food Control System** (at National Level)
  - (1) **Food Legislation** - the comprehensive body of appropriate food law
  - (2) **Food Control Management** - the continuous process of Monitoring, Controlling & Surveillance
  - (3) **Inspection Services** - operated by Gov. or independent organizations, inspector is key functionary
  - (4) **Laboratory Services** - essential, support for food law enforcement by providing Scientific data
  - (5) **IEC** – important for efficacy, can be used to educate consumer and to encourage food industry for adoption of good practices
Important Stakeholders

National authorities have the responsibility of protecting public health by reducing the risk of food-borne disease and providing food safety education and information to consumers and the food industry.

Ultimate responsibility for food safety lies with food producers, processors, retailers, preparers and servers. The capacity to fulfill their roles adequately depends on their ability to understand, establish and follow effective food control systems.

They are entitled to safe, wholesome food. They have responsibilities on their own by proper good hygienic practices when handling, storing while following manufacturers’ recommendations on labels. However they cannot expect the sole provision from firm.

Source: Elaborated from risk based food inspection manual (2008)
Food Control System for Public Health and Trade

- **Food control is a tool to achieve safety** either for hygienic-based or price-based food demand

- **Food Control System** to be provided by government agencies for protection of consumer from unsafe foods (Alomirah, 2010).

- **Competent Authority-CA** is the central authority of a state for official controls or any other authority to which competence is conferred (EDES, 2012). CA is the official government agency having jurisdiction (CAC, 1999)

- **Food Business Operators-FBOs** mean natural or legal persons responsible for ensuring that the requirements of food law are met within the food business under their control (FSA, 2007) who involve in food chain commercially [i.e. producers, processors, traders, exporters, importers, retailers, etc.]

- **Consumer** an active group through dialogue for safer food in risk governance framework (Cope and Frewer, 2010)
Linkage between National Quality Infrastructure and Food Control System

National Quality Infrastructure (NQI) is an institutional framework that establishes and implements conformity assessment services, accreditation, standardization, metrology (Tippmann, 2013).
• **SPS management functions** 6 levels

• **SPS Diplomacy** for engaging fully with trading countries (Henson and Blandon, 2007)

• **SPS capacity building** needs to link domestic policy objectives and agri-food export promotion (STDF, 2013)

• **Clarifying role of Institutions** Well-defined organizational structure supported by funding can confer analytical function, surveillance, quarantine systems, emergency management arrangements that need to be legally mandated, with sophisticated skills (Henson, 2007)
Firms Level: Food Safety Management System FSMS

- **Firm level food control**  Control of food-borne risks is highly complex
- **Standardized Processes**  All levels of food-chain guided with standardized practices
  
  [(e.g.) Fishery Processing Plants SSOP, GMP, HACCP-3 main standardized systems]
- **Cost and Benefit of Food Safety Regulations**  Benefits are reductions in risks of morbidity and mortality associated with the consumption of contaminated food. Costs include production cost, compliance cost, administrative cost, etc. (Antle, 1999)
- **How to address Food Safety in Trade and Business?**  Food safety is addressed as a global public good through Private sector efforts, Institutional innovations following SPS-WTO, and Trade Capacity Building efforts (Unnevehr, 2006)
Risk Reduction in Food Trade for Safety

- No ‘zero-risk’ in food microbiological aspects, appropriate food control is required (Anklam, 2001)

- **Risk → Hazard plus Exposure**

- Risk can be reduced by adoption of good practices GAP,GHP,GMP, HACCP in food production

- Risk Assessment, Risk Management and Risk Communication formalized and incorporated into a process known as risk analysis for food safety (FAO, 2005)

- Food Safety Objective FSOs as a tool to develop food standards, guidelines and related texts (Schothorst et al., 2002)

- FSO and ALOP suggested by international governmental bodies as a mean for CAs to make food safety control transparent and quantifiable
Food Control in Export:
Control of Fishery Products for International Markets
Introduction

- **Achieving food safety** is driven by food security, agriculture practices, trade requirements, consumer concern on food safety, etc.
- **Goal** is to fulfill the needs of consumers while producers taking responsibility along food chain following regulatory control
- **Myanmar is traditionally an agrarian country** exports a variety of primary produces cultivated by a majority 70% of population
- **the world 2nd largest exporter -Bean** in 2011, but not selling to lucrative markets
- **Little investment in quality infrastructure** during last 30 years (UNIDO, 2013)
- Trade-supported industries were not so successful in export aimed at lucrative markets (ITC, 2015)
Challenges in Food Sectors

- **Food Control**  Authorities with food control systems are generally in place but without quality policy for export success (ITC, 2015). Weak in sharing export success goal among public agencies (Wai and Yamao, 2014a).

- **Myanmar’s Export Strategy to Nontariff Measures**  Only general export procedures for all export goods existed (EU, 2014) over 90% of Myanmar primary produces were selling to the countries with less rigorous SPS regulation requirements (Wai and Yamao, 2014a and Aye, 2005).

- **Technical Regulations**  Responsible agencies admitted technical regulation information gaps between National standard body and Trade promotion organization that adversely effect trade.

- **Agri-Export Success**  is facing with the challenges, as a result of lack of appreciation on Commodity Standards formation, insufficient resources in food control works, etc. (Wai and Yamao, 2014a).

- **Image of Myanmar food products**  No strong brand image (e.g. sea food) in international market (CBI, 2012) however, neighboring countries (China, Thailand, Bangladesh, etc.) are buyers and re-exporters of Myanmar (fishery) products.

- **Food Safety Challenges**
  - Chemical hazards: Histamine in dried-anchovy, antibiotic residues: nitrofuran, chloramphenicol in fish, etc.
  - Microbiological hazards: *E-coli* and fecal coliform in Beans, *Vibrio cholerae* in ice products, *Streptococcus aureus* in milk products and salads, etc. (Ilsijapan, 2014). According to FDA, microbiological contamination is a major problem associated with street foods, reported during market assessments (Nwe, 2011).
Fishery Control for International Markets

- **Resources** Myanmar fishery resources especially from marine remained largely untapped due to late privatization (Okamoto, 2008). However, little information was available about competency of marketable conformed fishery products for international trade from food control aspects.

- **Equivalent Inspection Level** among trading partner countries **SPS:Article 4** states how recognition agreement could be made between trading partner countries to account for equivalence level in inspection, testing and other relevant procedures (WTO).

- **Mutual Recognition Agreement** among trading partner countries **TBT:Article 6** mentions how central government bodies of trading partner countries achieve mutual recognition of conformity assessment through accreditation (WTO).

- 3 main parts-
  1. Food Control over fishery products in International trade
  2. Fishery Food Control System for Export
  3. Assessment of the approved fishery processing plants: Firm level adoption of Standards
Fishery Production and Control in Myanmar

Table: Fishery Production growth during 2000-2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Production growth % during 2000-2010</th>
<th>Capture Fishery</th>
<th>Aquaculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td></td>
<td>0.4</td>
<td>7.2</td>
</tr>
<tr>
<td>EU</td>
<td></td>
<td>-1.2</td>
<td>3.1</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td>0.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td>-2.2</td>
<td>-0.6</td>
</tr>
<tr>
<td>South East Asia</td>
<td></td>
<td>3.6</td>
<td>13.4</td>
</tr>
<tr>
<td>Myanmar</td>
<td></td>
<td>10.9</td>
<td>24.0</td>
</tr>
<tr>
<td>Cambodia</td>
<td></td>
<td>5.6</td>
<td>15.3</td>
</tr>
<tr>
<td>Vietnam</td>
<td></td>
<td>4.1</td>
<td>13.3</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
<td>2.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Philippines</td>
<td></td>
<td>3.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td>1.1</td>
<td>9.4</td>
</tr>
<tr>
<td>Lao</td>
<td></td>
<td>0.6</td>
<td>6.9</td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td>-4.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
<td>-10.7</td>
<td>-3.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td></td>
<td>5.6</td>
<td>7.1</td>
</tr>
</tbody>
</table>

- 4.14 million metric tons MMT produced in 2012, higher than neighboring countries’ production—Bangladesh 3.1 MMT, Thailand 2.9 MMT (DOF)
- Production growths become highest (table)
- Fishery is the only one sector delegated by EU, among all food sectors
- **Trade**: Border (>60%), Oversea-normal trade (<40%)
- **Importers**: EU, USA, Japan, China, Thailand, Bangladesh
- **Top 10 Fishery Products**: Rohu, Hilsa, Pink, Live crab, live eel, White Pomfret, Tiger, Rosy Jew fish, Ribbon fish, dried prawns
- **World Top Exporters**: China, Thailand, Vietnam
- **Top aquaculture producers**: China, India, Vietnam, Indonesia (FAO, 2008)

Source: FAO (2012)
Major Markets of Myanmar Fishery Products

- Asia neighboring countries are so far the top importing countries of Myanmar fishery products, China with the highest ranking, Thailand the 2nd and so on, including Japan

Source: Statistical Data of Department of Fishery in Myanmar (2012)
(1) Food Control over Fishery Products for International trade

(a) Schematic Food Control for EU markets

Figure: EU’s food control coverage in export country

Legend

- Mandatory Inspection
- Document Submission
- Sending Document back, Result/Notification
- Trans-boundary Border Inspection
- At Port of Consignment Arrival

FBO  Food Business Operators
CA   Competent Authority (ICS- Inspection and Certification Section )
CCA  Central Competent Authority (ex: FIQCS- Fish Inspection and Quality Control Division, Myanmar )
HC   Health and Food Safety (DG-SANTE)
FVO  Food and Veterinary Office of EU
TC   Third Country [Export country]

Source: Wai et.al.(2016)
(1) Food Control over Fishery Products for International Trade

(b) Vertical Integration of Food Control System by CA

Figure: Vertical integration at government level

**Stage 3. Food Chain Approach + Continuous Monitoring + Information Asymmetry Reduction + Transparency**

- Effective utilization of Food control system by using RAPID ALERT SYSTEM regionally, Internationally (RASFF of EU, ASEAN Rapid Alert System, etc.) USA has its own USA-FDA Alert too.

**Stage 2. Food Chain Approach + Continuous Monitoring + Information Asymmetry Reduction**

- CA starts its function by mutual recognitions with other countries’ CA at G-G, but effectiveness is still the ongoing process USA, Japan don’t follow this mutual recognition step but practices TQM system in domestic food industry by adoption of HACCP and import countries require to do so.

**Stage 1. Not with food chain approach**

- No Competent authority CA for specific food sector and export is made with the bottle-neck checking just before export, due to the willing buyers’ demand but with the low price.

Source: Author
(1) Food Control over fishery products for International trade
(c) Horizontal Integration-Food Safety Management System FSMS at Firm Level

Figure: Horizontal integration at firm level

Stage 1
- 1st stage, a firm does not have certificate that limits market access

Stage 2
- 2nd stage, FSMS can be started by acquiring single certificate from either public or private sources (Only firm 2.1 type can export to EU). Firm must be approved by CA no matter how much private standard they possess

Stage 3
- 3rd stage, firm would acquire both private and private certificates
- 4 types: 2.1, 3.1, 3.2, 3.3 are eligible

Stage 3 (Double or triple certificates)
- 3.1. HACCP certificates approved by CA, ISO 9000, 14000 series
- 3.2. HACCP certificates approved by CA and ISO 22,000 series
- 3.3. HACCP certificates approved by CA and ISO 9000 series

Stage 2 (Single certificate)
- 2.1. HACCP certificate approved by CA
- 2.2. HACCP certificate approved by ISO 9000 (without CA’s approved HACCP certificate)
- 2.3. Quality Management approved by ISO 22,000 series (without CA’s approved HACCP certificate)

Stage 1 (Without certificate)
- 1.1. Traditional/Conventional factory without any certificate

Source: Author
## Fishery Food Control System

### Key Components

<table>
<thead>
<tr>
<th>Input</th>
<th>Activities</th>
<th>Food Control System Activity</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td><strong>Functions</strong></td>
<td><strong>Food Legislation Act, Law, Regulations, Food Authorities</strong></td>
<td><strong>GOAL</strong></td>
</tr>
<tr>
<td>Food Control Management</td>
<td>Checking Sampling (for lab-test) Supervision</td>
<td>Licensing: Registration, Approval Issuing Health Certificate, Communication for Surveillance activity</td>
<td><strong>GOAL</strong></td>
</tr>
<tr>
<td>Inspection Services</td>
<td>Lab Testing (Quality) -Microbiological -Chemical</td>
<td>Supervised by Inspection and Certification Section of FIQCD, DOF, [29 Inspectors]</td>
<td><strong>Function</strong></td>
</tr>
<tr>
<td>Laboratory Services</td>
<td>-Awareness Promotion -Participatory of SH</td>
<td>FIQCD has its own ISO accredited lab, supervises firm level laboratory, trains lab-technician of firms</td>
<td><strong>GOAL</strong></td>
</tr>
<tr>
<td>IEC materials</td>
<td></td>
<td>Trainings for Inspectors, trainings for Food Business Operators, Provides technical assistances</td>
<td></td>
</tr>
</tbody>
</table>

Source: Wai et.al. (2015)

FIQCD: Fishery Inspection and Quality Control Division  
DOF: Department of Fishery  
MLBF: Ministry of Livestock, Breeding and Fisheries
(3) Approved fishery processing plants: Adoption of standards

Figure: Firms’ adoption of public and private standards

- **Public Standards**: All 20 firms used Public Standard
- **Private Standard**: 60% did not use ISO 9000. Among them, more than half of them did not have a plan to apply for private standards meaning they will continue to rely on public standard DOF HACCP
- 60% did not use ISO 9000[Quality Management]
- 90% did not use ISO 22000 [Food Safety]
- 95% did not use 14000 [Environmental]
- 40% ISO 9000, 10%-ISO22000, 5%-ISO14000
- **Size of firms**: 30% - less than 100 employees, 50% between 100-300, 15% - more than 300

Source: Wai et.al. (2015)
## Requirements of 7 major markets in vertical integration and approved factory lists

<table>
<thead>
<tr>
<th>Import Country/Markets</th>
<th>2nd stage of Vertical integration</th>
<th>3rd stage of Vertical Integration</th>
<th>Number of Myanmar fishery factory approved by import country’s CA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Harmonization</td>
<td>Verification Visit</td>
<td>Mutual Recognition between CAs</td>
</tr>
<tr>
<td>EU</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Japan</td>
<td>Not necessary</td>
<td>Not necessary</td>
<td>Not necessary</td>
</tr>
<tr>
<td>USA</td>
<td>Not necessary</td>
<td>Not necessary</td>
<td>Not necessary</td>
</tr>
<tr>
<td>China</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Required</td>
<td>Not yet</td>
<td>Required</td>
</tr>
<tr>
<td>ASEAN</td>
<td>at preparation stage</td>
<td>Not yet</td>
<td>Not yet</td>
</tr>
<tr>
<td>GCC countries</td>
<td>Not necessary</td>
<td>Not necessary</td>
<td>Not necessary</td>
</tr>
</tbody>
</table>

**Legend**
- * means processing plants did not require to be approved by import country’s CA

- 7 major markets and requirements at 2nd and 3rd stages of integration. EU and China integrated vertically
- US integrated completely also having the same requirements at the 2nd stage with Japan that lack the 3rd stage so far
- Integration is initiated by EU and followed by China, Vietnam and ASEAN with varying intensity
- Up to 2014, 20 fishery factories approved for EU markets, 78 factories for China, 24 for Vietnam market
- ASEAN encourages its countries to integrate like EU. However, most countries were not ready practically

Summary

• Fishery Sector is one and only food sector that have (formal) MRA
• Other agriculture sectors have room to develop due to lacking of farm level good practices

• At Government Level (Fishery Sector)
  – Competent Authority and SPS Diplomacy CA recognized and invested in food control with clear role at institutional structure [SPS functions]
  – Vertical Integration It integrated itself at the 2nd stage of Vertical Integration for taking part in international trade with SPS management functions [SPS-Diplomacy for International trade]Risk-management is applied in food control management [SPS functions]

• At Firm Level
  – Ownership and Size of Firms All approved firms owned by Nationals [none were Joint Venture/MNEs]. Almost all approved firms concentrated in Yangon
  – Horizontal Integration Only 14% of firms Integrated FSMS horizontally, 86% of the firms were still ineligible
THANKS FOR YOUR ATTENTION
References

- FAO,(2012), Feeding the world: Statistical year book of the Food and Agriculture Organization.
- UNIDO,(2013), http://www.adb.org/about/main