

Roundtable Discussion on Food Safety and Standards

TACKLING FOOD SAFETY CHALLENGES

March 5, 2014

Co-chairs:	Prof. Dedi Fardiaz, Bogor Agricultural University, Indonesia Prof. Songsak Srianjata, Institute of Nutrition, Mahidol University, Thailand
9:00 - 9:10am	Welcome and Introduction
9:10 - 10:00am	Updates on Food Safety Regulatory Frameworks Cambodia - Mr. Sin Sideth Deputy Director, Department of Laboratory, CAMCONTROL, Ministry of Commerce, Cambodia Lao PDR - Ms. Viengxay Vansilalom Director, Food Control Division, Food and Drug Department, Ministry of Health, Lao PDR Myanmar - Dr. Khin Saw Hla Deputy Director, Food Control, Food and Drug Administration, Ministry of Health, Myanmar Vietnam - Ms. Nguyen Thi Minh Ha Deputy Director, Codex Office, Vietnam Food Administration, Ministry of Health, Vietnam
10:00 - 10:20am	Morning Tea Break
10:20 - 12:30pm	Discussion <i>Key Topics</i> - Food Additive Safety - Consumer Protection - SME Education
12:30pm	Lunch

WORKSHOP AND ROUND TABLE DISCUSSION ON FOOD SAFETY AND STANDARDS

March 04-05, 2014
Yangon, Myanmar

Sin Sideth

Deputy Director of Lab Dept,
Camcontrol DG, Ministry of Commerce

OUTLINE

- Cambodia Trade
- Cambodia Food Safety Management System
- Legal and Institutional Framework and Adoption of Food Safety Standards
- Implementation and Law enforcement related to the Joint Prakas IMP 868
- Challenges and Summary

CAMBODIA TRADE

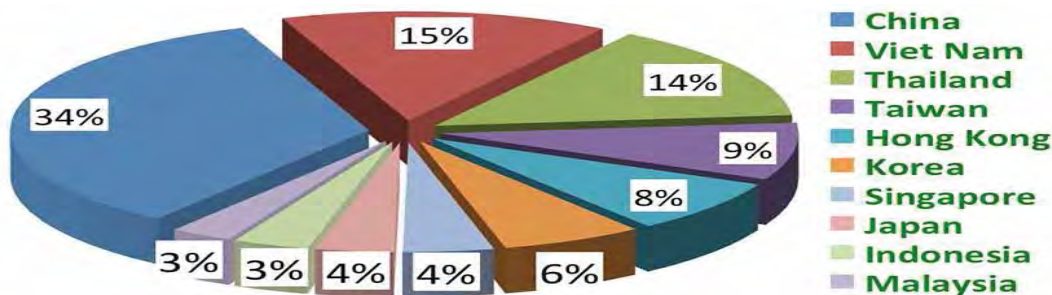
Cambodia Trading

Partners:

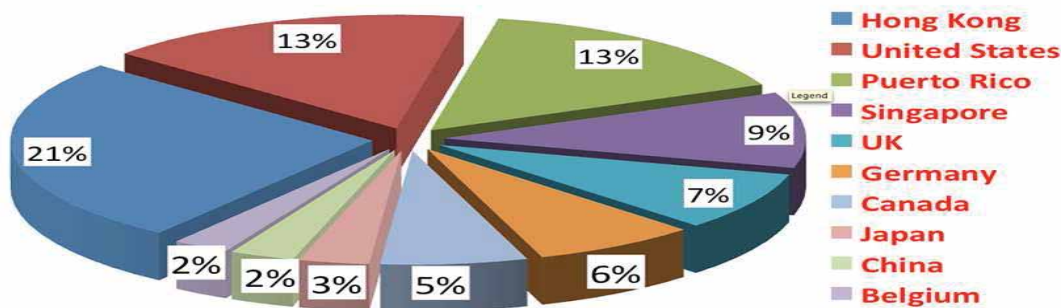
- ASEAN (estimate 600 million consumers)
- Member state of WTO (2004)
- Food export less than import due to SPS issues and Supply demand



Cambodia imported from top 10 countries in 2012



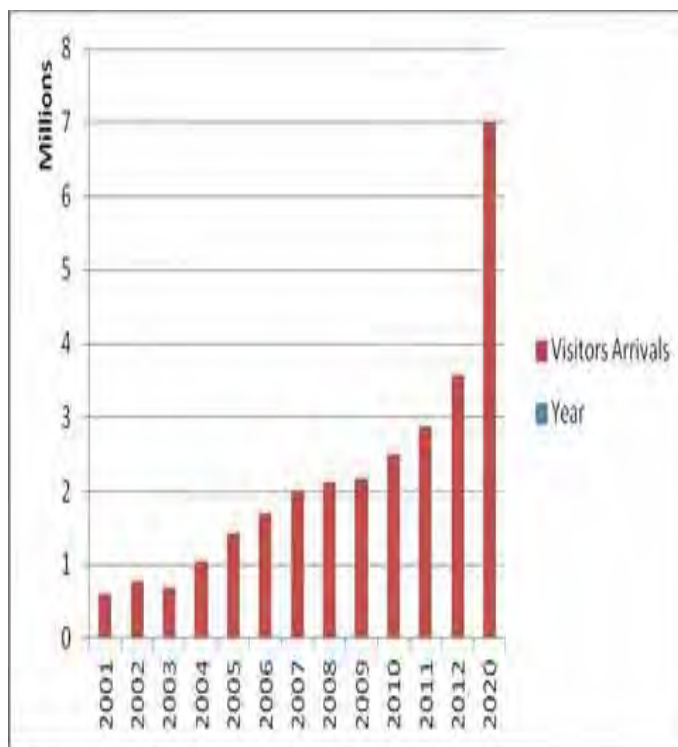
Cambodia exported to top 10 countries in 2012



Tourism associated with
food safety ?

Income generated from
Tourism sector:

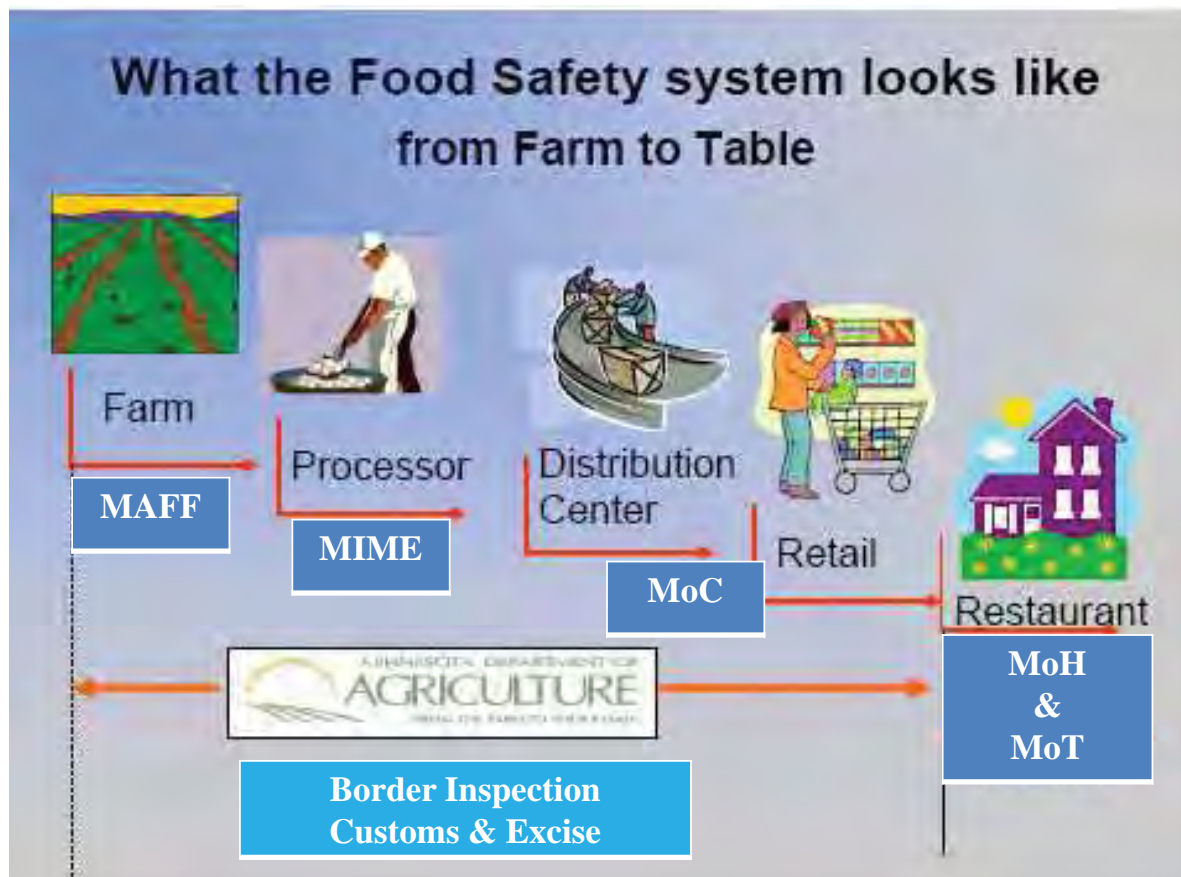
2009 - \$ 1,561 million
2010 - \$ 1,786 million
2011- \$ 1,912 million
2012 – est. \$ 5,000
million



Cambodia Food Safety Management System

Multiple Agencies System based on Farm to Table Approach:

- Inter-ministerial agreement for the implementation and institutional arrangement on food safety management, Prakas IMP 868 (October 22, 2010) established
 - IMP 868 gives mandates to six Ministries
 - MAFF at Primary Production /Primary processing
 - MIME at Secondary processing (SMEs and Factories)
 - MoC at the markets and import (adds, store, display ...)
 - MoH at Canteens and Restaurants (Hygiene inspection)
 - MoT at Canteens and Restaurants (Licensing for business operation)
 - Customs and Excise (border inspection as leading agency)



Cambodia Food Safety Management System (cont.)

For the facilitation and coordination RGC has established numbers of Committees:

- Inter-Ministerial Committee (1998) chaired by SM/Minister of Commerce (8 ministerial members attended)
- National Codex Committee (2000)
 - 8 Ministerial members invited as IMC
 - 4 Technical Working Groups
 - One Secretariat assigned (from CAMCONTROL)
 - Once National Codex Contact Point assigned

Legal and institutional framework and adoption of food safety standards

Govt. Policy on Food Safety Standards

- not reinvent the wheels
- to harmonize with international standards
 - Codex, OIE and IPPC
 - as well as regional standards (ASEAN)

Working with international partners (SPS/TBT)

- Codex contact point – Camcontrol
- OIE contact point – MAFF
- IPPC contact point – MAFF
- TBT contact point - MIME

Significant existing laws and regulations for current practices

- Law on the management of quality and safety of products and services “LMQPS” (26 Jun 2000)
- Law on the management of pesticides and fertilizers (14 Jan 2012)
- Law on Cambodia Standards (24 Jun 2007)
- Law on Fishery (21 May 2006)
- Sub-decree on Food Hygiene for human consumption (12 Jun 2003)

However, technical regulations are still challenging issues for line ministries.



to enhance the competency of food inspection and law enforcement, line ministries agreed on :

- to adopt Codex General Standards/Codex guidelines to be as National Standards but the adoption procedure is not clear (through ISC or NCC ?)

In addition:

- National Food Safety Policy (lead by MoH and draft ongoing)
- LMQPS will be amended to be a New Food Safety Law (lead by NCC and MoC seeking fund and expert)

Implementation and law enforcement related to the joint prakas IMP 868

Refer to IMP 868 relevant ministries shall:

- Policy development, legal framework, standards and technical regulation development;
- Regulation and enforcement of food safety including food business registration and licensing, inspection and other legal enforcement actions;
- Verification and competent authority certification;
- Development and implementation of risk analysis and risk management systems;
- Data collection, scientific and technical research with the purpose of monitoring risk

Implementation and law enforcement related to the joint prakas IMP 868

Refer to IMP 868 the food business operators shall:

- provide safe food and to address safety issues as they arise
- implement Food Safety Management Systems (FSMS);
- ensure compliance with food requirements and standards;
- alert the Ministry and Competent Authority on food safety issues and collaborate closely with the Ministry and CA in implementing measures to avoid or reduce risks caused by its products;
- respond quickly to food safety concerns as they arise;
- voluntary recall the food products;
- record information of its supplier and shall make it available to the Ministry and CA on demand and
- Food business operators shall ensure that food is adequately labeled

Implementation and law enforcement related to the joint prakas IMP 868

Refer to IMP 868 consumers have shall contribute to implement of food safety by:

- understanding about food safety issues and consume only food that meet food requirements and standards
- taking food safety problems to suppliers, report to the Ministry or Competent Authority

Challenges: Lack of consumers' awareness on food safety

Challenges and Summary

- lack of Coordination and cooperation amongst line ministries although IMC plays the role as facilitator and coordinator.
- Procedure for adoption of Codex standards as Technical Regulations
 - lack of technical regulations for law enforcement due to Codex general standards not yet adopted (food additives, vet drug, pesticide residues, contaminants, ...)
- lack of transparency
- capability of CA limited
- consumer awareness
- resources limited (Lab's equipments and inspection tools)
- GHP, GMP, HACCP is not mandatory for specific food

THANK YOU
VERY MUCH

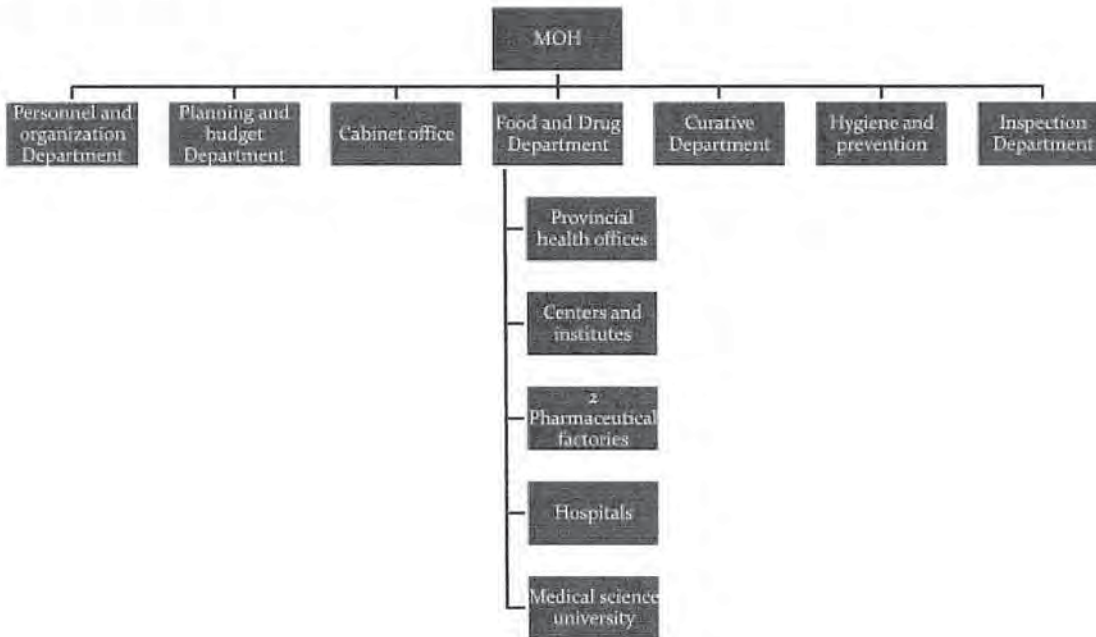
Food safety control Lao PDR

Dr Somthavy CHANGVISOMMID
Director General of Food and Drug Department
Ministry of Health, Lao PDR
email: csomthavy_fdd@yahoo.com, codexcontactpoint_lao@yahoo.com

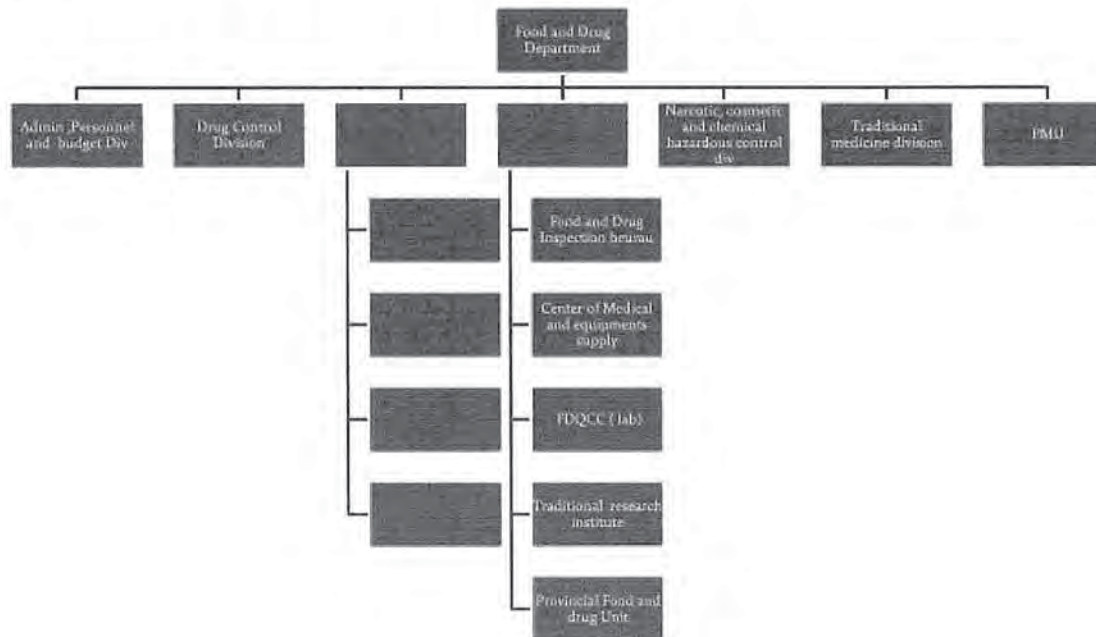
Content

- Introduction
- Regulatory frame work
- activities
- weaknesses and recommendation

Organization Chart of MOH



Organization Chart



Legal and Institutional Framework

1. MOH

a. FDD- Food safety authority

- ☞ Food safety legislation development
- ☞ Premarketing approval: registration, import export permit
- ☞ Food testing services
- ☞ Information, Education, Communication and Training on Food Safety, QA
- ☞ Inspection of food businesses: Food establishments, retailers, markets, border check points (BFDI)
- Food and Drug administration committee (Chair man and secretariat)
- Food borne disease surveillance and Food Safety emergency respond Inspection and certification of imported
- Codex contact point

b. DHP- restaurants and street food vendors

Legal and Institutional Framework

2 . Ministry of Agriculture

primary production control at farm level

- ☞ Plant and animal health control,
- ☞ Implementation of GAP, plant quarantine, registration of pesticides, Vetdrugs, GVP, Good Husbandry Practice
- ☞ Laboratory Services

Food Safety legislation

- Food law revised 2013
- Food Safety policy 2009
- Regulation on Drinking water in packaging 585/MOH 2005
- Regulation on safe food processing , Imported - Exported food No 586/MOH
- Food labeling 2009
- Food premises registration No 1600/FDA
- Food inspection regulation 297, MOH , 24 Feb 2012



Food Safety legislation

- GMP Guideline for Food establishment and drinking water processing plants 2008
- Decree on Iodizes Salt, drinking water, fish sources, Ice, Ice cream..
- Revising Food law and Food Safety emergency WG and plan



Food testing

- 2 laboratories :
 - Food and Drug Quality Control Center - main laboratory for food testing for microbiology analysis and chemical analysis, it preparing to accredited with ISO 17025
 - Vientiane municipal lab – basic microbiology testing and some chemical parameters
 - water supply lab- heavy metal testing
 - The monitoring of contaminants and FBD have been carry out by support of WHO but not regularly

Food training and education

- Food inspectors have vary level of trainings: Pharmacy courses, special trainings on Food Safety Quality Assurance in international and regional level, Audit courses
- FDD with assistant of WHO , FAO experts provide training on GHP, GMP and HACCP for Food producers, series training of risk analysis, Risk based inspection
- Disseminated existing Food Safety legislation
- On job training on application for GHP and GMP

Entry points inspection



Minimarket inspection

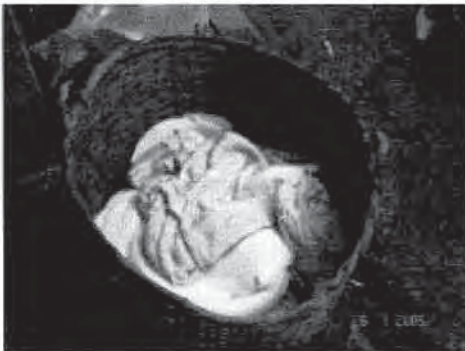




Food establishment inspection



Market inspection





Trainings



Trainings



Cooperation with key stakeholders

- Consultation with Food and drug administration members in policy level for food safety issues
- work with national Codex committees and Food Safety technical working group in considering food safety activities in technical level
- Pesticides committee consultation
- Work with national standards body in development of Food standards
- Work with SME office (SMEPDO, APO) in conducting training on GMP and pilot implementation

Capacity building

- Receiving technical assistant and trainings supported by WHO, FAO(funded by NZAID,Japan) on Food inspection, risk analysis , Risk based inspection, Food import- export inspection and certification)
- EU ASEAN program on inspection and food testing
- Training program in Japan for 5 months on Food safety control system (1 senior staff, 2 technical staff)
- Food Sanitation training for 3 weeks in Japan (JICA)
- GMP training and pilot implementation project support by MAF, Japan through APO



Challengers

- WTO accession and international standards requirements
- ASEAN harmonization
- Regional and international market access



weaknesses

- Limited food legislation and standards
- Limited skilled staff and numbers
- Limited Food testing capacities e.g equipments and facility and skilled staff
- Food Imported through land border and not approved by food safety authority
- Enforcement activities are not effectives

Recommendation

- Develop necessary food legislation and standards and requirement on Food inspection
- Strengthen Food control system: manpower, food testing laboratory, inspection and enforcement
- Capacity for food safety staff and inspectors in short term and long term
- Establish Food science and technology faculty and food safety curriculum

summary

- Food Safety control system in Lao PDR is in the low level and starting build up the capacity
- It needed to have assistant in strengthen FSMS in better in order to fulfill the consumer protection task effectively and reduces foodborn illnesses
- support lao producers to go for international market.
- Capacity for food safety staff and inspectors in short term and long term
- Establish Food science and technology faculty and food safety curriculum



Workshop on Food Safety and Standards

Sedona Hotel
Yangon, Myanmar
4th to 5th March, 2014

ASEAN Member Countries



Updates of Food Safety Regulatory Frameworks

From Myanmar

Presented by
Food Division
Department of Food and Drug Administration

Vision

It is an important task to keep food in retail service free from pathogens and harmful chemical substances or low enough to cause any health hazards

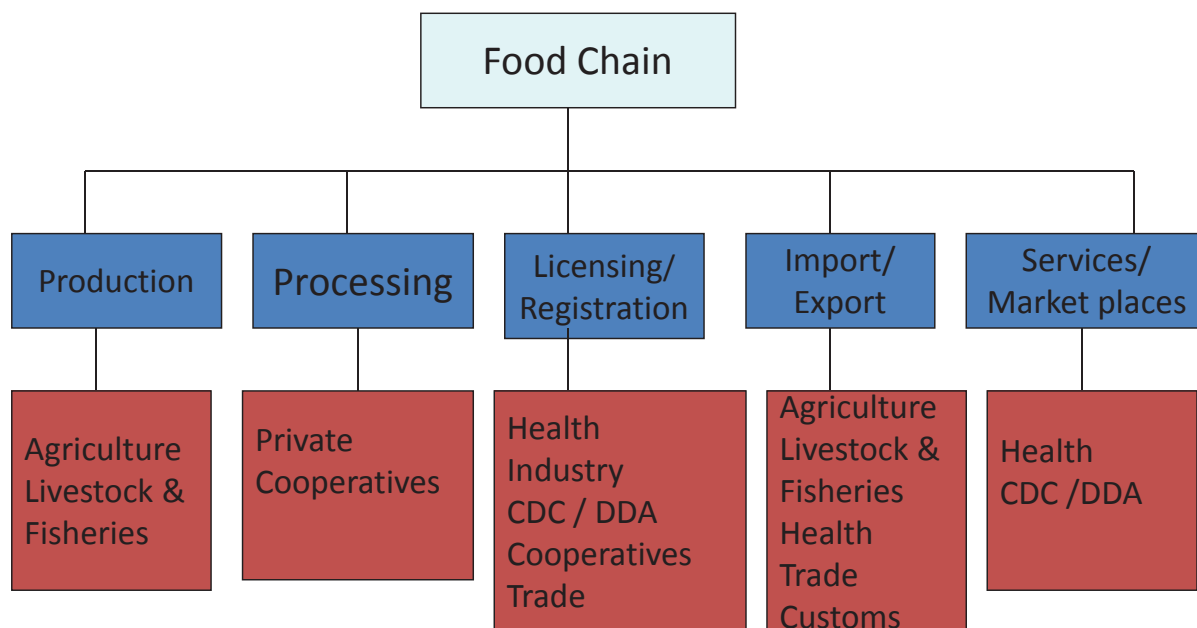
- Foodborne diseases are a major health and economic problem in both industrialized and developing countries.
- The incidence of foodborne diseases in the industrialized countries has been estimated to be as high as 10% of the population.

In some countries the trend is on the increase.

The developing countries bear the biggest burden of food-borne diseases in the world

- Unsafe levels of chemicals and presence of pathogens in food may cause serious health problems, they also pose threats to trade and the environment
- Food production, processing, and preparation are among the most important economic activities for almost all countries and any disruption can have a major impact on the country and on the confidence in the food supply

Responsible agencies along the food chain



Hazards

- Biological Hazards
- Chemical Hazards
 - Environmental contaminants
 - Agrochemicals
 - Food Additives
 - Naturally occurring toxins
 - Processing contaminants
 - Allergens
- Physical Hazards

Collaboration among inter-related sectors

- all professions
- all sectors
(industry, government, consumers and academia)
- all levels
(local, national, regional, international)

Comply with guidelines, standards and specifications

- Factory Specification
- Commodity guidelines and standards
- Regional guidelines and standards
- International guidelines and standards

Related Laws and guidelines

- Agriculture, Fisheries and Livestock sector related laws, regulations and guidelines
- National Food Law
- Industries Registration Laws
- Import / Export Law
- Municipal Law

- International guidelines and references
 - IPPC and OIE guidelines
 - Codex guidelines and reference standards
 - WTO – Sanitary and Phytosanitary Measures

- Practices and standards are in line with codex guidelines and standards
- Myanmar adopted codex guidelines and standards as national reference in 2005
- Government and industry are widely applied for ensuring food safety and quality nowadays.

Activities

- Premarket assessment
 - Pesticide Registration and importation assessment
 - IPM procedures
 - Good Agriculture Practice, Good Farming Practice,
 - Food Hygiene practices and guidelines
 - Import / Export guidelines

- Post-market assessment
 - conducted on commodity basis
- Risk assessment
 - on commodity and priority basis

Food control work is a multisectoral, departmental and services involvement.

As food and drug safety is concerned with a number of sectors including agriculture, fisheries, industry, trade & environment, in recognition of the need for integration, Food & Drug Board of Authority (MFDBA) has been formed in accordance with the provision of National Drug Law and reformed in 2000 and 2013.

- To ensure efficient and uniform control throughout Myanmar, various levels of Food and Drug Supervisory Committee (FDSC) has been formed in 1992 and reformed in 2002
- Food Advisory Committee, Food Orders and Directives Sub-committee and Food Technical Affairs Sub-committee have been formed in 2002 revised in 2013
- The drafted 6 no. of guidelines are under reconsideration

- Food and Drug Administration (FDA) has been formed under the Department of Health according to National Drug Law
- Upgraded to Department of Food and Drug Administration since 1st August 2013
- Branch of DFDA in Yangon and Mandalay
- States / Regional Offices in remaining 12 States / Regions
- Border Stations in Muse, Myawaddy and Tamu (Total 13)

- Department of Food and Drug Administration is concerned with control of processed food
- Activities include –
 - Development of legislation
 - Standards Development
 - Premarket Assessment
 - Monitoring and Surveillance
 - Laboratories development
 - Enforcement works

Trainings and education to Food Inspectors,
Laboratory Technicians, Industry
Participation in international standard settings
Consumer awareness with IEC materials

Flow Chart for Food Manufacturing
Recommendation

Case application forwarded by respective company to
FDA

Field Inspection and Sample Collection and Data
assessment

Case report submitted to CFDSC
for consideration

Forwarded to MOH for confirmation

Issue Recommendation

- Documents to be submitted
 - Factory Layout and localization map
 - Process and Quality Control
 - Ingredients used
 - Machines and its specifications
 - Food Handlers record
 - label

Import Recommendation (IR) Process

Applicant	Food and Drug Administration
Case File Application with - Product Specification - Ingredient list - Product Registration	→ Document Assessment
Preshipment Sample	→ Laboratory Assessment
Pick up Import Recommendation for Importation License at Ministry of Commerce	← Issue Import Recommendation Certificate (2 years validity)

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ImportHealth Certificate (HC) for Food Importation

Applicant	Food and Drug administration
Case File Application with - Import Recommendation → - Bill of Lading - Import Declaration - shipping documents - Health Certificate / Certificate of analysis	Document Assessment
Representative sample of Imported Foods for Customs Clearance →	Laboratory Analysis of imported food (Shipment samples)
Pick up HC for imported food for Customs Clearance ←	Issue HC for Customs clearance

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2013 Work load for Import Assessment

Categories	Total		Items
	IR	IHC	
Fats & Oils(F&O)	472	740	RBD Palm Olein, Olive Oil, Sunflower Seed Oil, Soya Bean Oil, Sesame Oil, Margarine, Shortening, B.O.S, Rice Bran Oil, Coating Fat
Food Additives(FA)	525	467	MSG, Flavour, Colour, Yeast, Seasoning Powder, Baking Powder, Kularome, Maltodextrin, Citric acid, jelling agents, etc
Food General(FG)	449 5	169 0	Biscuits, Cookies, Chocolate, Wafer, Cracker, Cakes, Dried Fruits, Nuts, Juices, Soft Drinks, Sauces, Snacks, Candy, Chewing Gum, Instant Noodles, Instant Vermicelli, Cereals, Peanut Butter, Sugar, Bird's Nest, Chicken Essence, Bread Crumb, Donut Mix, NDC, Coffee, Tea, Porridge, Oat Meal, Mayonnaise, Roasted Seed, Jam, Flour (Wheat, Corn, Tempura)Jelly, Jelly

Categories			Items
	IR	IHC	
Milk & Milk Products(M&M)	307	717	Whole Milk Powder, Skim-milk Powder, Sweet Whey Powder, Whey Powder, Butter, Cheese, SBC, EFM, UHT Milk, Colostrum Milk Tablet, Yoghurt
Food for Special Dietary Uses(Sp.F)	30	6	Glucerna, Prosure, Ensure, Diebetasol, Casilan
Frozen Food (Fr.F)	120	41	Ice- Cream, Processed Meat, Chicken Frank, Fish Ball, Meat Ball, Sausage, Paratha, Pastry, Green Peas, Mixed Vegetables, French Fries
Functional Food(FF) Dietary Supplements	268	137	Dietary Supplement Products, Functional Foods, Collagen, Antioxidants, Omega 3, Vitamin & Mineral Supplement, Lecithin, Probiotics, Melatonin, Amino Acid, Herbal Supplement, Bioactive Polysaccharides, Propolis
Bottled Drinking Water (B.D.W)	19	-	Natural Mineral Water

Export Recommendation (ER) Process

Applicant	Food and Drug Administration
Case File Application with - Product Specification - Ingredient list - Product Registration - reference label for bulk size	Document Assessment
Representative Sample	Laboratory Assessment
Pick up Export Recommendation for applying Export License at Ministry of Commerce	Issue Export Recommendation Certificate (2 years validity) ²⁸

Export Health Certificate Process

Applicant	Food and Drug Administration
Case File Application with - Export Recommendation → - Shipping Documents Bill of Lading Import Declaration - Health Certificate / Certificate of Analysis	Document Assessment
Representative sample of exported food for Customs Clearance →	Laboratory Analysis of exported food (Shipment samples)
Pick up HC for Customs Clearance ←	Issue HC for Customs clearance

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2013 Work load for Export Assessment

Categories	Total	
Export Health Certificate(FE)	120	Rice, Bean, Palm Sugar, Tea Powder
Export Recommendation (FER)	148	Tradition Food, Coffee Mix, Tea Mix, Instant Noodles, Instant Vermicelli

Challenges

Human resources development

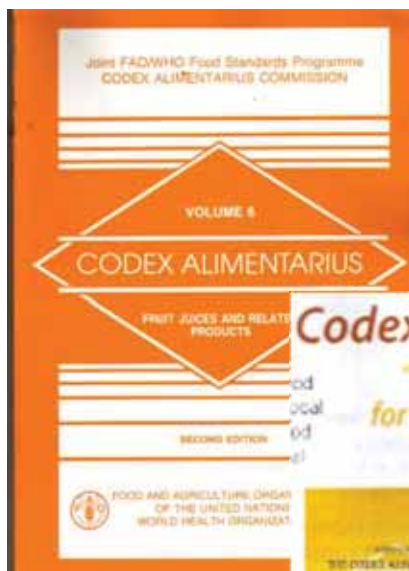
- Study tour on food inspection and certification
- Short-term and long-term trainings on food science and technology
- Trainings on chemical analysis of contaminants, food fortification

Upgrading of laboratory facility

- Extension of laboratories
- Laboratory accreditation

Participation in International and Regional food standards works

THANK YOU



Codex Alimentarius
"The Food Code for consumer health protection"



WORKSHOP AND ROUNDTABLE DISCUSSION ON FOOD SAFETY AND STANDARDS



4-5 March , 2014

Presenter : Eng. Nguyen Thi Minh Ha
Vietnam Codex Office – Vietnam Food Administration

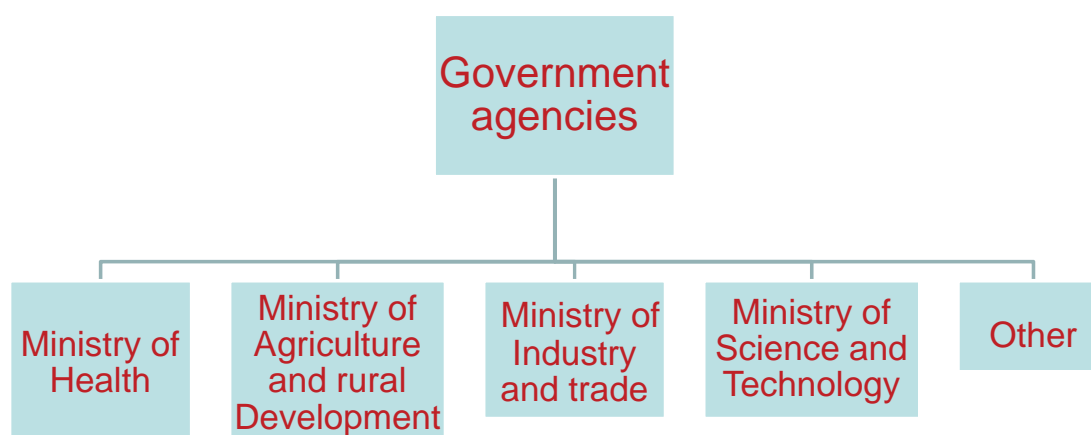


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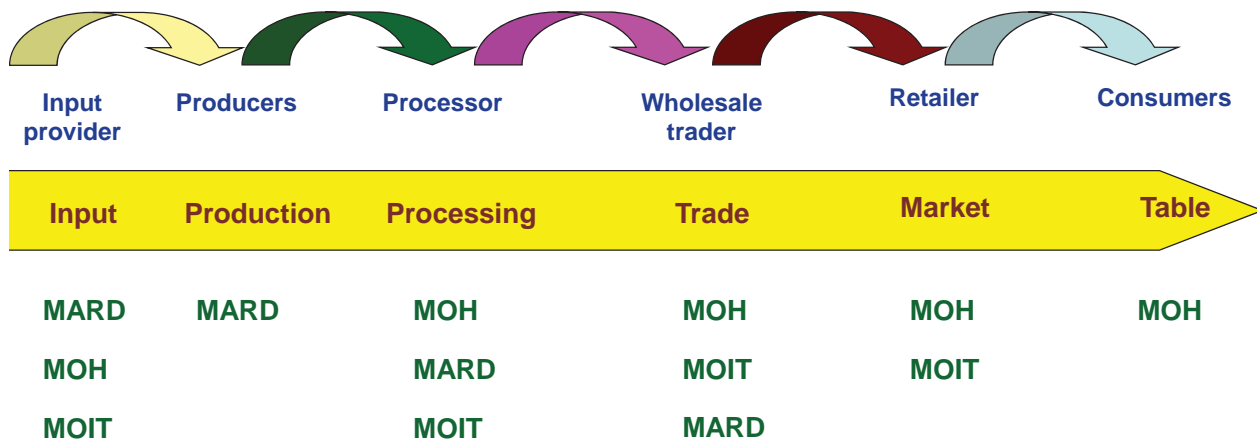


1. Government agencies and other bodies involved in food regulatory system
2. Methods for management of food safety
3. Challenging issues
4. Conclusion

1. Government agencies and other bodies involved in food safety control system



Food safety responsibility Position of Ministries along the food chain



MOST

MOH: Ministry of Health

MARD: The Ministry of Agriculture and Rural Development

MOST: Ministry of Science and Technology

MOIT: The Ministry of Industry and Trade

MINISTRY OF HEALTH - MOH



Responsible for the governance and guidance of the health, healthcare and health industry of Vietnam.

Responsible for:

- Development of standards (including the Codex Alimentarius), laboratory accreditation, and quality control for imported foods.
- Development of technical regulations, and the annual listing of foods requiring inspection.



Cont.



Responsible for supervising food hygiene and safety:

- All processed foods
- Food Additives
- Colours and Flavours
- Residues
- Processing aid
- Natural mineral water, prepackaged water
- Functional food/Fortification food
- Imported foods



MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT - MARD



- Safety of Fresh foods and raw materials
- Animal origin-Department of Animal Health (DAH);
- Plant origin – Department of Plant protection (DAP);
- Fishery products – National Fishery Quality Assurance Department (NAFIQAD)
- Charge of production, import-export, distribution, and use of pesticides in plants and products of plants, veterinary drugs and bio-products, growth promoters



MINISTRY OF INDUSTRY AND TRADE - MOIT



- Production and marketing of alcohol, beer, beverages, confectionary, milk, vegetable oil, flour, starches, and bottled water products.
- Controlling microbiological contamination and chemical residues during food processing
- Developing a food hygiene and safety control program in the food processing industry.
- Trade aspects of food. labeling of goods, which, while less directly relevant to food safety,
- Overall quality management



MOST Ministry of Science and Technology



Responsible for scientific and technological activities

- Development of scientific and technological potential;
- Intellectual property;
- Standardization, measurement and quality control;
- Atomic energy, radiation and nuclear safety;
- State management of public services in the domains under its management in accordance with law.

Other bodies involved in food safety control system



- Institutes, Universities
- International organizations : FAO, WHO, CAC, OIE...
- Associations, Manufactures
- Consumers
- Other

2. Methods for management of food safety

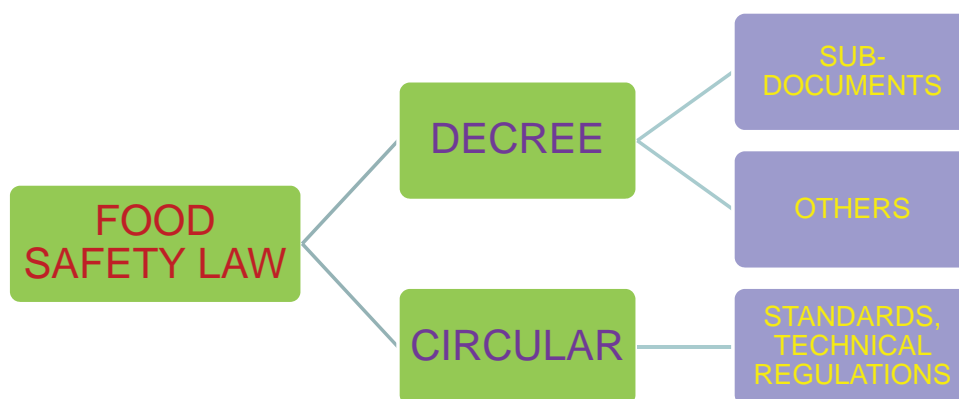
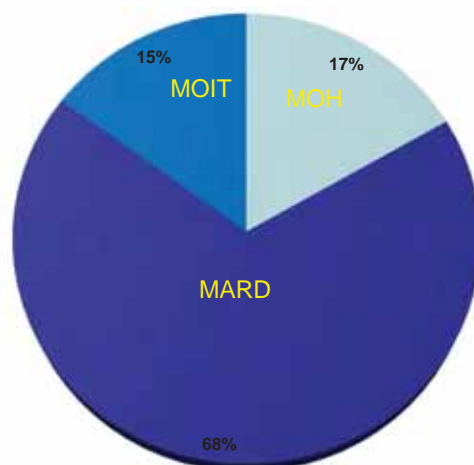


Figure 1. Diagram of National Standards for Foods managed related ministries



2.1 STANDARDS ON FOOD SAFETY



National standards : Vietnam National Standards

Standards for commodity

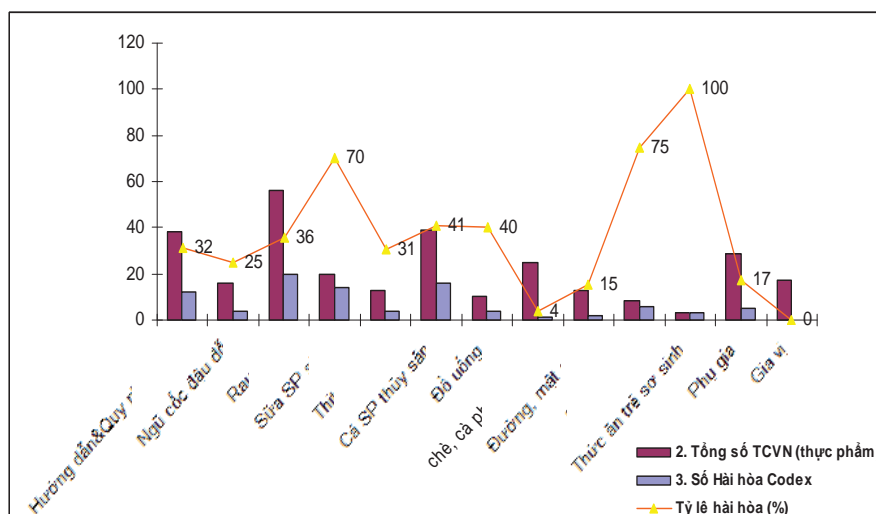
Standards for food processing

Total: 287 standards (almost based on Codex Standards) such as :

- ❖ Milk and milk products
- ❖ Fresh fruits and vegetable
- ❖ Cereals and cereal based-products
- ❖ Fish and fishery products
- ❖ Meat and meats products
- ❖ Guidelines and code of practices
- ❖ Other ...



Percentage of national standards based on Codex standards



2.2 TECHNICAL REGULATIONS



- There are about 50 technical regulations of food promulgated by MOH until 2013

1. Food categories	2. Number	3. Number based on Codex Standards	4. Percentage with Codex (%)	5. Other
Food Additives	23	23	100.00	
Supplements	6	6	100.00	
Beverages	3	2	66.67	1
Milk and Milk products	5	5	100.00	
Contaminants in Food	3	2	66.67	1
Formula	4	4	100.00	
Other	6	3	50.00	3
Total	50	45	90.00	5



2.2 TECHNICAL REGULATIONS

There are about 29 technical regulations promulgated by MARD until 2013

Food Categories	Number	Based on
Meat	3	Codex, ISO
Legumes	6	Codex, ISO
Fruits and vegetable	3	Codex, ISO
Animal feed	2	Codex, ISO
Fish and fishery products	14	Codex, ISO, EU
Other	1	SEV, ISO
Total	29	

3. Challenging issues



Challenging

- Vet drugs residues in meat
- Pesticide residues in fresh vegetable and fruits
- Conditions of processing and handling street food in small markets and restaurants
- Using food additives in food processing, particularly using artificial sweeteners and colours
- Date marking and nutrition labelling of pre-packaged foods
- Cooperation among related ministries is not close and uniform
- Food standards and technical regulations are not met the demands of food industry domestically as well as internationally;
- Lack of skill and experiences of inspectors in terms of food safety issues



4. Conclusion

1. Food Regulatory Frameworks

- Establish government endorsed food regulatory systems
- Develop, implement and enforce food safety standards

2. Food Inspection and Certification Systems

- Develop legislative frameworks for food control management
- Establish communication systems to support food inspection including information, education and training (electronic information exchange systems regarding recall, communication with trade partners and consumer information)
- Develop laboratory and technical capacity including training of personnel

4. Conclusion



3. Technical Skills and Human Resources

- Develop technical skills in areas across the food control system
- Develop skills in food safety risk analysis

4. Information Sharing and Communication Networks

- Utilise and establish relevant forums for information exchange
- Encourage collaboration on food safety capacity building between economies across the region and internationally
- Establish surveillance systems and mechanisms for transparent information-sharing that provide accurate and timely information



Identification of Food Safety Challenges in the Region (CLMV Countries) and Capacity Building Needs

March 4-5, 2014, Yangon, Myanmar

1

Chemical contaminants (Cambodia)
Heavy metals (Hg, Cd, Pb, As), Mycotoxins (Aflatoxin, Ochratoxin, etc.),
Pesticide and Veterinary drug residues, Others (3-mcpd, benzopyrene,
melamine, etc.)
Excessive Food Additives, Prohibited Chemical Additives

Food Safety Challenges Chemical Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
Pesticide and Veterinary drug residues,	Fresh fruits and vegetables Fish and meat and their products	-Law enforcement and monitoring; - GAP/training; - Strengthening lab capacities
Mycotoxins (Aflatoxin, Ochratoxin, etc.),	Cereals and cereals products	- Post harvest management; - Strengthening lab capacities
Food Additives, preservatives etc.	Processed food	-Law enforcement and monitoring; - GMP/training - Strengthening lab capacities
Heavy metals (Hg, Cd, Pb, As),	Fish and fish products Cereal; Vegetable Ground Water	- Monitoring - Risk communication
3-mcpd, benzopyrene, melamine,	Soy sauce, oil Milk products	- Training new technology on soy sauce production - Strengthening import inspection

Microbial pathogens (Cambodia):

Salmonella spp., *Vibrio parahaemolyticus*, *E. coli*: EPEC, ETEC, EHEC, EIEC, *Vibrio cholerae*, *Staphylococcus aureus*, *Listeria monocytogenes*, etc.

Parasites (liver flukes): *Clonorchis*, *Ophisthorchis*

Food Safety Challenges Microbiological Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
<i>Salmonella spp.</i>	-Meat and meat products	- GHP/GMP/HACCP
<i>E. Coli</i> ; <i>staphylococcus</i>	- Meat and meat products; - Water, fruits and vegetable	- GHP/GMP/HACCP
<i>Listeria monocytogenes</i>	-Fish and fish products, (Sea food)	- GHP/GMP/HACCP
<i>Vibrio cholerae</i>	- -Fish and fish products, (Sea food)	- GHP/GMP/HACCP

Chemical contaminants (Laos):

Heavy metals (Hg, Cd, Pb, As), Mycotoxins (Aflatoxin, Ochratoxin, etc.), Pesticide and Veterinary drug residues, Others (3-mcpd, benzopyrene, melamine, etc.)

Excessive Food Additives, Prohibited Chemical Additives

Food Safety Challenges Chemical Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
Heavy metals	drinking water	monitoring the level in water sources and environment, control
Aflatoxin, Ochratoxin	nuts, coffee	storage and drying process control, GMP
Pesticides, HERBICIDES	fruits and vegetables	registration, GAP
Excessive use of Food additives	preservatives and color	monitoring the residues and notify and education
Prohibited FA(formalin, borax) Betagonists, natural toxin, hormone, growth promoter..	Seafood, meat meat	regular inspection, destroy and punishment

Microbial pathogens(Laos):

Salmonella spp., Vibrio parahaemolyticus, E. coli: EPEC, ETEC, EHEC, EIEC, Vibrio cholerae, Staphylococcus aureus, Listeria monocytogenes, etc.

Parasites (liver flukes): *Clonorchis, Ophisthorchis*

Food Safety Challenges Microbiological Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
Salmonella	chicken	good storage and cooking practice
E.coli	vegetables, water sources, street food	good hygiene practice, education 5 keys safer food
Vibrio. parahaemolityticus	seafoods	monitoring import food, good storage and cooking practice
Staphylococcus au.	RTE , street food	Good hygiene practice
Ophistorchis	Fish	cooked food consumption

Chemical contaminants (Myanmar):

Heavy metals (Hg, Cd, Pb, As), Mycotoxins (Aflatoxin, Ochratoxin, etc.), Pesticide and Veterinary drug residues, Others (3-mcpd, benzopyrene, melamine, etc.)

Excessive Food Additives, Prohibited Chemical Additives

Food Safety Challenges Chemical Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
Histamine	Fishery – anchovy (dried products)	improve storage and handling
Non food color	Fishery products	GMP
Antibiotic residues (Nitrofurantoin, Chloramphenicol)	Fish and shrimp, raw meats	GAP/GFP
Nitrite	Dried fish(Snake Head), Processed meat products	GMP
Hormone	Dairy products	GAP

Microbial pathogens (Myanmar):

Salmonella spp., *Vibrio parahaemolyticus*, *E. coli*: EPEC, ETEC, EHEC, EIEC, *Vibrio cholerae*, *Staphylococcus aureus*, *Listeria monocytogenes*, etc.

Parasites (liver flukes): *Clonorchis*, *Ophisthorchis*

Food Safety Challenges Microbiological Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
E.coli, fecal coliforms	pulses and beans, vegetables	GAP – post harvest
Vibrio cholerae	ice products (eg. ice- cream)	GMP
Salmonella spp.	Bakery products	GMP
Staphylococcus aureus	processed food (milk and milk products), salads	GMP, GHP

Chemical contaminants (Vietnam):

Heavy metals (Hg, Cd, Pb, As), Mycotoxins (Aflatoxin, Ochratoxin, etc.), Pesticide and Veterinary drug residues, Others (3-mcpd, benzopyrene, melamine, etc.)

Excessive Food Additives, Prohibited Chemical Additives

Food Safety Challenges Chemical Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
Pb,	Canned foods including canned fruits, water sources,	control from farm to table,
Hg	Fish and fishery products	control the animal feed and vet drugs, apply HACCP
Pesticies	fresh fruits and vegetable, processed fruits and vegetable	make a list of pesticide which is allowed to use with the MRLs enclosed with.
Food additives (colours)	beverages, ready to eat (crackers, snacks, potato chips...), noodles	issue the list of food additives with the provisions to use in food processing.

Microbial pathogens (Vietnam):

Salmonella spp., *Vibrio parahaemolyticus*, *E. coli*: EPEC, ETEC, EHEC, EIEC, *Vibrio cholerae*, *Staphylococcus aureus*, *Listeria monocytogenes*, etc.

Parasites (liver flukes): *Clonorchis*, *Ophisthorchis*

Food Safety Challenges Microbiological Hazards	Specific foods associated with the risk	Risk Mitigation (Any available intervention to reduce the risk?)
<i>Salmonella spp</i>	egg, poultry products, milk and meat products	5 keys of food hygienic conditions in processing.
<i>E.coli</i>	beef meat products, beef fresh milk	cooking carefully, using clean water resources
<i>Listeria monocytogenes</i>	raw milk and food made from raw milk. Contaminate a variety processed meats. RTE and hot dogs Smoked seafood...	do not eat raw milk Cooking carefully Separate the uncooked meat from other cooked products and fruits and vegetable
parasites	castle meat, game and poultry meat	

Please, rank the following diets started from the food consumed most

GEMS/Food Regional Diets	Rank			
	C	L	M	V
Cereals	1	1	1	1
Roots and Tubers	8	6	5	7
Pulses	15	6	4	14
Sugars and Honey	6	3	13	13
Nuts and Oilseeds	9	5	8	12
Vegetable Oils and Fats	7	4	14	10
Stimulants (Tea, Coffee)	11	3	11	9
Spices	10	2	7	15
Vegetables	2	2	2	2
Fish and Seafood	3	3	3	5
Eggs	5	5	9	4
Fruis	4	6	6	8
Milk and Milk Products	13	3	12	3
Meat and Offals	3	4	10	6
Animal Oils and Fats	14		15	11

Please, rank the following capacity building needs

Capacity Building Needs	Rank (if any)			
	C	L	M	V
Basic Chemical Risk Assessment	2	1	3	3
Basic Microbiological Risk Assessment	3	3	3	1
Practical Exposure Assessment of Food Additives	3	3	2	2
Practical Exposure Assessment of Contaminants	3	2	2	3
General Food Consumption Survey	1	2	1	2
Categorization of Food Establishment based on the Risk	1	2	1	4
Chemical Laboratory Analysis	2	1	4	3
Microbiological Laboratory Analysis	2	3	4	1

Workshop and Roundtable Discussion on Food Safety and Standards

March 4-5, 2014, Yangon, Myanmar

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