

# International Conference on Infrastructure Needs For A Food Control System: Roadmap For Regional Harmonization

*December 9-10, 2014, New Delhi*

## **Conference Report**



**Organized By  
ILSI-India and ILSI Japan**



**With Support From  
Ministry of Agriculture, Forestry and Fisheries (MAFF), Japan**



**In Association With  
Food Safety and Standards Authority of India (FSSAI), GOI**



**Co-sponsored By  
Export Inspection Council (EIC), Ministry of Commerce, GOI**

**INTERNATIONAL CONFERENCE ON  
INFRASTRUCTURE NEEDS FOR A FOOD CONTROL SYSTEM:  
ROADMAP FOR REGIONAL HARMONIZATION**

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## **About This Report**

India and its neighboring countries, such as Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka are rapidly growing with more open economies. There is now greater attention to food safety standards and/or food safety control systems with the dual objective of promoting trade and ensuring better public health. The Conference, therefore, aimed to share information and to build capacity in the food safety control systems among the countries and further to identify needs for the future.

The Conference shared information about food control system in SAARC countries as also other Asian countries. It created awareness about Codex standards, their scientific basis and use for protecting public health and ensuring fair trade practices. It identified the infrastructure needs for modern food control system and discussed about possible future actions.

It is hoped that the Conference recommendations will promote and further strengthen the harmonization of food safety standards and/or food safety control systems in SAARC region. It has been instrumental in building the network among food safety authorities in the region. Steps will be initiated at regional level and country level for action on specific issues and considering needs of each country for future capacity building activities.

This Report is divided into two parts. Part One provides "Statement of Recommendations and a Roadmap for Harmonization" and Part Two provides briefly "Proceedings" of the Conference.

The Content of this Report does not represent the views of the organizers. Gratitude is expressed to all the experts and representatives from Government from SAARC countries for sharing their views and information with the participants.





## **Technical Contributors**

**Dr. Mubarik Ahmed**, D G PARC, Department of Plant Protection, Ministry of National Food Security & Research

**Ms. Vani Bhambri Arora**, Deputy Director, NABCB, Quality Council of India

**Ms. Dechen Choki**, Regulatory and Quarantine Officer and Focal Officer For Food Safety, Bhutan Agriculture and Food Regulatory Authority (BAFRA), Ministry of Agriculture and Forest, Royal Government of Bhutan

**Ms. Pauline Chan**, Director of Scientific Programs, ILSI South East Asia Region

**Dr. Ritu Singh Chauhan**, MD, National Professional-Microbiology, Communicable Disease Surveillance, World Health Organization

**Mr. S Dave**, Advisor, Food Safety and Standards Authority of India Ministry of Health and Family Welfare, GOI

**Dr. Ananda Jayalal**, Director, Environmental Health Occupational Health and Food Safety, Ministry of Health

**Mr. Anil Jauhri**, CEO, Quality Council of India

**Ms. Vinod Kotwal**, Director, Codex and Liaison Officer, Food Safety and Standards Authority of India, Ministry of Health and Family Welfare, GOI

**Mr. Anil Mehta**, Deputy Director, Food Safety and Standards Authority of India (FSSAI), Ministry of Health and Family Welfare, Government of India

**Mr. Satheesh Moosa**, Microbiologist, Food Control Division, Maldives Food And Drug Authority, Ministry of Health, Republic of Maldives

**Dr. B K Nandi**, Former Senior Food and Nutrition Officer, FAO Regional Office for Asia and the Pacific, President, Society for Nutrition, Education and Health Advancement (SNEHA)

**Ms. Rita Pandey**, Officiating Director General, Department of Food Technology and Quality Control, Ministry of Agriculture Development Government of Nepal

**Dr. Sudarshan Rao**, Assistant Director, National Institute of Nutrition

**Ms. Shashi Sareen**, Senior Food Safety & Nutrition Officer, FAO Regional Office for Asia and the Pacific

**Mr. Parmod Siwach**, Assistant Director (Tech.), Export Inspection Council of India, Ministry of Commerce and Industry, GOI

**Ms. Keiko Sait**, Technical Official, Policy Planning and Communication Division, Department of Food Safety, Pharmaceutical and Food Safety Bureau, Ministry of Health, Labour and Welfare (MHLW)

**Dr. S K Saxena**, Director, Export Inspection Council, Ministry of Commerce and Industry, GOI

**Mr. Mohammed Ruhul Amin Talukder**, Research Director (DS), Ministry of Food, Government of the People's Republic of Bangladesh

**Mr. Hideya Yamada**, Director, Export Promotion, Food Industry Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries

**Dr. Yukiko Yamada**, International Consultant on Food Safety; Advisor, Ministry of Agriculture Forestry and Fisheries

## **Abbreviations**

<b>AEC</b>	ASEAN Economic Community
<b>APEDA</b>	Agricultural And Processed Food Products Export Development Authority
<b>ARAC</b>	ASEAN Risk Assessment Centre
<b>ASEAN</b>	Association Of Southeast Asian Nations
<b>ATIGA</b>	ASEAN Trade In Goods Agreement
<b>BAFRA</b>	Bhutan Agriculture And Food Regulatory Authority
<b>BFSA</b>	Bangladesh Food Safety Authority
<b>BSTI</b>	Bangladesh Standard And Testing Institutions
<b>CAC</b>	Codex Alimentarius Commission
<b>CCFFV</b>	Codex Committee On Fresh Fruit And Vegetables
<b>CCFH</b>	Codex Committee On Food Hygiene
<b>CCFICS</b>	Codex Committee On Food Import And Export Inspection And Certification System
<b>CCMAS</b>	Codex Committee On Methods Of Analysis And Sampling
<b>CCPR</b>	Codex Committee On Pesticide Residues
<b>CFL</b>	Central Food Laboratory
<b>CFTRI</b>	Central Food Technological Research Institute
<b>CGSFA</b>	Codex General Standards On Food Additives
<b>DFTQC</b>	Department Of Food Technology And Quality Control
<b>EIC</b>	Export Inspection Council Of India
<b>FAO</b>	Food And Agriculture Organization Of The United Nations
<b>FSSAI</b>	Food Safety And Standards Authority Of India
<b>GAP</b>	Good Agriculture Practices
<b>GHP</b>	Good Hygiene Practices
<b>GMP</b>	Good Manufacturer Practices
<b>GOI</b>	Government Of India
<b>HACCP</b>	Hazard Analysis Critical Control Point
<b>ICAR</b>	Indian Council Of Agricultural Research
<b>ILAC</b>	International Laboratory Accreditation Cooperation
<b>ILSI</b>	International Life Sciences Institute
<b>INFOSAN</b>	International Network Of Food Safety Authorities
<b>IPPC</b>	International Plant Protection Convention
<b>JECFA</b>	Joint FAO/WHO Expert Committee On Food Additives
<b>JEMRA</b>	Joint FAO/WHO Expert Meetings On Microbiological Risk Assessment
<b>JMPR</b>	Joint FAO/WHO Meeting On Pesticide Residues
<b>MAFF</b>	Ministry Of Agriculture, Forestry And Fisheries Of Japan
<b>MFDA</b>	Maldives Food & Drug Authority
<b>MHLW</b>	Ministry Of Health, Labour And Welfare
<b>MoHFW</b>	Ministry Of Health And Family Welfare
<b>MRL</b>	Maximum Residue Limits
<b>NABL</b>	National Accreditation Board For Testing And Calibration Laboratories
<b>NFCS</b>	National Food Control System
<b>NFTL</b>	National Food Testing Laboratory
<b>NFQSC</b>	National Food Quality And Safety Commission
<b>SAARC</b>	South Asian Association For Regional Cooperation
<b>SPS</b>	Sanitary And Phytosanitary Measures
<b>TBT</b>	Technical Barriers To Trade
<b>WHO</b>	World Health Organization
<b>WTO</b>	World Trade Organization

# **PART ONE**

## **STATEMENT OF RECOMMENDATIONS**

### **&**

## **ROADMAP FOR REGIONAL HARMONIZATION**

ILSI-India and ILSI Japan organized the “International Conference on Infrastructure Needs For A Food Control System: Roadmap For Regional Harmonization” on December 9th -10th, 2014 in New Delhi, India. The Conference was organized with support from Ministry of Agriculture, Forestry and Fisheries, Japan, in association with Food Safety and Standards Authority of India (FSSAI), Ministry of Health and Family Welfare, GOI, and was co-sponsored by Export Inspection Council, Ministry of Commerce and Industry, GOI.

The Conference was inaugurated by Mr. K. Chandramouli, Chairman—, FSSAI. Discussions on some of the key subjects were led by: Dr. S K Saxena, Director, EIC; Mr. S Dave, Advisor, FSSAI; Dr. Ryuji Yamaguchi, Executive Director, ILSI Japan; Dr. B K Nandi, Former Senior Food and Nutrition Officer , FAO RAP; Dr. V Prakash; FRSC, Distinguished Scientist of CSIR INDIA, Director, Innovation Research and Development at JSS MVP, Mysore. The Valedictory Address was delivered by Mr. Y S Malik, Chief Executive Officer, FSSAI. Presentations were made by 28 eminent speakers on different related subjects, apart from the panel discussion which focused on infrastructure requirements of the region, the gaps that exist and the way they could be made up. Over 100 delegates from 7 countries from Government, Industry, Academia, FAO and WHO and other national and international institutions participated in the Conference.

### **Preamble**

The objective of the two-day conference was to develop a road map for harmonization of food control systems in the South Asian region. This road map may be relevant to other regional groupings as well.

The action points that emerged from the presentations and discussions are essential components of the road map for harmonization with the dual objectives of ensuring safe and nutritious food and facilitating food trade within the region and the rest of the world.

It is essential for each country to have a food control system with legal provisions for levels of safety, infrastructure, surveillance mechanism, food labeling, to make harmonization possible.

Harmonization of food regulations would be beneficial keeping in view Codex as the reference point since Codex standards have WTO

acceptance and are based on the best available science.

### **Regulatory Authorities In SAARC Region**

The food control system varies a good deal among countries in the South Asian region. The Bangladesh Parliament enacted the Food Safety Act 2013 which is under implementation including the establishment of Bangladesh Food Safety Authority.

The food control system is governed by the Food Act of Bhutan 2005 and Regulations 2007. The National Food Quality and Safety Commission is the highest decision making body in food matters.

In India the food control is governed by Food Standards and Safety Authority of India set up under the 2006 Act by Parliament.

The food control system is regulated in Maldives by Food and Drug Authority and the Health Protection Agency. The Department of Food Technology and Quality Control is the implementing authority for food legislation in Government of Nepal has provisioned Department of Food Technology and Quality Control as the implementing agency for food legislation.

The Ministry of Food Security and Research is working on a national strategy on implementing food safety which will provide a sound regulatory foundation for domestic and international food trade of Pakistan.

Food control activities are mainly carried out in Sri Lanka by the Ministry of Health through its Food Control Administrative Unit.

The food control systems in different countries have evolved in response to need. In spite of the differences in the systems and regulations it should be possible to harmonize the systems with the central objective of bringing them in line with Codex standards.

## **Action Points**

### **1. Areas For Harmonization**

The best option for the region is to complete the process of harmonization which was started by ILSI-India in 1999 with the regulatory regime under Codex. It is also important to take inventory of the initiatives in this regard under SAARC intergovernmental process and plan for future building on those initiatives. This process has to be transparent and open with consistency and practicality and subject to preference indicators. ASEAN is a good example. The areas identified in this Conference are:

- a. Legal provisions about safety
- b. Surveillance mechanism
- c. Safety tools including GMP,GAP, GLP, ISO, HACCP and risk assessment

- d. Food labeling including nutrient declarations which should be mandatory and supplementary nutrition information
- e. Food categorization systems
- f. Food additives
- g. Contaminants and biological hazards

### **2. Process of Harmonization**

The regulations should be implementable, provide room for innovation and introduction of new products. This mechanism essentially involves all stakeholders including regulators, consumer organizations, farmers, street vendors and industry.

### **3. Prerequisites of Harmonization**

In order to get the full advantage of harmonization it is essential to:

- a. Understand and in appropriate manner incorporate the Codex standards, guidelines and recommendations, as also the best international practices and the science on which these are based
- b. Strengthen cooperation among regional countries to promote sharing of data, knowledge base, best practices, laboratory infrastructure, training of manpower
- c. Use the SAARC organization to implement the road map for harmonization

### **4 National Food Control System**

The national food control system should:

- a. ensure that only safe and wholesome foods are marketed
- b. take decisions based on science and risk assessment
- c. empower authorities to detect sources of contamination and take necessary action to prevent contaminated foods from reaching the consumer
- d. enforce compliance by farmers, manufacturers, distributors, importers and other stakeholders

- e. be transparent and promote public confidence
- f. utilize capacity building programs by FAO/WHO

#### **5. Food Regulators**

Agreement among food regulators will ensure common standards for food safety, contaminants, labeling requirements, streamlined procedures, methods of analysis, accreditation of laboratories, conducting surveys, maintaining data base and organizing training programs at all levels.

#### **6. Surveillance And Monitoring**

Post-marketing surveillance and monitoring based on information from different sources, analysis of such information and their use in decision making would ensure efficient and effective implementation of the food control system and minimize risk of biological and chemical hazards.

#### **7. Self-Regulation**

Self-regulation by industry is the best way of control if their product is demonstrated to be safe.

#### **8. Consumer Education**

Education of the consumer has to be a shared responsibility of industry, regulators and consumer organizations. Consumer perceptions about food safety, standards and risks can greatly impact on their choice of food. It is therefore important to develop effective risk communication strategies.

#### **9. Strengthening of Infrastructure**

The panel discussion focused on the infrastructure needs of the region to enable efficient implementation of food control systems. Infrastructure would primarily include laboratories for sample analysis and research, trained personnel, etc. and would require huge investment. Hence it would be desirable to have common infrastructure facilities with shared secondary requirements. To achieve this objective it is necessary to:

- a. Establish accredited laboratories.
- b. Set up cold chains to avoid food wastage
- c. Organize programs for capacity building
- d. Ensure good laboratory practices
- e. Adopt internationally accepted methods of sampling and analysis
- f. Maintain proper documentation

#### **10. The Way Forward**

- a. Networking of NFCS at SAARC
- b. Develop SAARC as a block
- c. Notify referral laboratories
- d. Counselling and Training of NFCS staff
- e. Create a data base for the region

Harmonization is a complex and extensive exercise and will take time if a beginning is made with the mapping of NFCS in different counties the goal can be achieved to ensure safe and nutritious food to the consumer and facilitate and enhance trade within the region and with the rest of the world.

## **PART TWO**

### **CONFERENCE PROCEEDINGS**

### **Inaugural Session**

#### **Welcome Address**

***By Mr. D H Pai Panandiker***

Food quality and safety standards vary from country to country. Had the food control systems been guided by science alone, there would possibly be less room for differences even though science governing food control system is still evolving. Differences in standards exist due to other considerations, mainly economic. Greater the safety higher the cost of food. Still, there are minimum standards that need to be observed and efficiently implemented.

Harmonization presumes that each of the participating country has a national food control system, with legal provisions, infrastructure for food hygiene, a surveillance mechanism to detect and eliminate water and food contamination, and food labeling to inform the consumer about composition of packaged foods. The safety norms can vary from country to country but the existence of a food control system facilitates harmonization.

Commonality of standards has to be at two levels: vertical and horizontal. To implement these standards and ensure that they conform to the benchmarks, countries have to have the necessary infrastructure which would include laboratories with qualified equipment, trained manpower, accepted analytical methods and documentation following good laboratory practices. While harmonization of standards is more a policy matter, infrastructure requires huge financial investment

Harmonization facilitates food trade. Codex standards have been accepted by World Trade Organization as benchmarks and are useful guides to set food quality and safety targets for Asian countries. Harmonization of food

standards with Codex supported by infrastructure will promote public health and cut health care costs by reducing the incidence of disease and at the same time facilitate trade within the region and the rest of the world. What is needed most is political will. With cooperation between governments it should be possible to adopt common quality and safety standards which can be implemented, if necessary by having common infrastructure facilities.

ILSI-India had taken the initiative to bring about harmonization of food regulations in the SAARC region. With support from ILSI Global and FAO it brought together the SAARC countries to agree and take steps to harmonize food standards. That was way back in 1999. We had four meetings in India, Nepal and Sri Lanka. SAARC countries were committed to harmonization and the stage was set for vertical and horizontal harmonization. This is an ongoing process and situation will be reviewed further work undertaken.

#### **Introduction And Background**

***By Mr. Hiroaki Hamano***

ILSI Japan supported by Ministry of Agriculture, Forestry and Fisheries (MAFF), Government of Japan took the initiative in 2009 to investigate Legal Framework on Foods and Food Additives in Asian Countries. The objectives of this project are to facilitate harmonization of food regulations /standards for promoting fair trade, and further to help secure food safety within Asian region by disseminating and sharing information generated. This work will also support expansion of overseas businesses in the fast-growing markets of emerging countries.

So far studies have been completed in Codex standards and guidelines and food control

systems and regulations in the following countries: Japan, Korea, China, Malaysia, Singapore, Philippines, Indonesia, Thailand, Vietnam, India, Bangladesh, Nepal, and Sri Lanka, Brunei, Cambodia, Lao PDR, Myanmar and Taiwan. Conferences, Workshops and Seminars have been organized in: Tokyo, Japan; Bangkok, Thailand; Jakarta, Indonesia; Yangon, Myanmar; and New Delhi, India between 2010-2014.

The present Conference has been organized to share information about food safety control systems in SAARC countries and also other Asian countries, understand Codex standards, their scientific basis and use for protecting public health and ensuring fair trade practices; identify infrastructure needs for modern food safety control systems; and discuss about possible future actions. It is expected that the Conference will promote harmonization in food safety standards and/or food safety control systems; build the network among food safety authorities in the region and list specific issues and needs of each country for future capacity building activities.

### **Address By**

#### **Dr. A M Gondane**

In his address Mr. Gondane informed that substantial discussions on Harmonization of Food Regulations have taken place at SAARC. The work of harmonization of food regulations has been entrusted to Ministry of External Affairs.

He made the following points:

- A SAARC Agricultural Regional Center was established in 1989. However, it did not work due to cumbersome procedures. It also looked at meeting the food requirements. A SAARC Food Reserve was established to meet the food requirements during contingencies (floods, drought, and famine). Food was stored in different SAARC member Countries in Silos.

- SAARC Food Bank has been established, Ministry of External Affairs, Ministry of Agriculture, Ministry of Consumer Affairs and Ministry of External Affairs are involved. In 2011 an Agreement was signed and half million tons of food grains have been reserved. Guidelines and procedures have been simplified to enable countries to withdraw supplies when required.
- SAARC Seed bank has been established.
- Recognizing the need for standardization a SAARC Standards Organization has been established in Dhaka. Many groups have been setup under this organization including one on agriculture. Last meeting was held in November 2014.
- Intra SAARC trade in commodities is being facilitated.
- There is a three tiered discussions in SAARC for approving programs. It includes Program committee, Standing committee and Council of Ministers.
- In SAARC, agriculture is given a great deal of importance because more than 50% of the people are dependent on agriculture.
- It is important to have common regional standards for promoting trade in agricultural commodities and improve the nutrition and health status as well as productivity in the region. ILSI-India's help in harmonization of standards would be useful.

### **Opening Remarks**

#### **By Mr. Hideya Yamada**

On behalf of Ministry of Agriculture, Forestry and Fisheries of Japan, Mr. Hideya Yamada thanked the participants for attending the Conference. He appreciated ILSI India and ILSI Japan for organizing the Conference in New Delhi and thanked FSSAI and Export Inspection Council, Ministry of Commerce and Industry for extending their support.



Dr Yamada said that Japan and the MAFF would like to increase the volume of food trade with SAARC countries. He underlined that food safety control systems and standards are increasingly important in food trade. To ensure fair practices in food trade and to protect public health, it is important to share the information on food safety control systems and standards with each other. The Conference will help in creating greater awareness.

### **Inaugural Address**

#### ***By Mr. K Chandramouli***

Mr. K. Chandramouli, FSSAI inaugurated the Conference. He began by complimenting ILSI-India and ILSI-Japan for organizing a Conference on the topic which is very important for the region. He said that it is very important to have a uniform system which can be implemented. In order to implement standards it is necessary to have a strong infrastructure. Standards and Infrastructure are complementary and are crucial for establishment of a strong food control system in the region. It has been the endeavor of FSSAI ever since it came on ground for enforcement in the last 3 years, to establish a reasonably strong infrastructure in the country. He said that areas needing further improvement are laboratories and facilities for risk assessment and risk management. He also urged the private sector to keep infrastructure needs in mind and strengthen the efforts of FSSAI. There is a network of 140 laboratories which are NABL accredited. He assured that in the next 2-3 years infrastructure facilities will be made available throughout the country.

Mr. Chandramouli mentioned that the task of standardization is very challenging for India which has a variety of cuisines. It has been quite challenging for FSSAI to set up standards while keeping the variety intact. Further, FSSAI has set up 67 Working Groups which have worked

on harmonization of Indian standards with Codex and their report will be discussed by the Scientific Committee which would meet on December 10, 2014. He informed that in January, 2015 Meeting, about 10,000 horizontal standards will be finalized. Once they are notified they will provide guidance to the industry on norms to be followed.

Mr. Chandramouli said that in the SAARC region food consumption is small segment of the total food. Share of street foods prepared by unorganized sector is very large and it is challenging to lay down standards for this sector. He felt that a system should be evolved for setting standards for street foods. Once it is done consumer's health will be taken care of.

### **Vote Of Thanks**

#### ***By Mr. N M Kejriwal***

While proposing vote of thanks Mr. N M Kejriwal, President, ILSI-India said that the food processing industry in SAARC region has grown in size in recent years and produces a wide range of products including beverages, sugar, edible oils, ready to eat products etc. The rapid growth in the food industry has led to increased complexity across product design, supply chain and consumer habits. While the industry has adopted new technologies, introduced innovations, it has to meet consumer's expectation of safe, healthy and quality foods. Food Regulations play an important role in providing guidance to the industry on the norms to be followed by them to ensure that the foods that they produce are safe. He reiterated that it should be the endeavor of each country in the region to follow the norms laid down by International organizations like CODEX Alimentarius Commission as they are science based and adopted after years of deliberations and establish a well-developed infrastructure in terms of manpower and laboratories.

## **SESSION 1**

# **FOOD CONTROL SYSTEM IN SAARC COUNTRIES**

**Chair: Dr. S K Saxena, Director, EIC**

### **Food Control System In Bangladesh**

***By Mr. Mohammed Ruhul Amin Talukder***

Food safety and quality is an increasingly important issue both domestically and internationally. It is equally important for realizing the food security, health and nutrition related targets of National and International Development Goals. This paper is to analyze the existing food safety institutional framework in Bangladesh, identify bottlenecks if any and suggest options to improve it, taking into consideration of the emerging requirements.

The potential risks in food and food safety loads in Bangladesh are assessed in the first place. Then an inventory is made on the food safety institutions, laws and rules, standards and guidelines. In the end, gaps and issues are identified and evaluations are made as to how adequate the existing institutions are in addressing the loads/issues of food safety in the country.

Food control system in Bangladesh is a multi-sectoral responsibility. While Ministry of Health and Family Welfare (MoHFW), Ministry of Agriculture, Ministry of Food, Ministry of Industries (Bangladesh Standard and Testing Institutions, BSTI), Ministry of Commerce and Ministry of Local Government and Cooperatives have responsibilities in their respective areas. The food safety regulatory regimes have gone through reforms over the years.

With the Pure Food Ordinance 1959 and the Pure Food rules 1967 MoHFW used to coordinate food safety regulations and their implementation until the enactment of Pure Food Act 2005 which empowered Ministry of Local Government and Cooperatives to coordinate the activities through establishing National Food Safety Advisory

Council. On the other hand, BSTI, the codex contact point in Bangladesh, was leading the formulation of voluntary and mandatory standards and operating enforcement drives in the market in accordance with BSTI ordinance 1985.

Bangladesh National Codex Committee (BNCC) was established in the BSTI chaired by the Director General of BSTI. The BNCC consists of 14 representatives from relevant Ministries and Agencies. While BSTI is working relentlessly to harmonize with codex standards, a lot more remains to be done. Bangladesh has also adopted HACCP standards for food/fish processing industries.

Future Codex activities planned, among others, include capacity development of the National Codex Contact Points; organizing seminar and workshops; and establishing linkages with national and international Codex committees.

In 2013, considering the weaknesses in the system, Bangladesh Parliament enacted Food Safety Act-2013 in which the responsibility of coordination is given to Ministry of Food. The Rules of Business of the Government and Allocation of Business to the Ministries have also been modified accordingly. The major provisions of the Act are: establishment of 29 members National Food Safety Management Advisory Council (NFSMAC), Establishment of Bangladesh Food Safety Authority (BFSA), Formation of Central Food Safety Management Coordination Committee, at least 7 Technical committees on different food safety related subjects, etc.

While the Act is under process of implementation, the Government is also promulgating Rules as outlined in the Act. The

BFSA is also under process of establishment. The Government hopes that the food safety regulatory framework and institutions would thus embody all recent developments and help establish a science based and people centered approach in formulating standards and procedures, raising awareness and bolstering enforcements.

## **Food Control System In Bhutan**

*By Ms. Dechen Choki*

The Bhutan Agriculture and Food Regulatory Authority (BAFRA) under the Ministry of Agriculture and Forests was institutionalized on 5 August 2000 as a perpetual, public-sector instrument to promote the quality and safety of goods and products related to the Ministry of Agriculture and Forests. It also coordinates and liaises with other national, regional and international agencies that are related to regulation of quality and safety of agricultural products including foods.

BAFRA is the focal points for the Codex Alimentarius Commission (CAC) and the International Plant Protection Convention (IPPC), national enquiry point for WTO-SPS Agreement and the national competent authority for biosecurity.

BAFRA was designated as the National Food Inspectorate in 2003. The food control system is governed by the Food Act of Bhutan, 2005 and its Rules and Regulations, 2007. The National Food Quality and Safety Commission (NFQSC) established under the Food Act comprise of representatives from all the key ministries and agencies and is the highest decision making body on food safety matters.

The Food Rules and Regulations, 2007 applies to all stages of production, processing, transport, storage, distribution and preparation, trade, import and export of food, as well as animal feed. The Food Rules and Regulations, 2007 cross refers to the relevant Codex standards, guidelines and codes of practices. National food standards, guidelines and codes of practices are developed

based on the existing Codex works. Codex meetings, workshops and seminars are seen as an effective platform for educational and technical capacity building. The Food Rules and Regulations mandate the food handlers training wherein the food handlers are trained/educated on the basic aspects of food safety and accordingly, licensed. Since 2008, a total of 10,370 food handlers were trained and licensed. Since the concept of food safety is in a nascent stage, education and awareness continues to be an on-going activity.

The Food Act, 2005 provides legal status of the National Food Testing Laboratory (NFTL) which achieved ISO/IEC 17025 accreditation since 2012 and is currently accredited for basic test parameters.

Bhutan is a net importer of food products and the globalization of food supply has exposed its people to a wide range of food safety hazards such as veterinary drug residues, heavy metals, toxins (e.g. mycotoxins, biotoxins), pesticide residues and pathogenic microorganisms. Risk based food import inspection is crucial to minimize the exposure to hazards and at the same time ensure efficient utilization of the available scarce resources.

Apart from its head office in Thimphu, BAFRA has offices established in all the twenty districts across the country, five major entry/exit points and several other strategic entry points. Satellite laboratories and decontamination facilities are also established at the five major entry points to perform basic laboratory tests for food products and the quarantine of live animals and plants.

The future needs for an effective food control system in Bhutan are as below:

1. Extend the scope of accreditation of the NFTL to be able to test food samples for veterinary drug residues, heavy metals, toxins, pesticide residues and pathogenic microorganisms for which there is a need for adequate training of lab analysts in a well-recognized regional laboratory.

2. Keep abreast of the latest technology equipment, updated standard references and accordingly train staffs.
3. Laboratory networking for effective resource pooling in the region.
4. Establishment of four regional satellite food laboratories.
5. Strengthen satellite laboratories at the five major entry points.
6. Strengthen the understanding of risk analysis principles.
7. Develop national food safety information system.
8. Strengthen capacity to contribute to the standards setting process with enhanced regional collaboration and cooperation.
9. Capacity building for conducting risk assessment.
10. Establishment of a food borne disease surveillance system.
11. Capacity building on investigation of food diseases outbreak epidemiologically and clinically.

## **Food Control System In India**

*By Ms. Vinod Kotwal*

An Increase in food trade through domestic and international distribution of food has led many countries to adopt a National Food Control System (NFCS). According to FAO/WHO, Food Control can be defined as a “mandatory regulatory activity of enforcement by national or local authorities to provide consumer protection and ensure that all foods during production, handling, storage, processing and distribution are safe, wholesome and fit for human consumption, conform to safety and quality requirements and are honestly and accurately labeled as prescribed by the Law”.

The food control system in India has been distributed amongst Ministry of Health, Agriculture and Commerce.

- **Ministry of Health & FW, FSSAI**
- **Ministry of Agriculture, Plant Quarantine & Animal Health**
- **Ministry of Commerce, APEDA, EIC, MPEDA**

### ***A. Food Safety and Standards Act, 2006 and Regulations focusing on domestic and imports***

The **domestic and import** food control is governed by **Food Safety and Standards Authority of India (FSSAI), a statutory regulatory authority set up under the Food Safety and Standards Act, 2006**. The FSS Act led to the consolidation of various laws relating to food and establishment of the Food Safety and Standards Authority of India. Rules and six Regulations were notified in 2011 and these Regulations are meant to ensure food safety across the food chain by ensuring licensing and registration of the Food Business Operators (FBOs), laying down the vertical standards for manufacturing as well as imports, horizontal standards for pesticides etc. and also focusing on analysis of the food products.

Laboratories are an essential component of a Food Control System. The labs authorized for analysis of samples of imported food items are Central Food Laboratory, Kolkata, Central Food Laboratory, Ghaziabad, Central Food Laboratory, CFTRI, Mysore, Central Food Laboratory, Pune, CFL, Raxaul (Extension Centre of CFL, Kolkata), CFL, Sanauli (Extension Centre of CFL, Ghaziabad). 6 ICAR laboratories and I Spices Board laboratory has also been authorized as referral lab or specific Commodities.

### ***B. Export***

Various agencies like the Export Inspection Council of India (EIC), Agricultural & Processed

Food Products Export Development Authority (APEDA) and Marine Exports Products Development Authority (MPEDA) are responsible for various aspects of exports.

### ***C. Plant Quarantine and Animal Health***

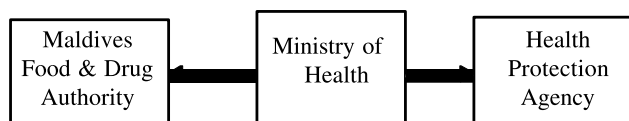
Plant and animal Quarantine Organizations come under the Ministry of Agriculture. The mandate of Plant Quarantine Service within the Directorate of Plant Protection, Quarantine and Storage is to prevent the entry, establishment and spread of exotic pests in India as per the provisions of The Destructive Insects & Pests Act, 1914 and the notifications issued there under. The service provided by includes:

- Undertaking the inspection of consignments of plants and plant products moving in international traffic with the object of preventing the introduction and/or spread of pests and surveys for pest of quarantine significance to control, contain and eradicate them.
- Providing assurance to importing countries that consignments exported from India are free from pests of quarantine significance through globally acceptable export certification as per IPPC.
- Promoting safe trade by creating awareness amongst customers by effectively

## **Food Control System In Maldives**

***By Mr. Satheesh Moosa***

The Food Control System is regulated by Maldives Food & Drug Authority (MFDA) and the Health Protection Agency (HPA) both are which under the Ministry of Health. MFDA is designated as the Competent Authority for Food. However, Checks on imported foods and most local produces are handled by HPA while MFDA controls quality assurance of exported products and bottled beverages. Food complaints and alerts are also handled by MFDA.



Food Mandate of MFDA is handled Food Control Division which is further divided in two sections; Food Regulatory Program and Quality Assurance.

Following tasks are carried out by the respective sections and Units:

### **Food Regulatory Programs–Section**

#### ***Regulatory Programs Unit***

- Formulation of food regulations, standards. Adapting CODEX standards as National Standards for different food commodities.
- As the Focal point for CODEX, we are responsible for communication of information to and from the CODEX commission to relevant stakeholders and also in carrying out CODEX related activities in the Maldives.
- Focal Point for INFOSAN, responsible for communication of Food Alerts and carrying out alert related activities in Maldives.

#### ***Risk Analysis and Product Registration Unit***

- Product validation
- Product registration (Food and Tobacco)
- Risk Assessment & Communication

### **Quality Assurance Section**

#### ***Official Control Unit***

- Factory and Export Approval – Act as Competent Authority for EU
- Health Certification for exports
- Fishing Vessel Registration and Hygiene Checks
- Surveillance of Market Chain Components (for fish and fishery products)

- **Compliance and Licensing Unit**
  - Approval of bottled beverages / factory approval
  - Competency evaluation of Food Inspectors

## **Food Control System In Nepal**

**By Ms. Rita Pandey**

Food control system is essential throughout the food chain for assurance of food safety and quality in the nation. All the stakeholders within the food safety framework have crucial roles to ensure food safety. Effective national food control system is essential to protect the health and safety of consumers and fair trade. Legislation, inspection, laboratory services and consumer awareness are the main pillars for food control management in Nepal. Government of Nepal has provisioned Department of Food Technology and Quality Control (DFTQC) as implementing agency for food legislation. DFTQC has been continuously making its effort towards maintaining food safety and quality for domestic as well as exportable commodities. However, the existing legislation and infrastructure is inadequate to encompass the food safety throughout the food chain.

The Department has been putting its focus on developing food safety policy, updating food legislation, strengthening food laboratories and harmonizing national standards in the line with Codex as per obligation of SPS agreement under WTO. National Codex Committee has been proving support in harmonizing national standards and guidelines with Codex. The food laboratories are upgrading to deliver their quality services. DFTQC has initiated new model food safety promotion activity with food safety sticker program in highway hotel restaurants and working on roll over the program to tourist area. DFTQC has to work on establishment of risk assessment framework and need to address food safety issues and challenges in near future. There is a need of updated regulations, well equipped infrastructure, competent and sufficient human

resources for effective food control system in Nepal. Better collaboration among concerned national, regional and international stakeholders will certainly improve the food safety and quality control system of Nepal.

## **Food Control System In Pakistan**

**By Dr. Mubarik Ahmed**

Pakistan is blessed with a population of 188 million; geographical area of 804,000sq.km; GDP growth rate 4.1%; and, per capita GNI US\$1386.2. The major crops are Rice, Wheat, Cotton, Sugarcane, Fruits and vegetables. The agricultural growth rate is 2.1% and its contribution to GDP is 21.04%. All together 34.31 million tons of food crops, 67.71 million tons of cash crops, 0.66 million tons of pulses and 4.62 million tons of edible oil are produced annually. Per capita availability of cereals, pulses, sugar and meat are 160, 6.7, 31 and 21Kg respectively, whereas calories and protein intake are reported to be 2,450Kcal and 72.5g per capita per day.

Pakistan's national food safety policy is based on the principles to protect the public health by reducing the burden of food borne illness to the greatest possible extent; to improve the nutritional status of population; and, to ensure the supply of safe and wholesome food for local markets and export. Ministry of National Food Security and Research (MNFS&R) is working on the National Strategy on implementing Food Safety, which will provide a sound regulatory foundation for domestic and international trade. The national goals for food safety are to develop a national policy to enforce food laws and control program for ensuring the following:

- Nutrient composition of food during the processing chain is maintained.
- Prevention and control of biological and chemical contamination.
- Prevention of hygienic standards.
- Reducing food losses in post-harvest chain that food is in confirmation to product label

- Offered food is not infectious to health, fit for human consumption and not economically debased.

The thematic outlines of National Food Safety Plan are as follows:

- Updation and enforcement of food laws and setting up national standards; making use of codex until the local standards are developed.
- Food safety control management by increasing inspection and laboratory services.
- Monitoring of food borne diseases and building the capacity for emergency response.
- Public information, education and communication.

To safe guide the interest of the food safety a number of laws and acts have been enforced to include Pakistan Plant Quarantine Act, Pakistan Animal Quarantine Act, Pakistan Fish Inspection and Quality Control Act, Pakistan Seed certification Act, Pakistan Standard and Quality Control Authority Act, Pakistan Pure Food Laws, Pakistan Agricultural Research Council Act and Agricultural Products Grading and Marketing Act. Besides these the following plans/Acts are implemented or are with the legislators for approval:

- National Food Safety Plan (with legislators)
- National Animal and Plant Health Regulatory Authority (with Legislators).
- The Punjab Food Safety and Standard Act (2011).
- Nutritional sector Perspective Plan (2011).
- The Milk and Meat Safety Act (2011).
- The Punjab Pure Food Rules (2007).

The upcoming activities / reforms include:

## **1. POLICY**

Preparation of food safety plan to include various aspects of food safety measures, revisions of existing laws/acts, development of standards, encouragement to market residues free food. In preparation of policy, MNFS&R, NHI, PARC PSQCA and EA are on board.

## **2. Regulatory**

- National Food Safety Authority is been establishment comprising technical experts of various fields.
- Pakistan Food Quality Control Council (established in 1992) is activated.
- Provincial governments are encouraged to form task force on food safety.

## **3. Legislations & Standards**

- Revision of pure food laws to harmonize with codex standard guidelines and recommendations.
- Enforcement of HACCP and GAP
- Updation and setting up of new laboratories.
- Introduction of 5S to maintain quality and sanitation standards viz. sorting, shelving, sanitation and self-discipline.

## **4. Others**

- Establishment of Provincial Food Safety Authorities.
- Establishment of Central Disease control Unit
- Development of strategy to control Food Disease.
- Imparting training and development of training courses.
- Introduction of qualified professional in food safety system.

## **Food Control System In Sri Lanka**

***By Dr. Ananda Jayalal***

Food control activities are mainly carried out in Sri Lanka by the Ministry of Health through its Food Control Administration Unit. The statutory powers to conduct food control activities are by the Food Act No 26 of 1980 and amendments there to and regulations made under the food act. A comprehensive set of food standards are available as food regulations. Director General of Health Services is designated as the Chief Food Authority by the act. A Food Advisory Committee has been established by the Food Act to advice the Minister on matters arising out of the implementation of the Food Act. Food Advisory Committee consists of officials from the Food Control Administration, Food Science and Technology experts, analytical experts, representative from industry, consumers, representatives from other government agencies etc.

Food Advisory Committee advises the Minister on regulations that are required for the food control system. The Minister has the legal authority to enforce regulations and to submit them to approval by the parliament. In formulation of the regulations Codex standards are based for the regulations.

Food authorities are being appointed by the Act under the chief food authority. For imported food, Director General of Customs have been appointed as the food authority. Regional Directors of Health are looking after the food control activities in the regions. Municipal councils are appointed as food authorities for their area of jurisdiction. Outside municipal areas it is the Medical Officer of Health who acts as the food authority. Approximately 1600 public health officers are appointed as authorized food inspectors throughout the island to carryout food inspection activities.

Sri Lanka Standards Institute, Consumer Affairs Authority, Atomic Energy Authority are also carrying out activities pertaining to food control. Therefore, conflicting situations arise in implementation of the food safety activities.

Analytical services for food safety are provided by number of agencies identified as approved analysts by the Act. The government analyst and two other laboratories are identified for chemical analysis whereas three microbiological laboratories have been identified for food microbiological analysis. However, existing laboratories do not have adequate equipment and trained man power to carry out modern day analytical services.

Laboratories depend on funding support from the government treasury. As no rolling fund is available and no cost recovery system is available laboratory improvements are not seen.

The present food control system is embedded inside a large organization i.e. Ministry of Health. Director General of Health Services (DGHS), who oversees many other functions, has to act as the chief food authority. As Sri Lanka is providing free health services to all of its citizens, large numbers of curative care institutions come under the DGHS. Most of the time resources are diverted to curative care facilities. Therefore, a dedicated chief executive officer and a standalone food safety and standards organization are required by Sri Lanka. A well planned rolling fund also required by the propose organization.

Inadequacy of trained human resource for food control activities also identified as hindrance to efficient operation of the system. Central food administration requires experts in various aspects of the food safety.

Data generation is also poor in Sri Lanka mainly due to inadequate capacities of the analytical services and other reasons mentioned above.



## **SESSION 2**

# **CODEX AND INTERNATIONAL STANDARDS FOR PROTECTING PUBLIC HEALTH AND ENSURING FAIR TRADE PRACTICES IN FOOD TRADE**

**Chair: Mr. S Dave, Advisor, FSSAI**

### **Importance Of Codex For Promoting Public Health And Ensuring Food Security**

***By Ms. Shashi Sareen***

Codex Alimentarius commission is an intergovernmental institution established by FAO and WHO in 1963 with the mandate to develop harmonized international food standards, guidelines and codes of practice to protect the health of the consumers and ensure fair practices in the food trade. In addition, food safety being an integral part of food security, the standards also play an important role in addressing food security concerns due to improving nutrition & health status of population, reducing food losses and wastes, increases national & international market access, reducing public health and other wasteful costs thereby leading to increased social and economic benefits. The Commission also promotes coordination of all food standards work undertaken by international governmental and non-governmental organizations.

The presentation brought out the current global food security and health situation and the importance of Codex standards for public health and food security. Reference was made to Codex structure, principles for elaboration of Codex texts and the latest Codex Strategic Plan 2014-19. As Codex impacts not only global trade but also plays an important role in using these standards and texts for formulating national policies, standards and food control systems, it is important for countries to participate actively in Codex activities and influence the texts so that these reflect their country situation and capacity. Ms. Sareen brought out the relevance or benefits

of Codex to members as well as the challenges countries face towards Codex related work both at global and national levels. FAO plays an important role in strengthening food safety in the region through activities that support countries to contribute to Codex standards setting as also providing support to strengthen countries capacities to adopt or adapt these in their own food controls and facilitate their implementation.

### **Understanding The Scientific Basis For Codex Food Safety Standards**

***By Dr. Yukiko Yamada***

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) stipulates that Members of WTO shall ensure that any food safety measure is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided in Article 5.7 (Art. 2.2); harmonization of food safety measures on as wide a basis as possible and that these measures shall be based on Codex standards, guidelines or recommendations, where they exist (Art. 3.1); food safety measures which conform to Codex standards, guidelines or recommendations shall be deemed to be necessary to protect human life or health, and presumed to be consistent with the relevant provisions of the Agreement (art. 3.2); and Members shall ensure that their food safety measures are based on an assessment, as appropriate to the circumstances, of risk to human life or health, taking into account risk assessment techniques developed by the Codex Alimentarius (Art. 5.1). It also stipulates that Members may introduce or maintain food safety measures which result in a higher level of

sanitary protection than would be achieved by measures based on Codex standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary protection a Member determines to be appropriate in accordance with the relevant provisions of the Agreement but all measures based on Codex standards, guidelines or recommendations shall not be inconsistent with any other provisions of the Agreement.

Any Codex standards, guidelines and recommendations related to food safety shall also be based on scientific principles and risk assessment and shall not be maintained without sufficient scientific evidence. The Codex Alimentarius Commission in 1993 decided to implement risk analysis in its work. It adopted the statements of principle concerning the role of science in the Codex decision-making process and the extent to which other factors are taken into account in 1995; and the statements of principle relating to the role of food safety risk assessment in 1997.

In order to provide scientific basis and risk assessments to the Codex Alimentarius Commission and any other interested parties, there are independent scientific advisory bodies established by FAO and WHO: namely, Joint FAO/WHO Expert Committee on Food Additives (JECFA) dealing with food additives (toxicological evaluations and specifications), contaminants (toxicological evaluations and exposure assessment) and veterinary drug residues (toxicological evaluations and MRL recommendations); Joint FAO/WHO Meeting on Pesticide Residues (JMPR) dealing with pesticide residues (toxicological evaluations and MRL recommendations); and Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment (JEMRA) dealing with microorganisms and parasites.

In the framework of risk analysis, the Codex Alimentarius Commission serves as risk

manager and the above mentioned advisory bodies as risk assessor. While in Codex meetings, delegations of the governments and observer international organizations participate and they express the positions of their governments or observer organizations, in advisory bodies, individual scientists participate in their capacity as scientists and must not represent their countries or organizations.

## **Codex Guideline Of Food Labelling And Claim**

***By Dr. B K Nandi***

The primary purpose of Food Labelling and Claim is to ensure that nutrition labelling is effective: in providing the consumer with information about a food so that a wise choice of food can be made; in providing a means for conveying information of the nutrient content of a food on the label; and also to ensure that nutrition labelling does not describe a product or present information about it which is in any way false, misleading, deceptive or insignificant in any manner. It is also aimed at ensuring that no nutrition claim is made without nutrition labelling. Information supplied in this regard should be for the purpose of providing consumers with a suitable profile of nutrients contained in the food and considered to be of nutritional importance. Another important aspect is that the information should not lead consumers to believe that there is exact quantitative knowledge of what individuals should eat in order to maintain health, but rather to convey an understanding of the quantity of nutrients contained in the product; this is because there is no meaningful way in which knowledge about individual requirements can be used in labeling.

Nutrition labelling guidelines recommend procedures for the nutrition labelling of foods. These guidelines apply to the nutrition labelling of all foods including foods for special dietary uses. Nutrition labelling consists of two

components: (a) nutrient declaration and (b) supplementary nutrition information. Nutrient declaration means a standardized statement or listing of the nutrient content of a food of certain nutrients or ingredients on the label. Nutrient declaration should be mandatory for all prepackaged foods for which nutrition or health claims, as defined in the “Guidelines for Use of Nutrition and Health Claims”, are made. The declaration of nutrient content should be numerical. In addition, this information may be given per serving as quantified on the label or per portion provided that the number of portions contained in the package is stated. For the purpose of these guidelines, a claim is any representation which states, suggests or implies that a food has particular characteristics relating to its origin, nutritional properties, nature, production, processing, composition or any other quality.

However, the following claims should be prohibited: Claims stating that any given food will provide an adequate source of all essential nutrients, except in the case of well-defined products for which a Codex standard regulates such claims as admissible claims or where appropriate authorities have accepted the product to be an adequate source of all essential nutrients; claims implying that a balanced diet or ordinary foods cannot supply adequate amounts of all nutrients; and claims which cannot be substantiated. “Foods for Special Medical Purposes” are specially processed or formulated and presented for the dietary management of patients and may be used only under medical supervision.

In conclusion “Codex guideline of food labelling and claim” can be considered as an effective tool to ensure dissemination of appropriate information concerning food and nutrition.

## **Codex General Standards On Food Additives (GSFA)**

***By Mr. Anil Mehta***

Codex standards are global reference point for international food trade. Codex standards are used as benchmarks in WTO dispute settlement processes. Under the joint FAO/WHO Food Standards Programme, Codex Alimentarius initiated the work on international standards for food additives in 1991.

Codex develops standards based on scientific principles. Joint Expert Committee on Food Additives (JECFA) is a risk assessment body for Food Additives and provides scientific advice to Codex Committee on Food Additives (CCFA). The food additives have been evaluated by JECFA as a group. The maximum level of use for a food additives group applies singly or in combination to all members of the group. Codex adopts 8 steps procedure for development of their standards. The member countries can make their comments at step 3 and step 6 of the process.

Since its inception Codex General Standards on Food Additives (GSFA) has been the sole source of information on food additives in Codex. GSFA covers all foods worldwide whether processed or unprocessed. GSFA is continuously updated and amended every year. It is now available in four languages (Chinese, English, French and Spanish). GSFA has been used by many countries as basis for harmonization of their national standards.

GSFA is available online at <http://www.codexalimentarius.net>. GSFA set out the conditions for use of food additives in food products. It allows users to search the standard, functional class of food additives or food category. It is updated regularly to include food additive provisions adopted by Codex Alimentarius Commission. A

CD-ROM version of GSFA on online is available for those who do not always have access to the internet and can be ordered through FAO Sales and Marketing Group.

## CCFICS Guideline On National Food Control System

*By Mr. Parmod Siwach*

In 2003, FAO and WHO jointly came out with a comprehensive publication titled “Assuring Food Safety and Quality: Guidelines for strengthening National Food Control System” with the objective to provide guidance to national authorities on strategies to strengthen food systems to protect public health; prevent fraud and deception; avoid food adulteration and facilitate trade. The document emphasize that no mandatory activity can achieve its objectives fully without cooperation and active participation of all stakeholders. Therefore, integration of mandatory regulatory approach with preventive and educational strategies that protect the whole food chain is the key for ideal & effective food control system.

Codex Committee on Food Import and Export Inspection and Certification System (CCFICS) started work on guidelines for National Food Control Systems way back in 2006 when delegation from Australia proposed a new work on need for guidance on National Food Inspection Systems in 15<sup>th</sup> Session of CCFICS at Argentina during 6-10 November, 2006. Interestingly, some of the member countries were

initially of the opinion that it is not covered under the Terms of Reference (ToR) of CCFICS. However, after discussion and deliberations for 7 years in various sessions of CCFICS, Physical Working Groups, Electronic Working Groups, the document “Principles and Guidelines for National Food Control Systems [CAC/GL 82/2013]” was agreed in 20<sup>th</sup> Session of CCFICS (February, 2013) and adopted by Codex Alimentarius Commission (CAC) in its 36<sup>th</sup> Session (July, 2013) in Rome, Italy.

This document is intended to provide practical guidance to assist the national government, and their competent authority in the design, development, operation, evaluation and improvement of the national food control system. It highlights the key principles and core elements of an efficient and effective food control system. It is not intended that the guidance results in “one system” being appropriate to all circumstances. Rather, various approaches may be used, as appropriate to the national circumstances, to achieve an effective national food control system. The document has identified 12 Principles (Picture 1) and framework (Picture 2) for design and operation of National Food Control System should be based on these principles.



A national food control system should possess three main characteristics viz. Situational Awareness, Pro-activity and Continuous Improvement, which, among other things, can be used in self-assessment or other evaluation to determine if the system is fully functional and effective. In today scenario when food is globally trades, these guidelines are an important tool to facilitate governments to align their National Food Control Systems as per the global requirements to ensure food safety and also to facilitate trade.

### **Food Safety Tools (GMP, HACCP, ISO 22000)**

*By Ms. Vani Bhambri Arora*

International trade is governed by World Trade Organization (WTO). Aim of the WTO is facilitation of free flow of trade and creation of a global market with equal access to all countries. Now quality and safety have acquired the center stage. There is growing use of standards worldwide-be it product or processes or systems or organizations or persons.

Standards are either governed by law, generally on the ground of health and safety, called technical regulations, or adopted voluntarily responding to market needs.

India has realized the importance of safe food and new integrated Food Safety Act was published in 2006. This new Act is based on international scenario and includes requirements like GMP/GHP in the form of schedule IV and product safety requirements. As explained standards can be used as Food Safety Tools and there are various national/international and voluntary standards available in market.

All these food safety standards are based on HACCP (Hazard analysis critical control point). The international standard of ISO-ISO 22000 also comprises of HACCP and includes components of interactive communication, GMP and management system.

These international and voluntary standards help us in framing regulations. The Schedule IV of Food Safety and Standards regulations are based on GMP/GHP requirements.

Further there are 2 provisions in the Act which would be accepted as due diligence from the certified clients. Whatever is the situation, standards need measurement which is by way of testing or inspection or certification called conformity assessment.

Internationally, as certification grew, so did the need to have confidence in it and its cross border acceptance. This led to the development of accreditation as a discipline. Accreditation is third party attestation of competence of conformity assessment bodies and today represents the most recognized means of establishing the credentials of certification bodies.

In order that inspection, certification or testing of one country is recognized by another country, it is necessary that there is a system whereby there is confidence in the conformity assessment system of each country. Such confidence is generated through the process of accreditation based on international standards. This has been provided for in the Agreement on Technical Barriers to Trade, commonly known as TBT Agreement.

The emerging regime includes that the legislation would be intact by government and regulatory bodies like FSSAI will enforce the law and accredited third party conformity assessment bodies will support the regulators and hence common man would able to get safe food.

QCI is the national accreditation body set up by the Central Government jointly with the major industry associations, and is an example of public-private partnership. .QCI is providing accreditation services through the National Accreditation Board for Certification Bodies (NABCB) which currently is offering accreditation for QMS, EMS, FSMS certification as per ISO/IEC 17021, Inspection Bodies as per ISO/IEC 17020, and Product certification as per ISO/IEC Guide 65/ISO 17065. In addition, the National Accreditation Board for Testing and Calibration Laboratories (NABL), currently an independent body under the Department of Science & Technology but slated to join QCI fold in the future, is offering accreditation of labs including Food testing labs as per ISO 17025.

## **Session 3**

# **Promoting Harmonization Of Food Safety Standards And Food Control System**

**Chair: Dr. Ryuji Yamaguchi, ED, ILSI-Japan**

### **Practical Application Of Codex**

*By Mr. S. Dave*

Chile crop was not so good in 2003. Indian exporters could not supply more than committed quantity. It became a trade issue. Indian grapes were termed “poisonous”. There were 17 Rapid Alerts from EU.

To change the above situation Codex documents were referred to and following “Mitigation Mechanism” was evolved by Agriculture and Processed Food Products Export Development Authority (APEDA):

- Registration, record keeping and monitoring of farms
- Proper sampling procedure, clear documentation (CCMAS, CCFICS)
- Product standardization & inspection strengthened (CCFFV, CCFICS)
- Implementation of GAP and Traceability (CCFH, CCPR, CCFICS)
- Exports only from recognized pack-houses
- Method of analysis as per AOAC/Codex (CCMAS, AOAC)
- Labs. to be ISO-17025 / NABL compliant labs. (ILAC)
- Setting up of NRL for periodic checks and alerts (CCPR)
- Regular training programmes for all concerned

Collaboration was forged by APEDA among: Exporters / Traders (including Packing Houses and Processing units); Labs. Other Agencies State Governments and farmers.

The strategy was implemented in two stages:

- **STAGE I:** Export of Fresh Grapes from India was regulated through monitoring of pesticide residues. Standards were laid down to meet international market demands. Agencies tested compliance with these standards. No export of fresh grapes could happen to European Union without adhering to this system.
- **STAGE II:** IT was used to enable the regulation, compliance and monitoring. All the stakeholders were integrated in the supply chain of Grapes export from India, with a centralized database.

Four million Euros were spent on developing infrastructure, training, standardization, etc. After two 2 years of hard work by all stakeholder on one product following benefits were achieved:

- Self confidence among farmers.
- Culture for food quality (CCFFV) and safety (CCFH) was followed.
- Increased implementation of GAP (CCFH)
- Farmers earned more value.
- Benefits went to 40,000 farmers and 150 exporters.
- Increased FOB realization per carton of 5 kg.
- Value addition through improved packaging.
- World - wide acknowledgement of Indian labs (CCMAS).

- No rejections for the last 11 years (CCPR).
- Zero paper-work and transparency (CCFICS).
- Experience with Judgment of Equivalence: CCFL, CCFICS.

## **Overview Of Food Safety Control System In Japan**

***By Ms. Keiko Saito***

The Department of Food Safety, The Ministry of Health, Labour and Welfare (MHLW) has been taking various measures to ensure food safety in order to protect people's health. Ms. Saito explained Food Safety Administration in Japan, especially in regard to the role of the MHLW.

In order to control food safety, regulations and inspections are made under The Food Sanitation Act. The National government (MHLW) makes the rules and Local governments administer and provide services more closely related to local residents and food businesses. Because it is important to gain the understanding of both consumers and businesses, we also put great value on promoting risk communication (interactive opinion exchanges). Food business monitors, consumers and the government all have their own roles.

Imported foods inspecting, the national government has responsibility for monitoring at the border (Quarantine station). For example, foods and additives that do not meet the standards for ingredients and production methods that are provided the Food Sanitation Act cannot be imported, produced, or sold.

Local governments monitor foods including imported foods based on the prefecture plan for Foods Monitoring and Guidance Plan on food sanitation. When a violation regarding an Imported foods are found, local governments report the information to the MHLW.

In consideration of the globalization of food distribution, the MHLW develops and implements a variety of policies based on scientific knowledge to ensure the safety of foods including imported foods.

## **Harmonization Of Food Control System In SAARC Region**

***By Dr. S K Saxena***

Safe and adequate food is the basic requirement of every human being, where safety attains a major role. National Food Control System are framed to accomplish this requirement by exercising control over the national and local authorities to provide consumer protection and ensure that all foods during production, transportation, handling, storage, processing and distribution are safe, wholesome and fit for human consumption; conform to safety and quality requirements; and are honestly and accurately labelled as prescribed by law.

Ensuring consumer's safety and fair trade practice are major two objectives of National Food Control Systems and International Institutions at National and International levels. Similarly each country in the SAARC region is creating/updating/ harmonizing their national regulations with international standards. This over-regulation required resources and infrastructure and may also negatively impact the food trade amongst SAARC region. Thus, the regional harmonization of National Food Control Systems consisting of Food Legislation, Inspectorate, Analytical Laboratories and Enforcements is desired to improve food safety and nutrition security, thus food trade and delivery of safe foods everywhere and anytime.

Therefore harmonization of food control systems in the region would aid in uptake and application of new technologies as well as encourage the food industry to invest in new tools to enhance the safety, availability, and quality of the food supply for consumers and also assist in facilitating food trade within and outside SAARC region through better compliance, ensuring the safety of foods, as well as addressing issues related to the compliance.

## **Facilitating Food Safety Standards Harmonization In ASEAN-ILSI SEA Region's Scientific Initiatives**

*By Ms. Pauline Chan*

Since 1992, Member States of the Association of Southeast Asian Nations (ASEAN) have been embarking on a progressive journey towards regional integration, which will culminate in the establishment of the ASEAN Community in 2015. The objectives for establishing the ASEAN Community, with the ASEAN Economic Community (AEC) as its key pillar, is to ensure durable peace, stability and shared prosperity in the region as ASEA moves towards the future. The AEC in particular will aim to transform ASEAN into: (i) a single market and production base; (ii) a highly competitive economic region; (iii) a region of equitable economic development; and (iv) a region fully integrated into the global economy.

The ASEAN Trade In Goods Agreement (ATIGA), signed by the respective ASEAN Member States, serves as the primary legal instrument to facilitate trade within the ASEAN bloc. Apart from addressing tariff reductions, the ATIGA also provides for the removal of non-tariff barriers to trade, including the elimination of Technical Barriers to Trade (TBT) as well as resolving issues related to Sanitary and Phytosanitary Measures (SPS) in accordance with principles laid down by the World Trade Organization (WTO). As part of this regional integration initiative, ASEAN leaders have also identified the agro-food sector as one of the priority areas to be integrated. As such, harmonization of food standards between ASEAN Member States is a critical component in order to achieve the goals of the AEC for the agro-food sector.

In order to facilitate the harmonization of food standards within ASEAN, a number of relevant ASEAN Working Groups have been established that are overseen respectively by the ASEAN Minister of Agriculture and Forestry; ASEAN

Economic Ministers; and ASEAN Health Ministers. Among others, these include the ASEAN Expert Working Group on Maximum Residue Limits for Pesticides; ASEAN Prepared Foodstuff Product Working Group (PFPWG); and ASEAN Expert Group on Food Safety (AEGFS). All of these ASEAN Working Groups follow similar principles in relation to the harmonization of food standards, which are to use Codex Alimentarius standards as the primary reference, as well as using science as the basis for harmonization in cases where Codex Alimentarius standards are not available or not directly applicable for the regional context.

ILSI Southeast Asia Region has been actively supporting the work of the various ASEAN Working Groups in utilizing science to harmonize food standards, including by organizing workshop that serve as platforms to discuss technical and scientific issues. These include the ASEAN Food Safety Standards Harmonization Workshop series, as well as the ASEAN Nutrition Labelling and Health Claims Workshop series. In addition, ILSI Southeast Asia Region has also developed the ASEAN Food Safety Standards Database, which has been provided to the ASEAN PFPWG as a reference tool to guide their work in harmonizing food additive standards.

Since 2011, ILSI Southeast Asia Region, in collaboration with the AEGFS and with technical assistance from the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO), have also been supporting the initiative to develop an ASEAN Food Consumption Database that could be used for regional risk assessments. The ASEAN Food Consumption Database would be an essential component to support the work of the newly established ASEAN Risk Assessment Centre (ARAC), which will serve to provide scientific advice to both ASEAN Member States and ASEAN Working Groups in their consideration for the harmonization of food standards within the region.



## **Session 4**

### **Information And Communication**

**Chair: Dr. B K Nandi, Former Food & Nutrition Officer, FAO, RAP**

#### **INFOSAN**

***By Dr. Ritu Singh Chauhan***

Need for clear authoritative reliable information has been identified as global need. A Resolution were passed by of the World Health Assembly in 2000 and 2002 for improved communication regarding food safety. It was decided that WHO will coordinate identified response to food safety emergencies. There was a specific request from FAO/WHO Codex Alimentarius Commission in 2004 for WHO to develop a network for the exchange of information during food safety emergencies. INFOSAN was launched by WHO in 2004 in collaboration with FAO. In 2010, a Resolution on advancing food safety was adopted reinforcing the mandate of INFOSAN. **INFOSAN is a** voluntary network of food safety authorities. It is managed jointly by WHO and FAO. It promotes rapid exchange of information during food safety related events, shares information on food safety issues of global interest, promotes partnerships and collaboration between countries, and between networks and helps countries strengthen their capacity to manage food safety emergencies. INFOSAN secretariat coordinates information exchange between countries and can facilitate technical assistance in the field, if requested. INFOSAN is designed to complement national food control systems.

#### **INFOSAN Membership includes:**

- **Emergency Contact Points** à From the national authority responsible for coordination of national food safety emergency response
- **Focal Points** à Other national authorities with a stake in food safety (i.e. human

health, veterinary health, agriculture, trade, fisheries, etc.)

- **Other members** à Advisory Group Members, WHO Regional Food Safety Advisors; FAO Regional Food Safety Officers; Regional Food Safety Authorities (i.e. ECDC, OIRSA, etc.)

INFOSAN Emergency Focal Point coordinates activities with relevant national agencies. It inform INFOSAN Secretariat on food safety related incidents and emergencies of international relevance, responds to urgent queries, takes action on alerts , and requests international assistance to respond to a food safety incident or emergency.

#### **INFOSAN: Global Collaborative Partnerships includes:**

- Global Early Warning System for Major Animal Diseases, including Zoonoses (GLEWS)
- World Organization for Animal Health (OIE)
- Global Foodborne Infections Network (GFN)
- European Union - Rapid Alert System for Food and Feed (RASFF)
- EMPRES Food Safety
- WHO's Global Outbreak Alert and Response Network
- PulseNet International

To effectively participate in INFOSAN, Member States must have an ability to identify, assess, manage and communicate issues during a food safety event.

INFOSAN Community website was launched in 2012 allowing INFOSAN members to build & exchange knowledge. It provides interactive forum to strengthen community of practice, shares Documents, hold discussions.

## **Risk Perception And Communication Associated With Food Safety**

***By Dr. V. Sudershan Rao***

Food Safety has become a major public health concern in recent times, especially in the last few decades when the country has witnessed many changes in food production, processing, storage, transportation and distribution. Lifestyles are vastly different from what they were five decades ago and so also the patterns of food consumption. Although traditionally in India, most of the foods are processed at household level, there is a perceivable change in the way foods are sold, procured and consumed. Therefore, there is always a concern about the heightened risks from foods. Risk communication, which deals with communicating about the likely and consequences of adverse events due to consumption of foods, is very much needed for promoting informed choices. Consumer perceptions about food safety risk can greatly impact their food choices and consumption. Often the perceived risks of the consumers do not really match with the actual risks of the product. Considering that motivation to seek risk-related information is guided by the perceptions of risk, understanding the food safety risk perceptions is of critical importance to develop effective risk communication strategies. Evidence suggests that food risks are perceived differently from non-food risks. This is because complete avoidance of food risks is not possible, and food has cultural, symbolic, familial and religious connotations which must be taken into account when developing risk messages. Unlike in the West, in India about 90% of calories come from home-cooked foods while 10% from outside food including ready to eat and pre-

packaged processed food. The situation may not be different in other SAARC countries also. Therefore, perceptions of risks, especially among home food preparers play a vital role in food choices not just of themselves but also for the entire household. In the Indian context, in as many as 90% of households, it is women who are involved in food preparation, but there has been hardly any effort to study their perceptions about food risks, which may in turn affect their food selection vis-à-vis the dietary patterns of the members in the family. In other countries, issues of food risk perception have been considered in formulating important policy agendas. The scenario in India is however different. Although a few nation-wide surveys have attempted to understand the profile of food intakes, food safety knowledge, attitudes and practices, 'risk perceptions' have been largely ignored. A recent study conducted in Hyderabad and surrounding villages had indicated that infestation and adulteration were perceived as major risks in cereals and pulses.

Majority of respondents perceived pesticide residues as risks in vegetables and fruits. About 83% perceived warm flies and mosquitoes as the only risk for non-cooked non-vegetarian foods like meat and fish. Perceived risks were also linked with food-borne diseases by many of the respondents.

An attempt will also be made to cover how food risks were portrayed, perceived and communicated in cases of bird flu in chicken, artificial ripening of fruits, hormonal injections to vegetables and milch cattle, chemicalization of food etc.

In the Indian context, studies are required to explore the linkages between risk perceptions and the factors that shape them. Moreover, food risk communication efforts should address these issues and appropriate risk communication strategies should be evolved.

## **Panel Discussion**

# **Infrastructure Needs To Promote Harmonization Of Food Standards And Modern Food Control System For SAARC Countries**

**Chair: Dr. V Prakash , FRSC, Distinguished Scientist of CSIR INDIA  
Director, Innovation Research and Development At JSS MVP**

### **Panel of Experts**

**Dr Yukiko Yamada, Dr. S K Saxena, Dr Sudarshan Rao, Mr. Anil Jauhri,  
Ms. Rita Pandey and Mr. Mohammed Ruhul Amin Talukder**

### **Laboratories**

- There is a need for strong infrastructure in the region including good state of art laboratories with good quality equipment and efficient maintenance services. Further, there should be an accreditation body for the laboratories. Laboratories are required at regional and sub-regional level.
- Till member countries of SAARC Region set up modern testing laboratories, samples can be sent to India for testing in accredited laboratories whose results are recognized world over.
- India can play an important role in capacity building. It can provide training in its laboratories on Food Safety Management.
- SAARC Regional Centre of Excellence is required.

### **Data Generation**

- Total diet studies are required Total diet studies are necessary to get the data on contaminants and nutrients and for undertaking risk assessment activities.
- Conduct Epidemiology Studies for Food Borne Illnesses.
- SAARC Countries should work together on data generations.

- All data on food safety should be computerized.

### **Information and Communication**

- An information network within the SAARC Region should be set up.
- Risk Communication should be given importance.

### **Risk Assessment**

- Risk assessment capability is a challenge. Infrastructure should be setup for risk assessment and risk assessment models should be developed.

### **Training**

- Food Safety Training centres at regional level are required for giving training in food safety to farmers, personnel working in food industry and regulatory bodies and media.
- Capacity building in Risk assessment is important.

### **Surveillance System**

- Modern Food Inspection System should be established on the border.
- Surveillance mechanism is required. Food Borne Disease surveillance is very important for the region.

### **Standards**

- Voluntary standards setting should be differentiated from the mandatory standards.
- Regional NRV's should be established for labelling purposes.
- RDAs should be harmonized.
- Codex Standards should be adopted by SAARC Countries. In the absence of Codex Standards, Regional Standards could be developed. In case some Codex Standards are evolved for developed countries, in such cases Regional Standards can be adopted. SAARC Countries can also take initiatives in case where Codex Standards are not available. They can set up their own standards and send it to the Codex for adaptation.
- Codex MRL's should be adopted.

### **Project On Food Control System**

- EU has a project with ASEAN supported by FAO on Food Control system. SAARC Countries can also undertake such project.

In his closing remarks in the Panel Discussion, Dr. Prakash emphasized the need for a comprehensive programme for educating farmers, personnel involved in food safety in the

concerned organizations and laboratories as also the decision makers and politicians. He recommended that educational material should be developed for farmers and for food handlers in Vernacular. At the same time institutions should conduct courses on Food Safety for those who intend to work in this area. He also said that while food regulations deal with packaged food, it is equally important; that a mechanism should be developed to ensure the food safety standards are also followed by producers of unpacked food served to consumers by the Railway, by the Airlines, by the Catering Organizations and Street Vendors.

Dr. Prakash pointed out that while there could be some divergence of opinion on food safety norms followed by different countries, science does not change across frontiers. Therefore, there should be absolute consensus on science. He also suggested that cold chains and storage facility for foods should be established, so that food is not wasted and do not become unsafe in transit or during storage. He urged that standard analytical methods should be followed by all, to avoid rejections of analytical results and for this it is important that analytical facilities are geared up.

## **Concluding Session**

### **Recap Of Conference Proceedings**

***By Mr. D H Pai Panandiker***

Mr. D H Pai Panandiker, Chairman, ILSI-India presented a brief overview of the discussions in the Conference on December 9-10, 2014 and presented the First Draft of Conference Recommendations (Page No 6-8). He said that these will be circulated for comments before finalization.

### **Valedictory Address**

***By Mr. Y S Malik***

Mr. Y.S Malik, CEO, FSSAI delivered the Valedictory Address. He appreciated the initiative taken by ILSI-India and ILSI-Japan in organizing the Conference with the objective of harmonizing food control system in SAARC Region. He said that he looked forward to receiving the Conference Recommendations which will act as advisory for FSSAI. He felt that harmonization of legal framework, infrastructure and the entire food control system will promote trade within the region and provide reassurance to consumers about safe and wholesome foods.

While emphasizing and need the importance of risk assessment, risk management and risk communication he recommended that it is crucial to have impact assessment of risk management and mitigation strategies, in countries which are in transition, on different sectors associated with food such as producers, importers, manufacturers and consumers. He reiterated the importance of good consumer practices.

Talking about FSSAI and its endeavour towards harmonization with the international norms such as Codex. Mr. Malik said that, considering the fact that FSSAI became operational from mid of 2011, it has achieved quite a lot. FSSAI started working with few standards and then progressed towards harmonization. He informed that the Scientific Committee of FSSAI in its meeting held on December 10 had approved major part of harmonization exercise which will go for Authority's approval to mid-January.

Stressing the role paid by soft infrastructure (regulations, standards) and hard infrastructure in assuring food safety, Mr. Malik informed that FSSAI has been working on providing a NABL accredited network of state of art laboratories in state and union territories whose findings should be credible and dependable.

FSSAI has authorized 68 laboratories in private sector for food testing and 8- 10 laboratories are in the pipeline. In addition the laboratory infrastructure is also being upgraded.

Mr. Malik said that FSSAI is taking the advice from all stakeholders as seriously as consumer expectations. He urged that a road map for strengthening the system should be provided to him.

### **Vote Of Thanks**

***By Mr. Hiroaki Hamano***

Mr. Hiroaki Hamano, Advisor, International Life Sciences Institute Japan proposed Vote of Thanks.



**International Life Sciences Institute-India**

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Email: [info@ilsi-india.org](mailto:info@ilsi-india.org)