Importance of Codex for Promoting Public Health and Food Security at International Conference on Infrastructure Needs for a food control system: Roadmap for Regional Harmonization

(9-10 December 2014, Delhi, India)

Ms. Shashi Sareen
Senior Food Safety & Nutrition Officer
FAO Regional Office for the Asia & the Pacific
E-mail: shashi.sareen@fao.org

Outline/Coverage

- Global Food security and health situation; Food security and its link to food safety and Codex
- Codex
  - Introducing Codex – importance, organization, principles of elaboration of texts, functions, documentation,
  - Importance of Codex to countries and participation by countries in Codex standards setting
  - Management of Codex activities at National level
  - Relevance and benefits of Codex to members or how Codex helps member countries
  - Challenges for countries towards Codex issues
- Some FAO activities/ programmes for food safety and standards in the region

Global food security & health situation

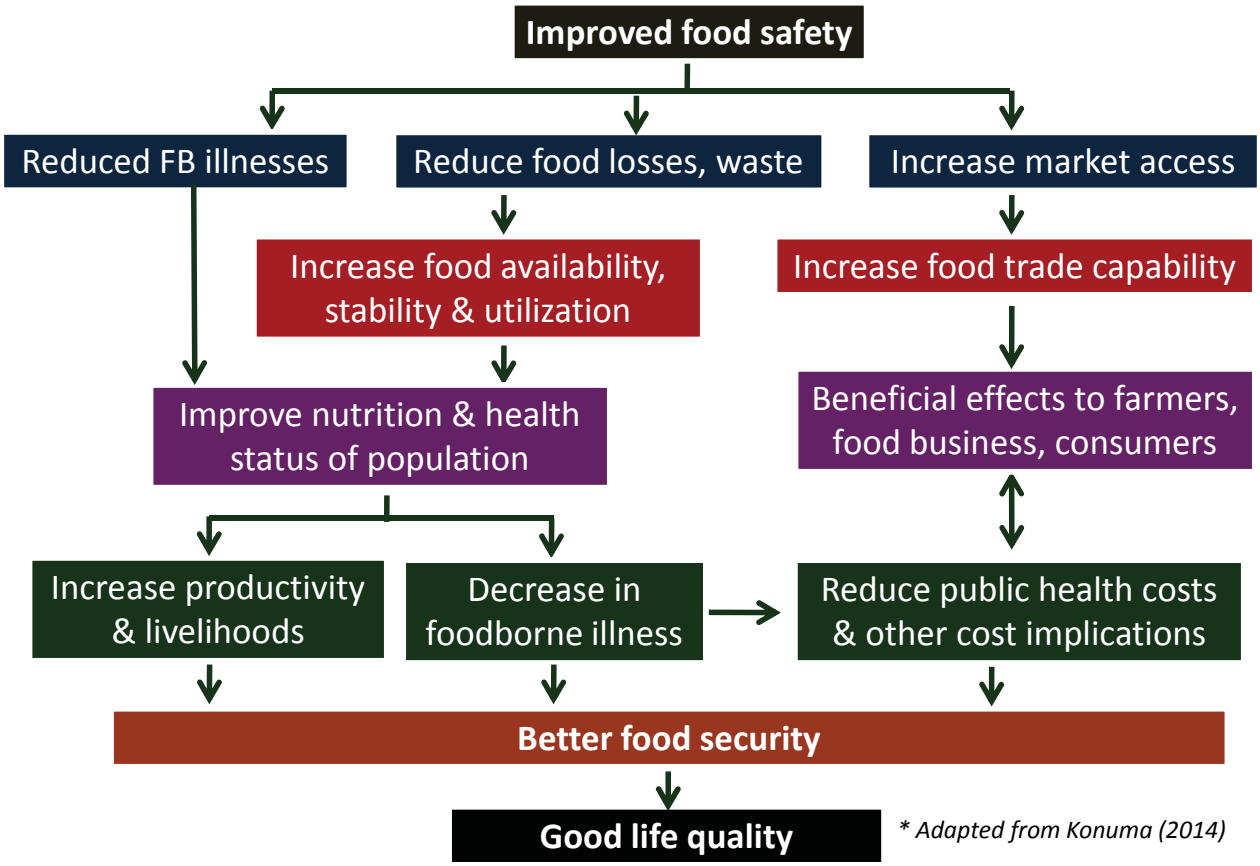
- 805 m people suffer from chronic hunger (2012-14)
- Undernutrition a major cause of death in children under five, causing 45% of all child deaths in 2013
- Over 2 b people suffer from micronutrient deficiencies
- Overweight and obesity affect 2.1 billion people
  - 42 million children under five overweight
  - Over 500 million adults affected by obesity in 2010
- Foodborne and waterborne diarrhoeal diseases cause ~2.2 m deaths worldwide annually (1.9 m children) [WHO]
- Global food security is high on the agenda (global/ regional) – access to safe food is important

Food Security & its Pillars/ Dimensions

& determinant factors of each pillar

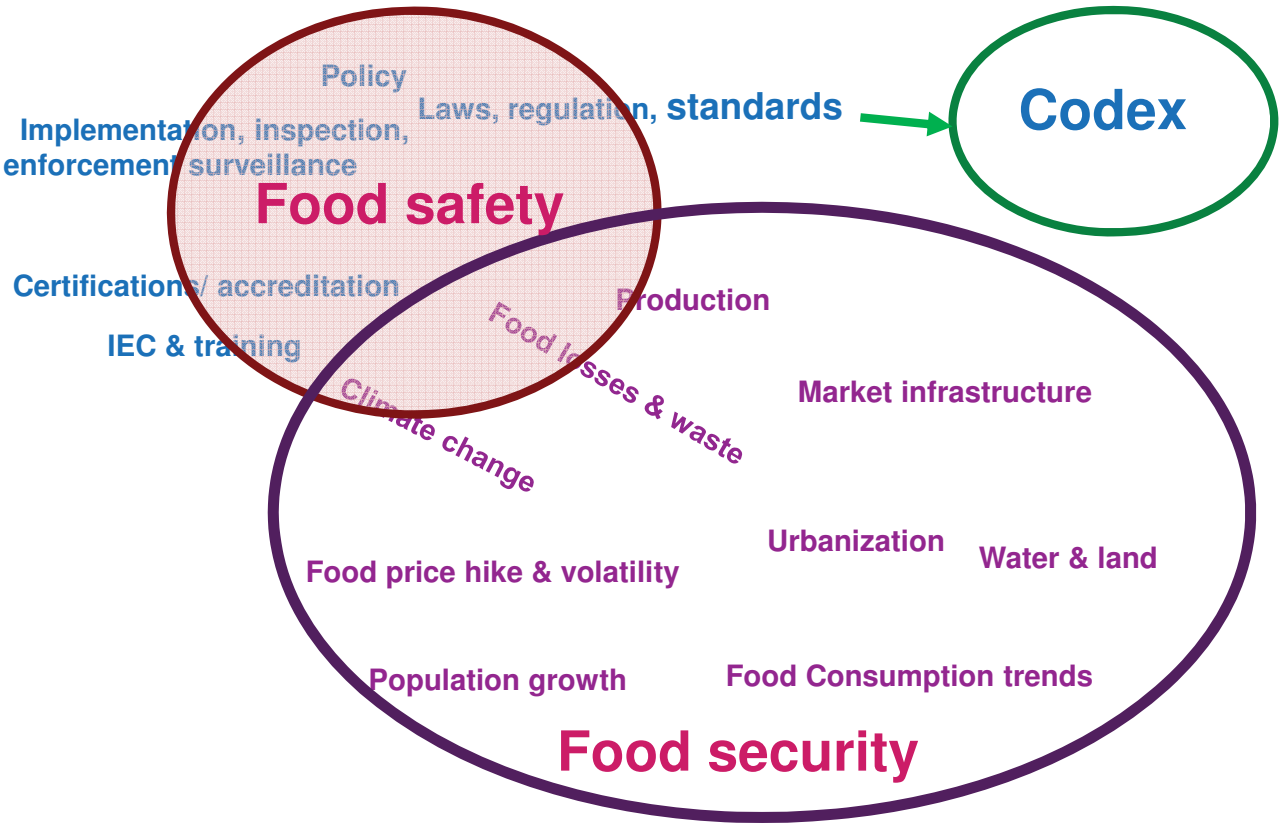
*FAO World Food Summit, 1996

Food safety & food security inter-relationship



* *Adapted from Konuma (2014)*

Food Security, food safety & Codex



Factors Influencing Food Security

An Introduction to Codex

Importance of Codex

- Codex international food standards, guidelines & Codes of Practice contribute to the **safety**, **quality** & **fairness of trade** in food & thereby impact **food security**
- Reference made to Codex texts in WTO **SPS Agreement as a baseline** - WTO members that wish to apply stricter food safety measures than those set by Codex may be required to justify these scientifically
  - Primary purpose to **protect health & safety** of populations
  - Codex has far reaching implications for resolving **trade disputes**
  - Also affect **market access/food trade, food losses/ wastes, have cost implications**

Codex Alimentarius Comission

- An Intergovernmental body
- **Established** by FAO/WHO in 1963
- **Mandate**
  - protect the health of consumers
  - ensure fair practices in international food trade
- **Membership** - 186 countries + 1 member org (EU) – representing 99% of world population and
- **Observers:** 220 international organizations:- 50 IGOs, 154 NGOs, 16 UN (representing scientific, industry, trade, consumers)

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Organizational Structure of Codex

CODEX ALIMENTARIUS COMMISSION

Executive Committee	Secretariat

General Subject Committees (10)	
General Principles (France)	Methods of Analysis and Sampling (Hungary)
Food Additives (China)	Pesticide Residues (China)
Contaminants in Foods (Netherlands)	Residues of Veterinary Drugs in Foods (USA)
Food Hygiene (USA)	Food Labelling (Canada)
Food Import and Export Inspection and Certification Systems (Australia)	Nutrition and Foods for Special Dietary Uses (Germany)

Commodity Committees (12)	
active	
Fish and Fishery Products (Norway)	Processed Fruits and Vegetables (USA)
Fats and Oils (Malaysia)	Fresh Fruit and Vegetables (Mexico)
Sugars (Colombia)	Spices and culinary herbs (India)
adjourned	
Milk and Milk Products (New Zealand)	Meat Hygiene (New Zealand)
Cereals, Pulses and Legume (USA)	Vegetable Proteins (Canada)
Natural Mineral Waters (Switzerland)	Cocoa Products and Chocolate (Switzerland)

ad hoc Intergovernmental Task Forces	
active	
Animal Feeding (Switzerland)	
dissolved	
Biotechnology (Japan)	Fruit and Vegetable Juices (Brazil)
Processing and Handling of Quick Frozen Foods (Thailand)	Antimicrobial Resistance (Republic of Korea)

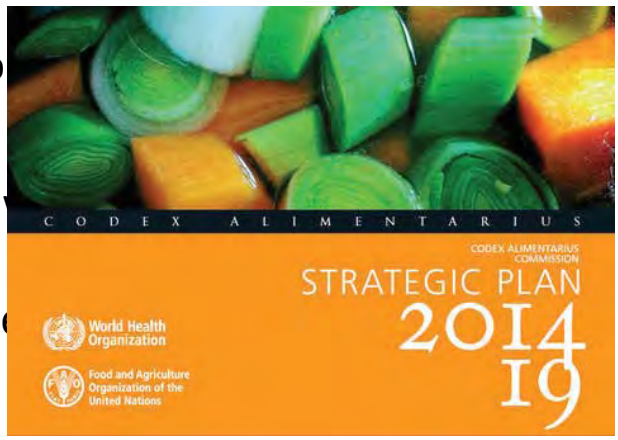
Regional Coordinating Committees	
Africa (Cameroon)	Latin America and the Caribbean (Costa Rica)
Asia (Japan)	North America and the Southwest Pacific (Papua New Guinea)
Europe (Poland)	Near East (Lebanon)

Principles of Codex elaboration Procedure

- **Objectives** of consumer health protection and fair trade practice
- **Transparency**- Open discussion and communication, Free to all interested
- **Science-based** & timely available scientific advice
- Standards **applicable globally**
- **Collaboration**
- **Inclusiveness**
  - Step by step (8-step)
  - Broad participation by all members interested
  - Consensus - every member included - every members concerns considered before decision taken

Codex Strategic plan 2014-2019

- **Vision:** The CAC should be the **pre-eminent international food standards –setting body** to protect the health of the consumers & ensure fair practices in the food trade
- **Core values:** collaboration, inclusiveness, consensus, transparency
- **Strategic goals: 4**
  1) Establish international food standards - current & emerging food issues
  2) Ensure application of RA princip standards
  3) Facilitate effective participation
  4) Implement effective & efficient practices
- **Objectives & work plans-**activiti indicators



Codex Outputs - Documentation

- *Codex alimentarius* in Latin means food code
- A collection of food standards, guidelines & related texts ie the documentation developed by the CAC
  - ➢Standards > 250
  - ➢Codes of Practice > 50
  - ➢Guidelines – 70
  - ➢>2500 pesticide MRLs, >60 chemical contaminants MLs, >1200 Food Additives and >300 Vet drugs evaluated
- Horizontal and Vertical

✓All Codex texts are available from the List of standards of Codex website http://www.codexalimentarius.org/standards/en/
✓The numerical Codex standards for food additives,veterinary drugs maximum residue levels & pesticide maximum residue levels, can also be accessed via databases that facilitate their use.

Codex Documents(Standards/ Guidelines/ Recommendations)

- Food safety & hygiene
- Nutrition
- Labelling
- Import & export inspection & certification
- Quality of foodstuffs

Importance of Codex to countries and participation in Codex standards setting

Codex Alimentarius Commission and Member Countries

- Most Members use some of Codex Standards/ texts
  - as the basis of their legislation/ regulations/ guidelines etc.
  - To strengthen food control systems
- Because
  - Internationally recognized
  - Based on sound science
  - Best practices based on inputs and experiences of member countries

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Active participation in Codex Why?

- Codex considers a standard/text that countries need
- The standard/text reflect the information/data in a country
- The standard/text can be used in country's regulation/guideline etc.

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What countries should do?

- Submit **information/data** in respond to request from committees/JECFA/JMPR etc.
- Propose **new work**
- Provide **comments** on proposed draft/draft standards
- Establish the **position of country**

Management of Codex activities at National level

3 Important aspects…..

- **NCCP**- act as a link between the Codex Secretariat, country stakeholders and member countries
- **NCC** - responsible committee for all decisions on Codex at national level - provides strategic leadership & coordination of Codex programme at national level
- **Working procedures** – NCC/NCCP (Procedural manual)

Relevance and benefits of Codex to members or how Codex helps member countries

Relevance/ benefits of Codex to members

- Science based and risk analysis
- Consensus based approach – truly global – reflects best information/ practices
- Covers a wide range – products, COP, methods, MRLs, audits, ethics, equivalence, etc
- Easy to harmonise national legislation & helpful in absence of national standards – not spend country resources – easy to convince stakeholders
- Provides flexibility in adaptation
- Exchange of information is standardized
- Facilitates trade – exports and imports
- Good basis for equivalence/ MR processes - facilitated
- Referenced by WTO (SPS Agreement)

Challenges in Countries for Codex

FAO and Food Safety

FAO Vision

- **Achieving food security for all** is at the heart of FAO's efforts – to make sure people have regular access to enough high-quality food to lead active, healthy lives.

Food security: all people, at all times, have physical, social and economic access to sufficient, **safe** and nutritious food to meet their dietary needs and food preferences for an active and healthy life. [World Food Summit, 1996]

FAO's Regional Food safety & Q Programme

- FAO has an important leadership role in advancing FS agenda in region
- Around **15 - 20 projects/ programmes** on food safety & quality (national/ regional) & tools & GL developed
- Broadly cover:
  - **Food safety policies, legislation,** governance (including coordination mechanisms)
  - **SPS/standards & norms/ Codex** related activities
  - **Inspection/Enforcement/surveillance-** testing, FBDS
  - Food safety in various agro food supply chains (including street foods/ retail); linkage to **primary production**
  - Food safety **emergency** management/ recall systems
  - **Certifications** and **accreditation**
  - **Trainings/ awareness/ education**

SPS/Standards/ Codex related

- **Focus:**
  - Support in strengthening NCC, NCCP, procedural manuals
  - Harmonization of standards in countries,
  - Adopting/ adapting Codex standards
  - Strengthening country participation in Codex standards setting
  - Data collection
  - **Trainings:** Chemical RA in the food chain; RA for SAARC
  - National WS on standards setting & strengthening & Codex activities (in Cambodia)

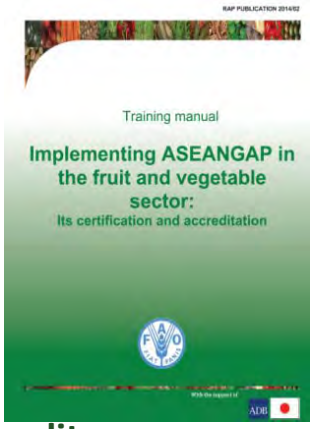
Inspection, Enforcement & Surveillance

- **Focus:** risk-based inspections, risk-based import control systems, certification systems, food-borne disease surveillance systems, laboratory capacity

- **Some activities**
  - Guidelines for **risk categorization** of food & food establishments (ASEAN, Bangladesh)
  - **Risk-based import controls** (India), **risk-based food inspection** (S.Korea, Bhutan, B'desh)
  - Development of **inspection guidelines**, manuals, training, sampling guidelines
  - Development of inspection **curricula**
  - Projects in Bangladesh, Thailand (**lab** capacity), Myanmar (inspection & **certification** – fisheries)

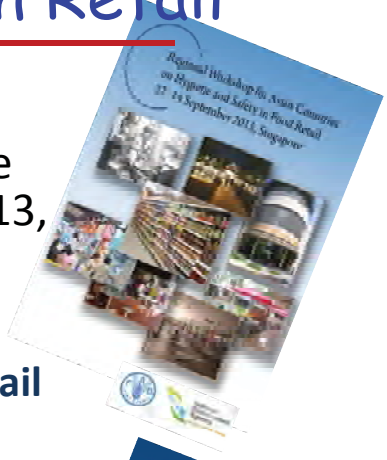
Some Initiatives on GAPs

- **Good Agriculture Practices (GAP)**
  - **Training manual** on "Implementing ASEAN**GAP** in the F&V sector, its Certification & Accreditation"
  - **SAARC - Good Agriculture Practice (GAP)** Standards & Certification Scheme
  - Scheme – 3 parts
    - ✓**I – GAP standards/ requirements (food safety; quality; environmental management; workers health, safety & welfare)**
    - ✓**II Structure for implementing GAP in a country - Guidance for establishing SO; governing structure**
    - ✓ **Part III Certification of GAP - Certification criteria, process, CB requirements, Rules for using Certification Mark**
    - ✓ **Annex - List of documents needed under Scheme**
  - Piloting in 4 countries



Some Initiatives on GPs in Retail

- **Food retail in Asia**
  - Regional WS on hygiene and safety in the food retail sector (12 - 14 September 2013, Singapore); 22 countries 41 delegates
  - Recommendations
    - ✓**Regional network/ platform on food retail** http://foodretailnetwork.asia/
    - ✓**Checklist for inspection of street food**
    - ✓**Booklet - information on rapid test kits**
    - ✓**Training module on hygiene & food safety in street food sector**
    - ✓**Regional training on risk-based imported food controls**
  - **Guidance on hygiene** and safety in food retail sector – **12 sections**



Some Initiatives on GMP/HACCP

- **GMP/HACCP In Asia - Regional Consultation WS: Implementation of GMP/HACCP in Asia – a status review**, (organised FAO & FSVO - Switzerland, June 2014, Bangkok)
- **Regional Guidance on Criteria for GMP/HACCP**
  - ❖ Adopted in legislation directly (vol/ mandatory),
  - ❖ texts more **directive & specific** – refer to legn
  - ❖ additional **definitions** – traceability, GMP/GHP, food chain, NC, PRP, etc
  - ❖ additional **clarifications** – internal design, verification/ validation
  - ❖ **Additions** – power supply, external design, allergen contamination, storage procedures, outsourcing, quality control, complaints
  - ❖ **Alignments** – equipment, specs, ref CAC/GL/60 on traceability
  - ❖ **Management systems aspects** - management commitment, self evaluation & review, documentation & records

Snapshot of Ongoing Projects in Asia …1

Regional projects:

- **ASEAN** - Support to CB & Implementation of International **Food Safety Standards** in ASEAN Countries"*(WS, training course, case studies, guidance documents)*
- **GMS** - Promotion of rural development through development of **Geographical indication**s at regional level in Asia
- **SAARC - Good Agriculture Practice (GAP)** Standards & Certification Scheme
- **Asia -** Strengthening Coordination between Departments Responsible for Food Safety

Snapshot of Ongoing Projects in Asia …2

- **Country Projects:**
  - Improving food safety & Institutionalization of Food Safety in Bangladesh for safer Food (**Bangladesh)**
  - Enhancing SPS Capacity of Ginger Exports through PPP and Policy assistance for **bio-secure** agro-food supply chain**(Nepal)**
  - Developing food law (**Laos)**
  - Strengthening of Food Safety and Standards (**Bhutan)**
  - Strengthening of National Codex Capacity (**Mongolia)**
  - CB to improve market access for fish & fishery products **(Myn)**
  - Strengthening SPS capacity for trade – improving safety & Q of fresh vegetables through value chain approach (**Vietnam)**
  - Institutional Strengthening on Food Safety & QC in Supply Chain Management of Livestock Products & **INFOSAN (Thailand)**
  - Strengthening **the food safety information, education, communication capacity** to implement Food Safety Law and National Strategy (**Vietnam)**
  - Development of Consumer Protection Law **(Cambodia)**

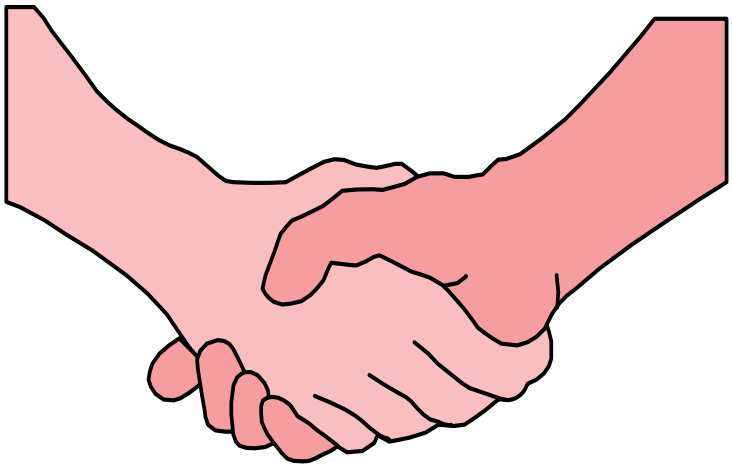
Future Focus/ Priorities

- **Food Safety Policy** development
- Strengthening **coordination actions/ mechanisms** through multidisciplinary approaches/ partnerships
- Sound **evidence base** through the generation and access to data and information, indicators
- Training on **risk communication**
- **Assessment** of food safety and risk management capacity of countries
- Strengthening role of **voluntary/ private standards** for regulatory purposes
- **Food safety strategy ; food safety indicators**

Useful websites

- FAO Food Safety and quality home page http://www.fao.org/food/food-safety-quality/home-page/en/
- Web page on Vet & Public Health, Feed & Food Safety; www.fao.org/ag/AGAinfo/programmes/en/A6.html
- Emergency prevention & early warning in area of food safety (EMPRES Food Safety): EMPRES-FS@fao.org
- INFOSAN – International food safety authorities network – https://extranet.who.int/infosan/
- *FAO Regional office for Asia and the Pacific http://www.fao.org/asiapacific/rap/home/en/
- *Capacity Building and implementation of international food safety standards in ASEAN countries http://foodsafetyasiapacific.net/
- Food Retail Network in Asia http://foodretailnetwork.asia/

THANK YOU



Any Questions?

Shashi.sareen@fao.org

Understanding the Scientific Basis for Codex Food Safety Standards

Yukiko Yamada, Ph.D.

Agreement on the Application of Sanitary and Phytosanitary Measures

- Article 2 Basic Rights and Obligations
- Article 3 Harmonization
- Article 5 Assessment of Risk and Determination of the Appropriate Level of SPS Protection

Scientific Principles and Evidence

- Article 2 Basic rights and obligations:

"3. Members shall ensure that any sanitary measure is applied only to the extent necessary to protect human life or health, is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided for in para. 7 of Article 5."

NB: the terms "phytosanitay", "animal or plant" are omitted from the text.

SPS Agreement & Codex

- Preamble

"Desiring to further the use of harmonized sanitary measures between Members, on the basis of international standards, guidelines and recommendations developed by the relevant international organizations, including the Codex Alimentarius Commission …, without requiring Members to change their appropriate level of protection of human life or health.

SPS Agreement & Codex(2)

- Annex A Definitions on "International standards, guidelines and recommendations":

"for food safety, the standards, guidelines and recommendations established by the Codex Alimentarius Commission relating to food additives, veterinary drugs and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of hygienic practice."

SPS Agreement & Codex (3)

- Article 3 Harmonization

"1. To harmonize sanitary … measures on as wide a basis as possible, Members shall base their sanitary … measures on international standards, guidelines or recommendations, where they exist, except as otherwise provided for in the Agreement, and in particular in paragraph 3"

SPS Agreement & Codex (4)

"2. Sanitary measures which conform to international 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 this Agreement and of GATT 1994."

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SPS Agreement & Codex (5)

- However:

"3. Members may introduce or maintain sanitary measures which results in a higher level of sanitary protection than would be achieved by measures based on the relevant international 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 …."

- These measures shall not be inconsistent with any other provisions of the Agreement

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Risk Assessment

- Article 5 Risk assessment:

"1. Members shall ensure that sanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human life or health, taking into account risk assessment techniques developed by the relevant international organizations."

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Risk Assessment (2)

- Article 5:

"2. In the assessment of risks, Members shall take into account available scientific evidence; relevant processes and production methods; relevant inspection, sampling and testing methods; prevalence of specific diseases or pests; …; relevant ecological and environmental conditions; and quarantine or other treatment.

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Risk Assessment (3)

- Article 5:

"7. In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as sanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary measure accordingly within a reasonable period of time.

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Implications of SPS on Codex

- Codex focuses on risk-based inspection and certification systems
  - Many of them already done (e.g., inclusion of HACCP, development of working principles for risk analysis)
- Codex reaffirms the role of science in its work ← scientific data for recommendation
- Codex revises its acceptance rules
  - Already removed

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Safety Provisions Recognized by SPS Agreement

- Maximum Residue Limits for Pesticides and Veterinary Drugs
- Maximum Levels for Contaminants
- Maximum Levels of Food Additives in Use
- Food Hygiene Requirements of Codex Standards
- Methods of Analysis and labelling for the above

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Role of Science in Codex

Role of Science in the Codex Decision-Making Process

1. Science-based: "Principle of sound scientific analysis and evidence"
2. Consideration of other legitimate factors
3. Role of food labelling
4. Right to abstention without preventing the decision of the Commission

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Independent Scientific Advisory Bodies

- Joint FAO/WHO Expert Committee on Food Additives (JECFA)
  - Food additives (toxicology, specifications)
  - Contaminants (toxicology, [exposure])
  - Veterinary drug residues (toxicology, MRLs)
- Joint FAO/WHO Meeting of Pesticide Residues (JMPR)
  - Pesticide residues (toxicology, MRLs, exposure)
- Joint FAO/WHO Meetings on Microbiological Risk Assessment (JEMRA)
  - Pathogenic bacteria & viruses, and parasites
- *Ad hoc* expert consultations by FAO & WHO

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Risk Analysis in Codex

Risk Analysis

Consisting of 3 components:

- Risk Assessment
- Risk Management
- Risk Communication

Codex Alimentarius Commission Procedural Manual contains:

- Definitions of Risk Analysis Terms Related to Food Safety
- Working Principles within Codex
- Risk analysis principles applied by Codex committees

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Statements of Principle Relating to the Role of Food Safety Risk Assessment

1. Risk assessment be the basis
2. Science-based; use of 4 steps of risk assessment; documentation for transparency
3. Functional separation of risk assessment and risk management & need for interactions between them
4. Use of quantitative information; presentation of risk characterizations in a readily understandable and useful form.

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Risk Analysis

Taken into consideration in the elaboration of recommendations on:

- Pesticide Residues (Maximum Residue Limits recommended by JMPR)
- Residues of Veterinary Drugs (Maximum Residue Limits recommended by JECFA)
- Contaminants
- Food Additives
- Food Hygiene
- Fortification of nutrients

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Risk Assessment by Independent Scientific Bodies (Chemicals)

Differences between Codex and Scientific bodies

- Codex Alimentarius Commission (CAC)
  - Risk management body
  - Delegations of Member governments and observer organizations participate
  - Recommendations to Members (science-based)
  - Also considers other legitimate factors and economic implications
- Independent scientific advisory bodies
  - Risk assessment bodies
  - Individual scientists participate
  - Scientific evaluations and advice

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Process

- Compounds to be on the agenda
  - Priority lists decided by the relevant Codex Committees and approved by the CAC
  - Agenda determined by the Secretariat of independent scientific bodies
- Selection of experts
  - By the Secretariat, based on expertise; regional representation is also considered
- These bodies exist only when they meet; however, monographs and reports shall be drafted for discussion before meeting

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Process

- To ensure scientific and consistent evaluation, guidance documents have been prepared.
- These documents are referred during the preparation stage as well as at the meeting
- Decisions are made through discussions at the meeting on scientific issues
- Their duties include response to questions of the related Codex Committees
- Incorporating new scientific developments

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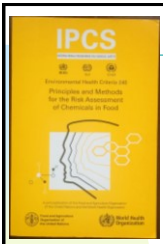

Risk Assessment of Chemicals in Food (2009)

- Risk assessment and its role in risk analysis
- Chemical characterization, analytical methods and the development of specifications
- Hazard identification and characterization: toxicological and human studies
- Dose-response assessment and derivation of health-based guidance values
- Dietary exposure assessment of chemicals in food
- Risk characterization
- MRLs for pesticides and veterinary drugs
- Principles related to specific groups of substances

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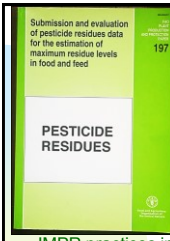

Pesticide Residue Data Evaluation by JMPR (FAO Panel)(FAO Manual, 2009)

- Selection of compounds for evaluation
- Data and information required for JMPR evaluation
- Preparation of data dossiers for consideration of the FAO Panel of JMPR
- JMPR practices in evaluation of pesticide residue data
- JMPR practices in estimation of MRLs, and residue levels for calculation of dietary intake
- Estimating dietary intake of pesticide residues
- Use of JMPR recommendations by regulatory authorities

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Who prepares data for evaluation?

- Pesticides, veterinary drugs, and food additives
  - Mostly manufacturers
  - Sometimes, governments or industry groups
- Contaminants
  - Governments
  - Research institutes and academia
  - Use of scientific literature search

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Toxicological Evaluation (ex. JMPR on pesticide residues)

- Excretion
- Distribution
- Metabolism in laboratory animals
- Acute toxicity
- Subchronic toxicity
- Chronic toxicity
- Carcinogenicity
- Genotoxicity
- Reproductive toxicity
  - Multi-generational
  - Developmental
  - Teratogenicity
- Neurotoxicity
- Endocrine disruption

Lowest NOAEL + Safety factor (usually 100)
⇒Acceptable Daily Intake (intentionally used); or
Provisional Tolerable Daily Intake (unintentional presence) for life time (every day)

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Toxicological Evaluation (2) (ex. JMPR on pesticide residues)

- Choline esterase inhibition
- Fatality after one time oral dose
- Fetus developmental toxicity as a result of toxicity to mother
- Effect at an early stage of repeated dose
- Acute neurotoxicity
- Biochemical changes, such as effect on hormones
- NOAEL + safety factor (>25)
  ⇒Acute Reference Dose (ARfD) for one day

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Evaluation of Pesticide Residue Data by JMPR

- Physical & chemical properties
- Metabolism in crops and livestock
- Environmental fate
- Analytical methods & storage stability

Residue definition

- Use pattern on the label(GAP)
- Supervised residue trials following GAP (residues in whole commodity and edible portion) ⇒MRL & levels necessary for dietary intake estimates
- Monitoring data ⇒ Extraneous MRL
- Processing studies
- Livestock feeding studies

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Evaluation of Pesticide Residue Data by JMPR (2)

- Determines the definition of residues taking into consideration toxicological significance of the parent and metabolites, their concentrations, ease of analysis, etc.
  - For enforcement (what to be analyzed)
  - For risk assessment (includes all toxicologically significant metabolites)
- Using the determined residue definition, estimates MRL on a basis of residue trials
  - If data are insufficient, no MRL (no detectable residue is allowed)

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Risk Assessment

- Validity of MRLs is determined by dietary exposure assessment
  - International Estimated Daily Intake (average total intake of a pesticide from foods) is compared with the ADI
  - International Estimated Short-term Daily Intake (97.5th percentile consumption of food with potentially highest concentration) is compared with ARfD (general population, children ≤ 6 y or women of child bearing age)
  - If the ADI or ARfD is exceeded, highlight the fact for CCPR to consider

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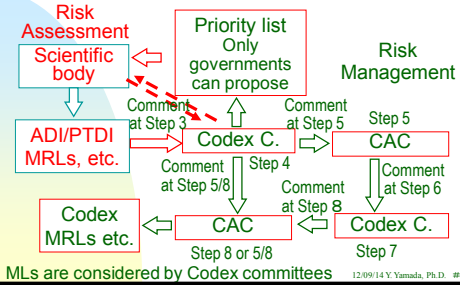
Elaboration Procedure of Codex MRLs



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Conclusion

- Science is the basis for Codex recommendations in the food safety area
- Using Codex recommendations is consistent with the SPS Agreement
- Toxicological endpoints recommended by the scientific advisory bodies can be commonly used
- In order to reflect your country's situations in Codex recommendations, provide scientific data to Codex or relevant scientific advisory body as necessary
- Active participation in Codex is important

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Codex Guideline of Food Labelling and Claim

Dr. Biplab Nandi, Ph.D
Senior Food and Nutrition Officer
Food and Agriculture Organization of the United Nations
Regional Office for Asia and the Pacific, Bangkok (Retd.);
President,
Society for Nutrition, Education and Health Advancement (SNEHA), Kolkata, India

New Delhi, ILSI: December 9-10- 2014

Contents

Purpose 1

To ensure that nutrition labelling is effective:

In providing the consumer with **Nutrient Content and other relevant information** about a food so that a wise choice of food can be made

Purpose 2

It does not describe a product or present information about it which is in any way **false, misleading, deceptive or insignificant.**

And also to ensure that **no nutrition claim is made without nutrition labelling**.

Principles 1
Nutrient Declaration

This 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.

Principles 2

A more exact quantitative delineation for individuals is not valid because there is **no meaningful way in which knowledge about individual requirements can be used in labelling**.

Scope 1

These guidelines recommend **procedures** for the nutrition labelling of foods

Scope 2

These guidelines apply to the **nutrition labelling of all foods including** foods for special dietary uses.

Definitions

Nutrition labelling consists of two components:

(a) **nutrient declaration**;

(b) **supplementary nutrition information**.

Nutrient Declaration 1

•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* (CAC/GL 23-1997), are made.

•Exception: where **national circumstances would not support** such declarations..

Nutrient Declaration 2: Listing

Where nutrient declaration is applied, the declaration of the **following** should be mandatory:

1. Energy value; 2. The amounts of protein, available carbohydrate (i.e. dietary carbohydrate excluding dietary fibre), fat, saturated fat, sodium and total sugars; and

3. The amount of any other nutrient for which a nutrition or health claim is made

Nutrient Declaration 3

Where a specific nutrition or health claim is applied, then the declaration of the amount of any other nutrient considered relevant for maintaining a good nutritional status as required by **national legislation or national dietary guidelines should be mandatory**.

Nutrient Declaration 4

Where a claim is made regarding the amount and/or the type of carbohydrate, the **amount of total sugars** should be listed . The amounts of starch and/or other carbohydrate constituent(s) may also be listed. Where a claim is made regarding the dietary fibre content, the **amount of dietary fibre** should be declared.

Nutrient Declaration 5

Where a claim is made regarding the amount and/or type of **fatty acids** or the amount of **cholesterol**, the amounts of saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids and cholesterol should be declared, and the amount of **trans fatty acid** may be required according to national legislation .

Nutrient Declaration 6

Only vitamins and minerals for which **recommended intakes have been established** and/or which are of nutritional importance in the country concerned should also be declared.

•

Calculation of Nutrients 1

•Calculation of energy

The amount of energy to be listed should be calculated by using the following conversion factors:

Carbohydrates 4 kcal/g – 17 kJ
Protein 4 kcal/g – 17 kJ
Fat 9 kcal/g – 37 kJ
Alcohol (Ethanol) 7 kcal/g – 29 kJ
Organic acid 3 kcal/g – 13 kJ

Calculation of Nutrients 2

• **Calculation of protein**

The amount of protein to be listed should be calculated using the formula:

Protein = Total Kjeldahl Nitrogen x 6.25

unless a different factor is given in a Codex standard or in the Codex method of analysis for that food.

Presentation of Nutrient Content 1

The declaration of nutrient content should be numerical.

Information on **energy value** should be expressed in kJ and kcal per 100 g or per 100 ml or per package if the package contains only a single portion. 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.

Presentation of Nutrient Content 2

Information on the amounts of **protein, carbohydrate and fa**t in the food should be expressed in g per 100 g or per 100 ml or per package if the package contains only a single portion. 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. Countries where the level of intake of trans-fatty acids is a public health concern **should consider the declaration of trans-fatty acids in nutrition labelling**.

Presentation of Nutrient Content 3

Numerical information on **vitamins and minerals** should be expressed in metric units. 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.

Presentation of Nutrient Content 4

In addition, information on **protein and additional nutrients** may also be expressed as percentages of the NRV where an NRV has been established.

Presentation of Nutrient Content 4.1

Codex Nutrient Reference Value (NRV): Identified for individuals **older than 36 months**.

- Estimate the **relative contribution** of individual products to overall healthful dietary intake
- Way to compare **Nutrient Content between Products**

Presentation of Nutri. Content 5

Conversion factors for niacin and folate equivalents
Vitamin Dietary equivalents
Niacin 1 mg niacin equivalents (NE) = 1 mg niacin
60 mg tryptophan

Presentation of Nutri. Content 6

Folate 1 µg dietary folate equivalents (DFE) = 1 µg food folate
0.6 µg folic acid added to food or
as supplement consumed with
food

Tolerances and Compliance

Tolerance limits should be set **in relation to public health concerns, shelf-life, accuracy of analysis, processing variability and inherent liability and variability of the nutrient in the product**; and according to whether the nutrient has been added or is naturally occurring in the product.

Specific Features of Presentation 1

The recommendations related to specific features of presentation are intended to enhance the **legibility of nutrition labelling**. However, competent authorities may determine any additional means of presentation of nutrition information taking into account approaches and practical issues at the national level and based on the needs of their consumers.

Specific Features 2

Format:Font,Contrast; Numerical Presentation (of nutrient content): should be in accordance with the various specified provisions

Specific Features 3

The use of **supplementary nutrition information** on food label should be optional and should only be given in addition to, and not in place of, the nutrient declaration, except for target populations who have a **high illiteracy rate** and/or comparatively little knowledge of nutrition. **For these, food group symbols or other pictorial or colour presentations may be used without the nutrient declaration.**

General Guidelines on Claims

The principle on which the guidelines are based is that no food should be described or presented in a manner that is false, misleading or deceptive or is likely to create an erroneous impression regarding its character in any respect.

The person marketing the food should be able to justify the claims made.

Prohibited Claims

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 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.
- Claims which cannot be **substantiated**.

Prohibited Claims 2

Claims as to the suitability of a food for use in the prevention, alleviation, treatment or cure of a disease, disorder, or particular physiological condition unless they are:

(a) in accordance with the provisions of Codex standards or guidelines for foods as developed by the Committee on **Nutrition and Foods for Special Dietary Uses** and follow the principles set forth in these guidelines. or,

(b) in the absence of an applicable Codex standard or guideline, **permitted under the laws of the country in which the food is distributed**.

Prohibited Claims 3

Claims which could give rise to **doubt about the safety** of similar food or which could **arouse or exploit fear** in the consumer

Potentially Misleading Claims

The following are examples of claims which may be **misleading**:

Meaningless Claims as to good hygienic practice, such as "**wholesome", "healthful", "sound**".

CONDITIONAL CLAIMS

The following claims should be permitted subject to the particular condition attached to each:

(i) An indication that a food has obtained an increased or special nutritive value by means of the **addition of nutrients**, such as vitamins, minerals and amino acids: may be given only if such an addition has been made on the basis of nutritional considerations **according to the Codex *General Principles for the Addition of Essential Nutrients to Foods***. This kind of indication should be subject to legislation by the appropriate authorities.

CONDITIONAL CLAIMS 2

(ii) Terms such as "natural", "pure", "fresh", "home made", "organically grown" and "biologically grown" when they are used, should be **in accordance with the national practices** in the country where the food is sold.

CONDITIONAL CLAIMS 3

(iii) Religious or Ritual Preparation (e.g. Halal, Kosher) of a food may be claimed provided that the food conforms to the requirements of the **appropriate religious or ritual authorities** (refer to: the *General Guidelines for the Use of the Term "Halal"*, CAC/GL 24-1997).

Foods for Special Medical Purposes

Foods for special medical purposes in which the essential characteristic involves a specific modification of the content or the nature of the **proteins, fats or carbohydrates** shall bear a description of this modification and information on the amino acid, fatty acid or carbohydrate profile, when necessary.

LABELLING OF AND CLAIMS FOR FOODS FOR SPECIAL MEDICAL PURPOSES 1

DESCRIPTION

Foods for special medical purposes are a category of foods for special dietary uses which are specially processed or formulated and presented for the dietary management of patients and **may be used only under medical supervision**.

LABELLING OF AND CLAIMS FOR FOODS FOR SPECIAL MEDICAL PURPOSES 2

They are intended for the exclusive or partial feeding of patients with **limited or impaired capacity** to take, digest, absorb or metabolize ordinary foodstuffs or certain nutrients contained therein, or who have other special **medically-determined nutrient requirements**

LABELLING OF AND CLAIMS FOR FOODS FOR SPECIAL MEDICAL PURPOSES 3

GENERAL PRINCIPLES

The formulation of such foods should be based on sound medical and nutritional principles. Their use should have been demonstrated, by **scientific evidence, to be safe and beneficial** in meeting the nutritional requirements of the persons for whom they are intended.

LABELLING OF AND CLAIMS FOR FOODS FOR SPECIAL MEDICAL PURPOSES 4

The labels, accompanying leaflets and/or other labelling and advertisement should provide sufficient information on the nature and purpose of the food as well as detailed instructions and precautions for their use. **The advertising of these products to the general public should be prohibited.**

Marking of Date

The date of minimum durability as provided for in Section 4.7 of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985) shall be declared.

Additional Information

A statement that the product is **not to be used for** parenteral administration shall appear on the label.

A prominent statement indicating whether the product **is or is not intended** as the sole source of nutrition , shall appear on the label.

Additional Information 2

A **statement** of the rationale for the use of the product and a description of the properties or characteristics that make it useful. If the product has been formulated **for a specific age group**, it should carry a prominent statement to this effect

Conclusion

Codex Guideline of Food Labelling and Claim:

An effective Tool for Disseminating Appropriate Information

Thank You

Heartfelt Greetings for the New Year 2015!

Contact:

nandi.biplab@gmail.com

"Codex General Standards for Food Additives (GSFA)"

A Presentation by:-

Mr. Anil Mehta
Deputy Director
Food Safety and Standards Authority of India
(Ministry of Health & Family Welfare)

9th December, 2014: New Delhi

Outline of Presentation

- CODEX Alimentarius Commission
- What is the GSFA
- Structure of the GSFA
- Food Additive Requirements – For inclusion as provision in the GSFA

Codex Alimentarius Commission

- Founded in 1963
- joint venture between the Food and Agriculture Organization (FAO) and the World Health Organization (WHO)
- Formulate internationally accepted food safety standards with the mandate to protect the health of the consumers and to ensure fair practices in food trade.
- 185 members countries and 1 member organization (EU), representing 99% of world population
- *Food Code* contains international food standards, recommended codes of practice, and guidelines.

Codex Alimentarius Commission

- WTO uses international standards as benchmarks in three areas:-
  - Codex Alimentarius Commission for food safety
  - World Organization for Animal Health (OIE) for animal health
  - International Plant Protection Convention (IPPC) for plant health
- Codex standards are referenced in the WTO SPS Agreement and in dispute settlement cases.
- Codex is the reference point for harmonizing national food safety standards
- Member countries that adopt Codex standards meet the requirements of the WTO SPS Agreement.

What is the GSFA?

- An international standard administered by the Codex Alimentarius Commission (CAC) under the Codex Committee on Food Additives (CCFA)

Deals solely with Food Additives:

– "any substance… the intentional addition of which to food for a technological purpose… may be reasonably expected to result… in it or its by products becoming a component of or otherwise affecting the characteristics… of such foods."

What is the GSFA?

General Principles of the GSFA: Preamble

Protect the health of consumers:

- Only lists food additives determined to be safe by JECFA
- Sets criteria for verifying the compatibility of the listed ML with JECFA's ADI (considers use in all foods)
- Provides criteria for justification for use of food additives.

Ensure fair practices in food trade:

- Only lists food additives with INS designated by CODEX
- Sets forth the conditions under which food additives may be used in all foods
- Defines foods in which additives may not be used
- Is the single authoritative reference point for food additives

What is the GSFA?

- 16 main food categories (266 total)
- Includes provisions for over 300 additives
- ~ 3300 adopted provisions (Tables 1 and 2)
- ~ 2600 draft and proposed draft provisions remaining in the Step process

Structure of the GSFA

- Preamble
  - Annex A
  - Annex B
  - Annex C
- Table 1
- Table 2
- Table 3
  - Annex to Table 3

Structure of the GSFA

- Preamble:-
  - First six pages of GSFA contains six sections describing:
    - ❖Scope
    - ❖Definitions
    - ❖General principles for the use of food additives
    - ❖Carry-over of food additives into foods
    - ❖Food category system
    - ❖Description of the standard

Structure of the GSFA

❑ Annexes to the Preamble:-

- Annex A
  - Guidelines for the development of maximum levels for the use of food additives with numerical acceptable daily intakes
- Annex B
  - Food category system
    - Hierarchical system
    - 16 main categories, total of 266 categories when including subcategories
- Annex C
  - Cross reference of GSFA food category system with Codex Commodity Standards

Structure of the GSFA

GSFA TABLES:

- Table 1
  - List of adopted food additive provisions sorted alphabetically by additive name
- Table 2
  - List of adopted food additive provisions sorted by food category (same information as in Table 1)
- Table 3
  - List of additives (and their functional classes) permitted for use in food in general in accordance with good manufacturing practice (GMP)
- Annex to Table 3
  - List of food categories (e.g. fresh fruit) which are excluded from the general conditions of Table 3

Structure of the GSFA

- Table 1:- List of adopted food additive provisions sorted alphabetically by additive name

ALLURA RED AC

INS 129 Allura red AC Functional Class: Colour

FoodCatNo	FoodCategory	MaxLevel	Notes	Year Adopted
01.1.2	Dairy-based drinks, flavoured and/or fermented (e.g., chocolate milk, cocoa, eggnog, drinking yoghurt, whey-based drinks)	300 mg/kg	52 & 161	2009
01.6.2.2	Rind of ripened cheese	100 mg/kg		2009
01.6.4	Processed cheese	100 mg/kg	161	2009
01.6.5	Cheese analogues	100 mg/kg	3	2009
01.7	Dairy-based desserts (e.g., pudding, fruit or flavoured yoghurt)	300 mg/kg	161	2009
02.4	Fat-based desserts excluding dairy-based dessert products of food category 01.7	300 mg/kg	161	2009

Note 3: Surface treatment.
Note 52: Excluding chocolate milk.
Note 161: Subject to national legislation of the importing country aimed, in particular, at consistency with Section 3.2 of the Preamble.

Structure of the GSFA

- Table 2:- List of adopted food additive provisions sorted by food category (same information as in Table 1)

Food Category No. 05.4 Decorations (e.g., for fine bakery wares), toppings (non-fruit) and sweet sauces

Additive	INS	Year Adopted	Max Level	Notes
ACESULFAME POTASSIUM	950	2007	500 mg/kg	161 & 188
ALITAME	956	2007	300 mg/kg	161
ALLURA RED AC	129	2009	300 mg/kg	
ASPARTAME	951	2007	1000 mg/kg	161 & 191
BEESWAX	901	2003	GMP	
BENZOATES	210-213	2003	1500 mg/kg	13
BRILLIANT BLUE FCF	133	2005	500 mg/kg	

Note 13: As benzoic acid.

Note 188: Not to exceed the maximum use level for acesulfame potassium (INS 950) singly or in combination with aspartame-acesulfame salt (INS 962).

Note 191: If used in combination with aspartame-acesulfame salt (INS 962), the combined maximum use level, expressed as aspartame, should not exceed this level.

Structure of the GSFA

- Table 3:- Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP

INS No	Additive	Functional Class	Year Adopted	Acceptable in Foods Conforming to the Following Commodity Standards
260	Acetic acid, glacial	Acidity regulator, Preservative	1999	
472a	Acetic and fatty acid esters of glycerol	Emulsifier, Sequestrant, Stabilizer	1999	
1422	Acetylated distarch adipate	Emulsifier, Stabilizer, Thickener	1999	
1414	Acetylated distarch phosphate	Emulsifier, Stabilizer, Thickener	1999	
1451	Acetylated oxidized starch	Emulsifier, Stabilizer, Thickener	2005	
1401	Acid-treated starch	Emulsifier, Stabilizer, Thickener	1999	
406	Agar	Bulking agent, Carrier, Emulsifier, Gelling agent, Glazing agent, Humectant, Stabilizer, Thickener	1999	CS 96-1981, CS 97-1981

Structure of the GSFA

- Annex to Table 3:

ANNEX TO TABLE THREE

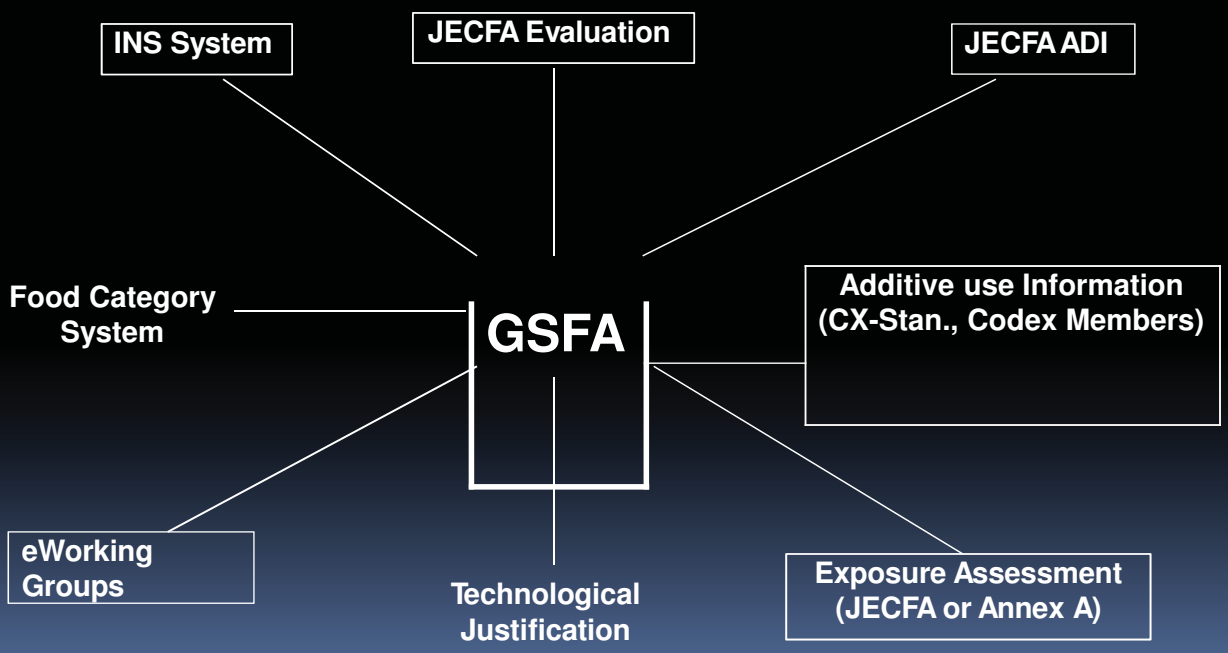
Food Categories or Individual Food Items Excluded from the General Conditions of Table Three

The use of additives listed in Table Three in the following foods is governed by the provisions in Tables One and Two.

Category Number	Food Category
01.1.1	Milk and buttermilk (plain) (EXCLUDING HEAT-TREATED BUTTERMILK)
01.2	Fermented and renneted milk products (plain) excluding food category 01.1.2 (dairy based drinks)[1]
01.4.1	Pasteurized cream (plain)
01.4.2	Sterilized and UHT creams, whipping or whipped creams, and reduced fat creams (plain)
01.6.3	Whey Cheese
01.6.6	Whey protein cheese
01.8.2	Dried whey and whey products, excluding whey cheese

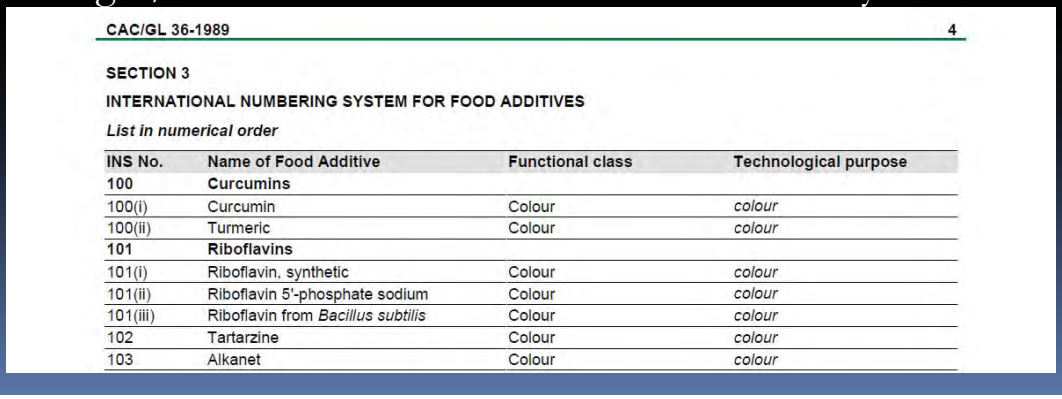
Food Additive Requirements

INCLUSION OF PROVISION IN GSFA



Food Additive Requirements

- It must have an entry in the International Numbering System (INS) –
  - Class Names and the International Numbering System for Food Additives (CAC/GL 036-1989)
  - A harmonized naming system for food additives
  - Also lists accepted technological functions
- Changes/Additions to the INS are administered by CCFA



CAC/GL 36-1989 4

SECTION 3

INTERNATIONAL NUMBERING SYSTEM FOR FOOD ADDITIVES

List in numerical order

INS No.	Name of Food Additive	Functional class	Technological purpose
100	**Curcumins**		
100(i)	Curcumin	Colour	*colour*
100(ii)	Turmeric	Colour	*colour*
101	**Riboflavins**		
101(i)	Riboflavin, synthetic	Colour	*colour*
101(ii)	Riboflavin 5'-phosphate sodium	Colour	*colour*
101(iii)	Riboflavin from *Bacillus subtilis*	Colour	*colour*
102	Tartarzine	Colour	*colour*
103	Alkanet	Colour	*colour*

Food Additive Requirements

- It must have been reviewed by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and assigned an Acceptable Daily Intake (ADI).
  - For a new food additive to be evaluated by JECFA, it must be placed on the JECFA priority list. This list is administered by CCFA
  - Prior to reviewing the safety of a food additive, JECFA will put out a "call for data". All interested members are invited to submit available toxicological and/or exposure data on the additive
  - JECFA meets once a year to examine the submitted data. If sufficient data is submitted, JECFA will either calculate a numerical ADI or list and ADI of "not specified". JECFA's review is subsequently published in a monograph (http://www.who.int/foodsafety/chem/jecfa/publications/monographs/en/).
    - JECFA may also publish an exposure assessment if sufficient data is provided.

Food Additive Requirements

- A provision for the use of a food additive in a certain food category must be submitted to CCFA for inclusion in the GSFA
  - Initial provisions were taken from commodity standards
  - New provisions can be submitted by a Codex Member state
    - Products containing the additive should be in international trade and technological justification as per the preamble should be provided
- The new provision must contain a maximum use level (ML - either numeric or Good Manufacturing Practice (GMP))
  - The ML should correlate to JECFA's ADI
    - Was the proposed use considered by JECFA in their exposure assessment?
    - Codex Members can submit their own exposure information

Food Additive Requirements

- A proposed provision is considered for inclusion in the GSFA by the CCFA via the step process:
  - Steps 1 and 2: The draft provision is prepared and entered into the GSFA as "proposed draft"
  - Step 3 – The proposed draft provision is circulated for comment by CCFA members
  - Step 4 – the comments are reviewed by CCFA
  - Step 5, 6, and 7 – provision is updated as a "draft", circulated again for comment, and reviewed by CCFA
  - Step 8 – The provision is forwarded to the CAC for formal adoption into the GSFA

Way forward

- **Electronic Working Groups (EWG)**

✓EWG on GSFA led by United States of America.

✓EWG on alignment led by Australia

✓EWG on Note 161 led by the UK

✓EWG to revision of food category 01.1 "Milk and dairy-based drinks" and its subcategories led by New Zealand.

✓EWG to prepare discussion paper on use of additives in additives (Secondary additives) led by European Union

✓EWG on food category 14.2.3 "grape wines" led by France

Conclusion:-

- Effective participation in codex meeting is important for:

  - Food safety
  - International Trade


Thank
You

CCFICS GUIDELINES ON NATIONAL FOOD CONTROL SYSTEM

Parmod Siwach

Export Inspection Council of India, New Delhi

FOOD CONTROL SYSTEM

'the mandatory regulatory activity of enforcement by national and local authorities to provide consumer protection and ensure that all food during production, handling, storage, processing and distribution are safe, wholesome and fit for human consumption; confirm to safety and quality requirements; and are honestly and accurately labeled as prescribed by law'

[FAO/WHO Definition]

FAO/WHO WORK

- *"Assuring Food Safety and Quality: Guidelines for strengthening National Food Control System"-2003*
  - ✓ to protect public health;
  - ✓ prevent fraud and deception;
  - ✓ avoid food adulteration and facilitate trade.
- Cooperation and active participation of all stakeholders
- Integration of mandatory regulatory approach with preventive and educational strategies.

CODEX: NATIONAL FOOD CONTROL SYSTEM

2006	• 15th Session CCFICS – New Work proposal by Australia
2007 2008	• 16th & 17th Session CCFICS - Discussion Paper on Need for Guidance on National Food Inspection Systems
2009	• 32nd Session CAC- Approved New Work on Principles and Guidelines for National Food Control Systems
2010	• 18th Session CCFICS- Proposed draft Principles and Guidelines for National Food Control Systems
2013	• 20th Session CCFICS- Agreed to send the document to CAC for adoption
2013	• 36th Session CAC- adopted *Principles and Guidelines for National Food Control Systems [CAC/GL 82/2013]*

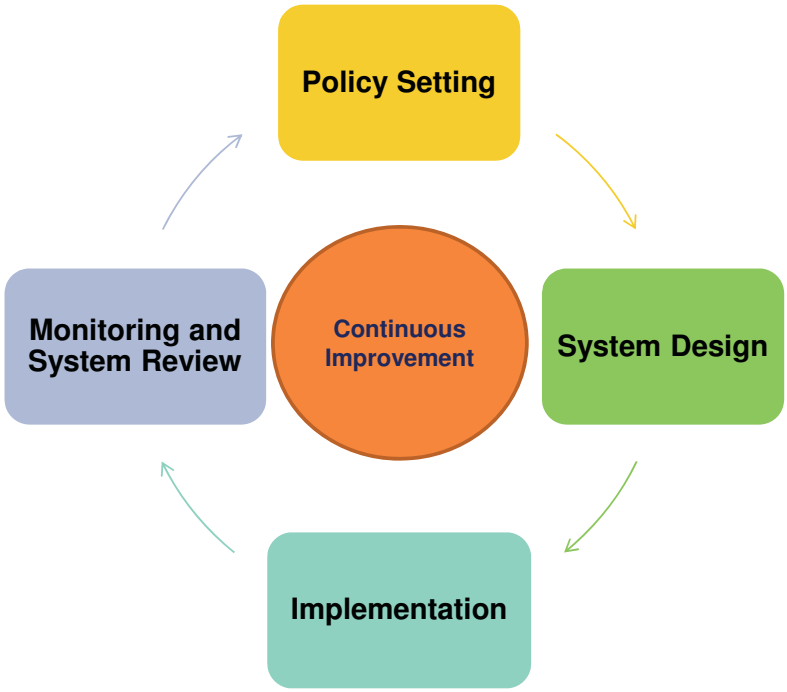
PRINCIPLES: NATIONAL FOOD CONTROL SYSTEM

1. Protection of Consumers
2. The Whole Food Chain Approach
3. Transparency
4. Roles and Responsibilities
5. Consistency and Impartiality
6. Risk based, Science based and Evidence based Decision Making
7. Cooperation and Coordination between Multiple Competent Authorities
8. Preventive Measures
9. Self Assessment and Review Procedures
10. Recognition of other Systems
11. Legal Foundation
12. Harmonization
13. Resources

KEY PRINCIPLES

KEY PRINCIPLES (2)

FRAMEWORK: NATIONAL FOOD CONTROL SYSTEM



POLICY SETTING

- Establish goals and objectives of National Food Control System with expected outcomes
- Development of national food control strategy
- Legislation should clearly reflect the intended policy objectives

KEY CHARACTERISTICS

System Design

- Should consider product risk, current scientific information, industry based controls and system review findings.
- Effective method of data collection
- Should ensure administrative procedures for documentation of control programs
- Application of control programs at effective points
- Taking account of quality assurance systems
- Provide capability to evaluate the effectiveness

System Design (2)

- Compliance and enforcement programs should facilitate Corrective action.
- Scale appropriate to resources available with flexibility for expansion
- Timely access to adequate information
- Establishment of national food safety emergency plan
- Communication programs to provide outreach, education and information exchange on food safety risks.

IMPLEMENTATION

- Preparation of implementation plan with sequence of elements, their preparedness and capability
- Developing guidance and instructions
- Sufficient guidance, training and awareness programs for all relevant stakeholders
- Should implement range of food control activities

MONITORING AND SYSTEM REVIEW

- Regular assessment for effectiveness and appropriateness
- Ongoing monitoring of control programs
- Regular review to contribute to system improvement
- Periodic testing to ensure effectiveness of communication and response systems.
- Periodic review of surveillance systems for their capacity to recognize emergencies.
- Results of evaluations, self-assessments and audits are taken into account for improvement

WAY AHEAD…..

- Take guidance to design, develop, operate, evaluate and improve the national food control system.
- Harmonization as per guidelines
- Performance Indicators to demonstrate the effectiveness
- Equivalence to facilitate trade

FOOD SAFETY TOOLS

VANI BHAMBRI ARORA
National Accreditation Board for Certification Bodies
QUALITY COUNCIL OF INDIA
New Delhi

INTERNATIONAL SCENARIO

- International trade governed by WTO - free flow of trade - creation of global market with equal access to all countries
- Quality & safety have acquired center stage.
- Increasing use of standards for products, services, processes and systems
- Food sector facing stringent regulations and demand for private certificationsSuppliers to demonstrate that they are providing safe, quality food that meets consumers' expectations.
- Need for checking compliance to prescribed standards – regulations and voluntary standards - conformity assessment – inspection/testing/certification
- Confidence in conformity assessment
- International acceptability for facilitating trade - Need for

INDIAN SCENARIO

- India has realized the requirement of safe food.
- New integrated Act has been drafted based on international scenario.
- New FSSA was introduced which includes GMP/GHP requirements as Schedule IV.
- Product specific requirements like contaminants etc are also included.

STANDARDS- AS FOOD SAFETY TOOL

- Standards for Product/Process / systems / Codes – Hygiene,
- International – ISO / Codex
- National – Bureau of Indian Standards, Min of Agriculture – Agmark
- Voluntary/private standards-BRC SQF etc.

All Food safety standards are based on HACCP

NABCB

H: Hazard

A: Analysis and

C: Critical

C: Control

P: Points

KEY FEATURES – VOLUNTARY STANDARDS

- Management Commitment
- Pre Requisite Programmes
- Quality Management System
- Food Safety System – HACCP
- Sustainability Model
- Sector Specific and Levels
- Rules for certain activities / processes and procedures

Contd……

- Scoring System
- Performance Levels % / Grades
- Audits based on performance –
  - Surveillance – Announced / Unannounced
- Requirements for CB
- Requirements for Auditors
- Requirements for Consultants
- Requirements for AB
- Systematic Monitoring Process

BENEFITS OF VS

- Demonstration of due diligence - Commitment
- Effective documentation and record keeping
- Traceability is one area where VS exceed Codex recommendations
- Requirements for staff training
- Impact on public health
- Impact on Market access – Recognized Around the World
- Continual improvement in processes for quality and safety
- Minimise product risks and recall

PROVISION IN FSSA

- These voluntary standards help us meetings the regulatory requirements

GMP/GHP → Schedule IV

- As per Section 80-" Defences which may or may not be allowed in prosecution under this Act." of FSSA,

"(i) Designed to manage food safety hazards and based on national or international standards, codes or guidelines designed for that purpose.

- Under section 2.1.7- Validity and Renewal of Registration and License-Schedule IV , Thr is a provision- (6) Food Business Operator having valid certificate of an accredited food safety auditor or from an agencyaccredited by Food Authority or any other organisation notified by food Authority for this purpose

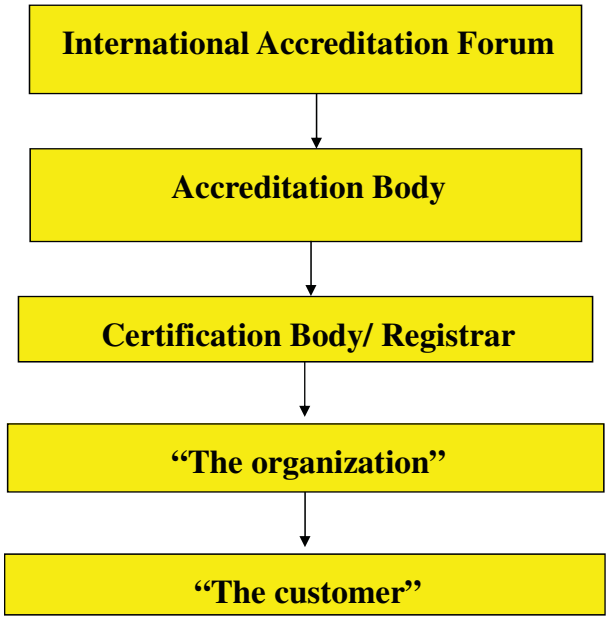
Conformity Assessment

- Need for checking compliance to prescribed standards –regulations and voluntary standards - conformity assessment – inspection/testing/certification
- Confidence in conformity assessment
- International acceptability for facilitating trade - Need for recognition of inspection/testing/ certification across borders

ACCREDITATION

- Third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks – ISO 17000
- Conformity assessment bodies – Certification bodies/ Inspection bodies/Labs
- QCI – responsible for national accreditation structure
- International Accreditation Forum (IAF) – Pacific Accreditation Cooperation (PAC) - NABCB member from India
- International Laboratory Accreditation Cooperation (ILAC) – Asia Pacific Laboratory Accreditation Cooperation (APLAC) - NABL

SUPPLY CHAIN IN CONFORMITY ASSESSMENT



BENEFITS OF ACCREDITATION

- Recognition of certification/inspection/ testing by Indian conformity assessment bodies in other countries – NABCB signatory to IAF MLA – NABL signatory to ILAC MLA – certificates/test reports issued by accredited CABs accepted worldwide
- Regulators accepting reports from IAF/ILAC members – examples Ecuador, South Africa
- Increasing use in G-to-G MRAs – example India-Singapore MRA, draft India-EC agreement
- Reduces risk for government, business and customers - international system - ensures through regular surveillance that Conformity assessment bodies are both independent and competent
- Lower cost of accreditation – in turn lower cost of certification/inspection/testing for industry –

EMERGING STRUCTURE

Government

(to enact legislation)

Regulatory Bodies – may be sector specific like Food, Drugs

(to enforce the law)

Accreditation Body

(technical competence of CABs)

Conformity Assessment Bodies (CABs)

(support regulation – voluntary certification/quality assurance)

Manufacturers and Service providers

Common man – recipient of goods and services

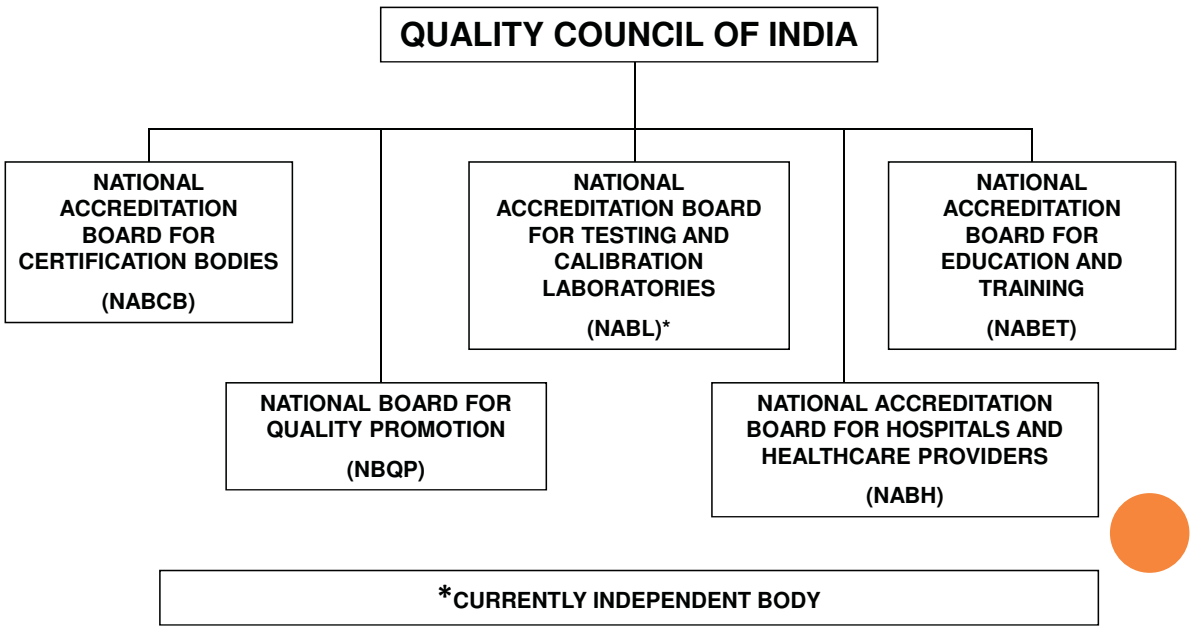
EMERGING REGIME

- **Regulatory regime** – Regulatory bodies increasingly seeking accredited CABs – more prevalent in non-food sectors – EC's agreements with Australia, USA, Japan etc; India-Singapore MRA, APEC MRAs - growing in food - growing in food - e.g. HACCP accreditation in Australia on Victorian Meat Authority's request in 1997 – UK DEFRA to use accredited micro labs - MFPI's MoU with QCI (HACCP/GHP/GMP etc) in 2005 – MoH's request to QCI for accreditation of agencies for checking GMP/GHP compliance in 2006 -India's Food Authority to rely on NABCB/NABL accreditations
- **Voluntary standards** – market driven – ISO 9001/14001/ 22000/27001 etc, generally retail industry driven – Scheme owners - Globalgap, GFSI, SQF, GOTS, Organic – prescribe accreditation as requirement for CBs, IBs and Labs
- **EC Regulation –** legislation on accreditation in July 2008 – wef 1 Jan 2010 – single national accreditation body – public, non profit, non competition, impact worldwide

ABOUT QCI

- Established in 1997 by a Cabinet decision – in partnership with CII, FICCI, ASSOCHAM – independent, non profit, successful PPP
- Autonomous body – regd as society - Chairman appointed by PM (Ratan Tata, Venu Srinivasan, Dr. R.A.Mashelkar, Mr. Arun Maira) – Currently Mr. Adil Zainulbhai
- Provide accreditation structure in the country
- Spread quality movement in India – assigned National Quality Campaign funded by Govt
- Provide right and unbiased information on quality & related standards
- Represent India's interest in international fora
- Help establish brand equity of Indian products and services

STRUCTURE OF QCI



NABCB

- Schemes in operation
  - Quality Management Systems/ISO 9001
  - Environmental Management Systems/ISO 14001
  - Food Safety Management Systems/ISO 22000 and others
  - Product Certification as per ISO Guide 65/ISO 17065
  - Inspection Bodies as per ISO 17020
  - ISMS and ITSMS
  - ISO 13485
  - ISO 50001

STATISTICS

QMS-43 (5)
EMS-13(3)
OHSMS-7(4)
FSMS-15 (6)
ISMS-3(0)
EnMS- 1(5)
IB Scheme- 19 (15)
PC scheme-4(4)
QMS-MD: 0(0)
ITSMS- 1

INFORMATION ON ACCREDITATION

Quality Council of India
2nd Floor, Institution of Engineers Building
2, Bahadur Shah Zafar Marg
New Delhi - 110002
INDIA

Telefax : +91-11-23379321/9260/0567/8057
Email : info@qcin.org, nabcb@qcin.org,
Website : www.qcin.org

THANK YOU
FOR YOUR ATTENTION!

CODEX CASE STUDIES FROM INDIA

S. Dave

Advisor – Food Safety and Standards Authority of India

1

Structure of the Presentation

- Experience with Quality Assurance in Perishables: *CCFH, CCFFV, CCPR, CCMAS, CCFICS*
- Experience with Judgment of Equivalence: *CCFL, CCFICS*
- Harmonising India's Food Standards with Codex Alimentarius

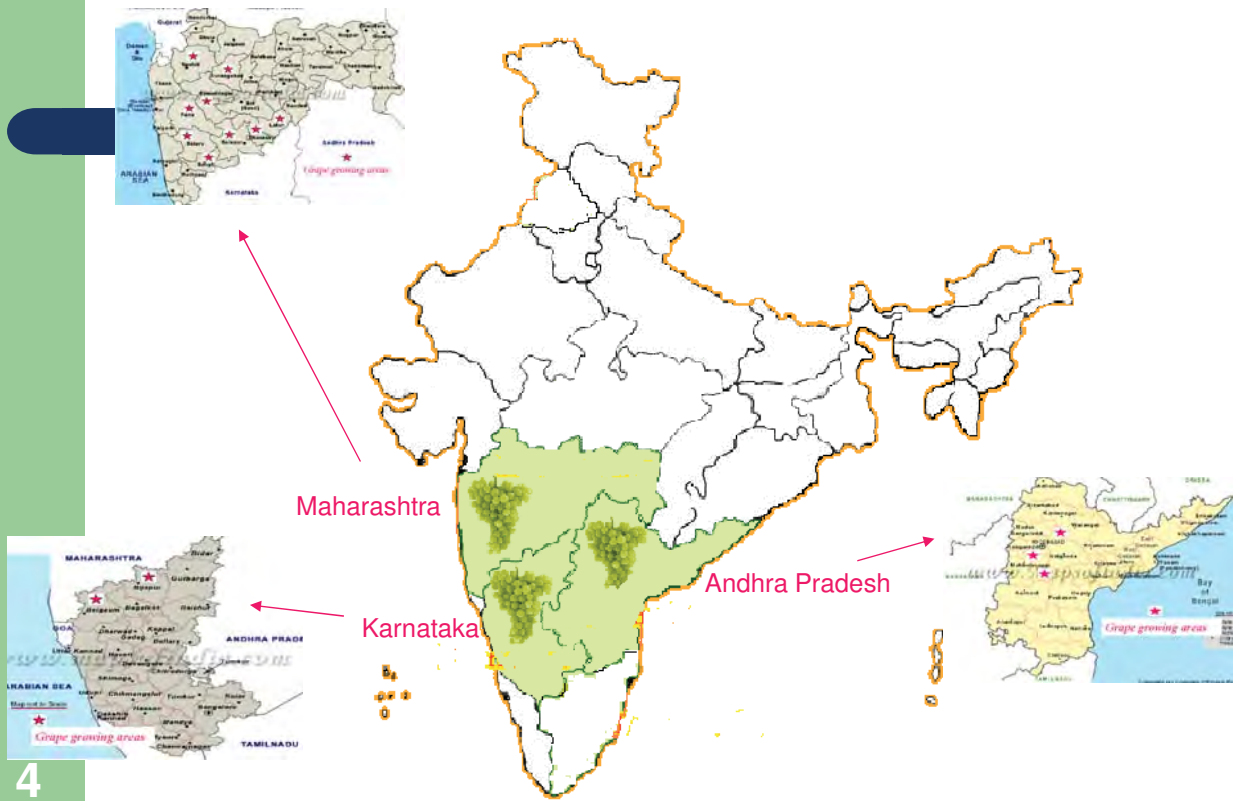
2

- Experience with Quality Assurance in Perishables: *CCFH, CCFFV, CCPR, CCMAS, CCFICS*

THE GRAPES STORY

3

Grape Growing States of India



4

What happened in 2003…!

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

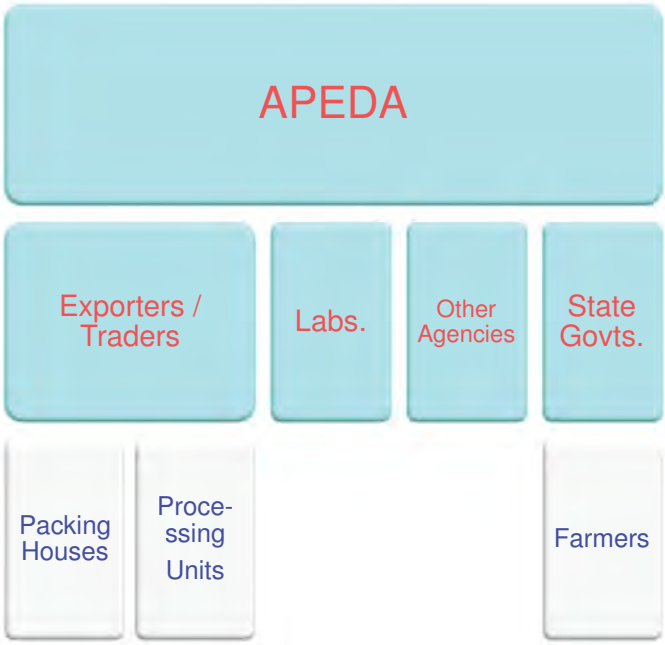
5

The Mitigation Mechanism

- Registration, record keeping & 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

6

The Hierarchy of Collaboration…



7

Implementation

- STAGE I: **Government of India regulation** - *Regulation of Export of Fresh Grapes from India through monitoring of pesticide residues.*
  - Standards to meet international market demands
  - Agencies to test compliance with these standards
  - And no export of fresh grapes can happen to European Union without adhering to this system.

- STAGE II: **IT enable the regulation, compliance and monitoring**
  - Integrating all the stakeholders in the supply chain of Grapes export from India, with a centralized database.

8

What did it entail …?

- 2 years of hard work by all on one product
- 4 million Euros on infrastructure, training, standardisation, etc.
- Innumerable interactions & trainings
- Sleepless nights on chasing goal posts
- Criticism from certain quarters

9

What did India gain…!

- Self confidence among farmers
- Culture for food quality *(CCFFV)*; safety *(CCFH,CCPR)*
- 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 our labs.*(CCMAS)*
- No rejections for the last 11 years *(CCPR)*
- Zero paper-work and transparency *(CCFICS)*

10

THANKS FOR YOUR ATTENTION

11

Overview of Food Safety Control System in Japan

~an overview of the role of MHLW~

Keiko SAITO
Technical Official
Office of International Food Safety,
Department of Food Safety,
Ministry of Health, Labour and Welfare

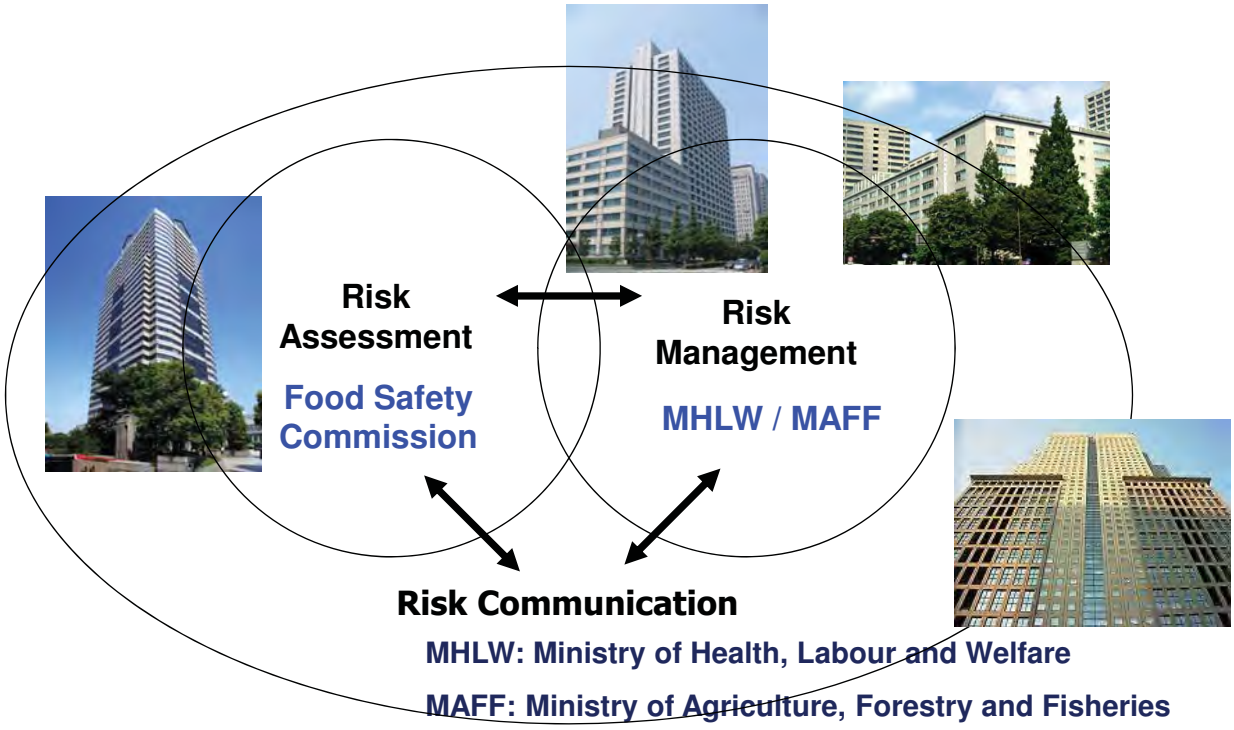
Today's Topics

1. Administration system for food safety in Japan

2. Ensuring Safety of Imported Food

1. Administration system for food safety in Japan

Risk Analysis in Japan



MHLW: Ministry of Health, Labour and Welfare

MAFF: Ministry of Agriculture, Forestry and Fisheries

CAA: Consumer Affairs Agency

Role sharing of Food Safety (Risk Analysis)

Risk Assessment

Food Safety Commission

- Implementation of risk assessment
  Assess the probability and extent of adverse impacts of hazardous substances in food.

Food Safety Basic Law

Risk Management

MHLW

- Sets standards for chemicals in food.
- Monitors compliance.

Food Sanitation Act, etc.

MAFF

- Registers agricultural chemicals.
- Approves and controls Veterinary drugs and their uses.
- Set standards for feed.

Agricultural Chemicals Regulation Act
Act on Safety Assurance and Quality Improvement of Feeds, etc.

Risk Communication

- Disclosure of food safety related information
- Opportunities for the consumers to express their views

5/32

Department of Food Safety, MHLW

- **MHLW**
  - **Pharmaceutical and Food Safety Bureau**
    - **Dept. of Food Safety**
      - **Policy Planning & Communication Division**
        - Office of International Food Safety
        - Office of Quarantine Station Administration
      - **Standards & Evaluation Division**
        - Office of Health Policy on Newly Developed Food
      - **Inspection & Safety Division**
        - Office of Import Food Safety
        - Office of Information Management for Food Poisoning Damages

Structure of Food Sanitation Administration

~ mainly in the MHLW ~

Ministry of Health, Labour and Welfare(MHLW)

32 Quarantine Stations

- To ensure the safety of import foods
- Registration (cancellation) for Registered inspection organizations

7 Local Bureaus of Health and Welfares

- Approval and inspections on HACCP facilities
- Registration (cancellation) for Registered inspection organizations

Local Governments
- 47 Prefectures, 70 Cities with health centers, and 23 Wards (Tokyo)

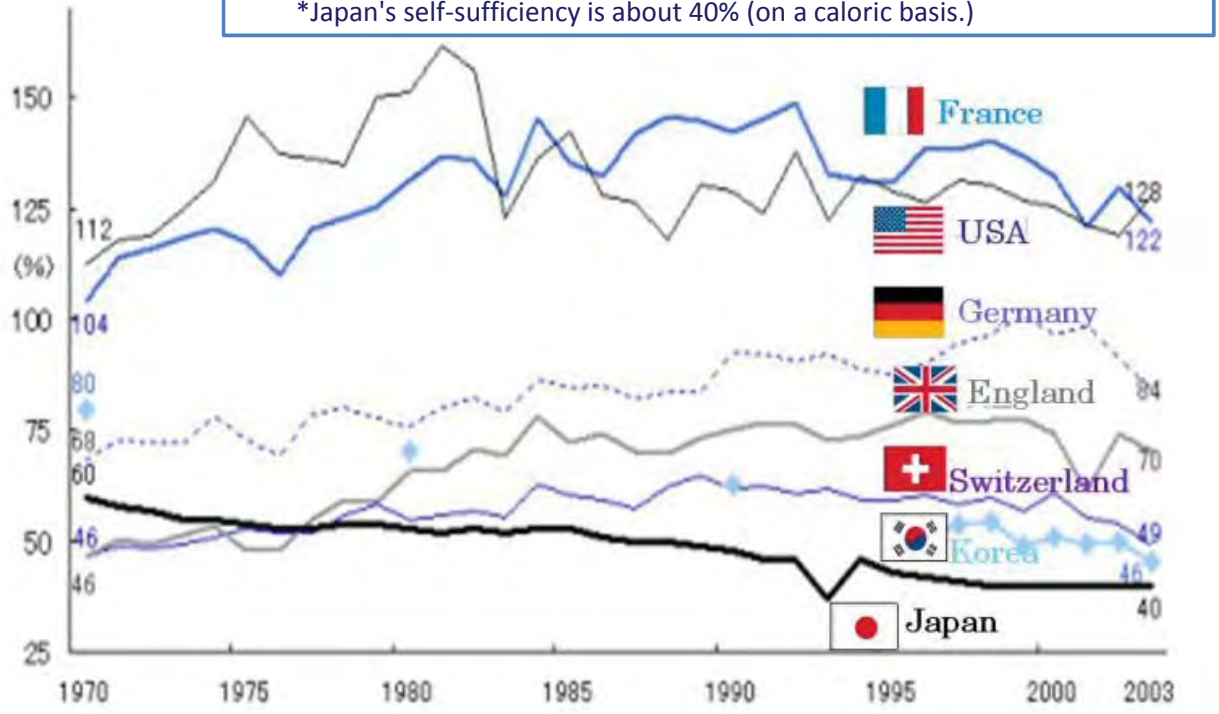
494 Health Centers

- Business licensing・ Inspection, surveillance and guidance・ Sampling
- Administrative order・ Investigation・ Consultation, handling of claims

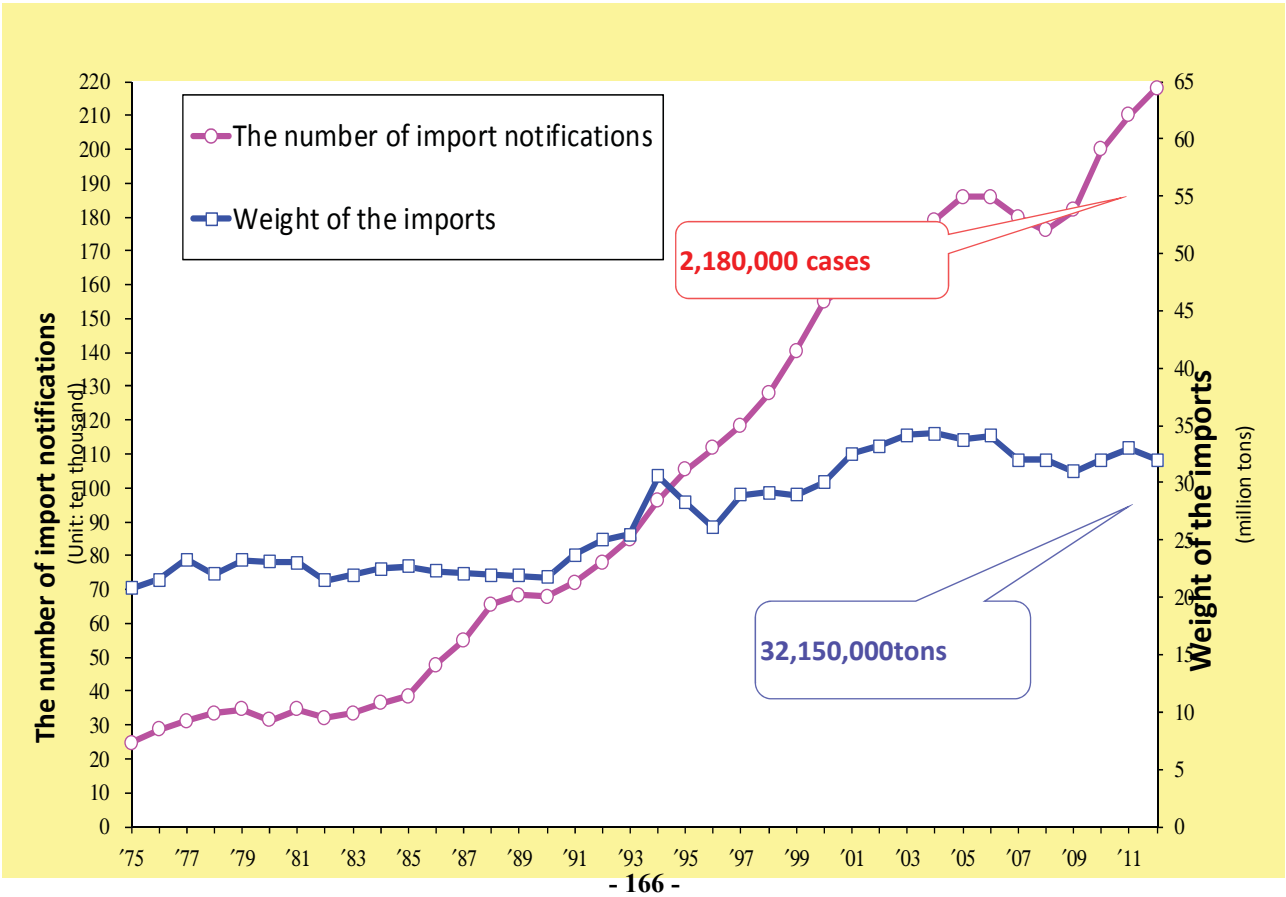
2.Ensuring Safety of Imported Food

Food Self-sufficiency Rate

Imported food accounts for about 60% of food in Japan.
*Japan's self-sufficiency is about 40% (on a caloric basis.)



Food Import Status in Japan

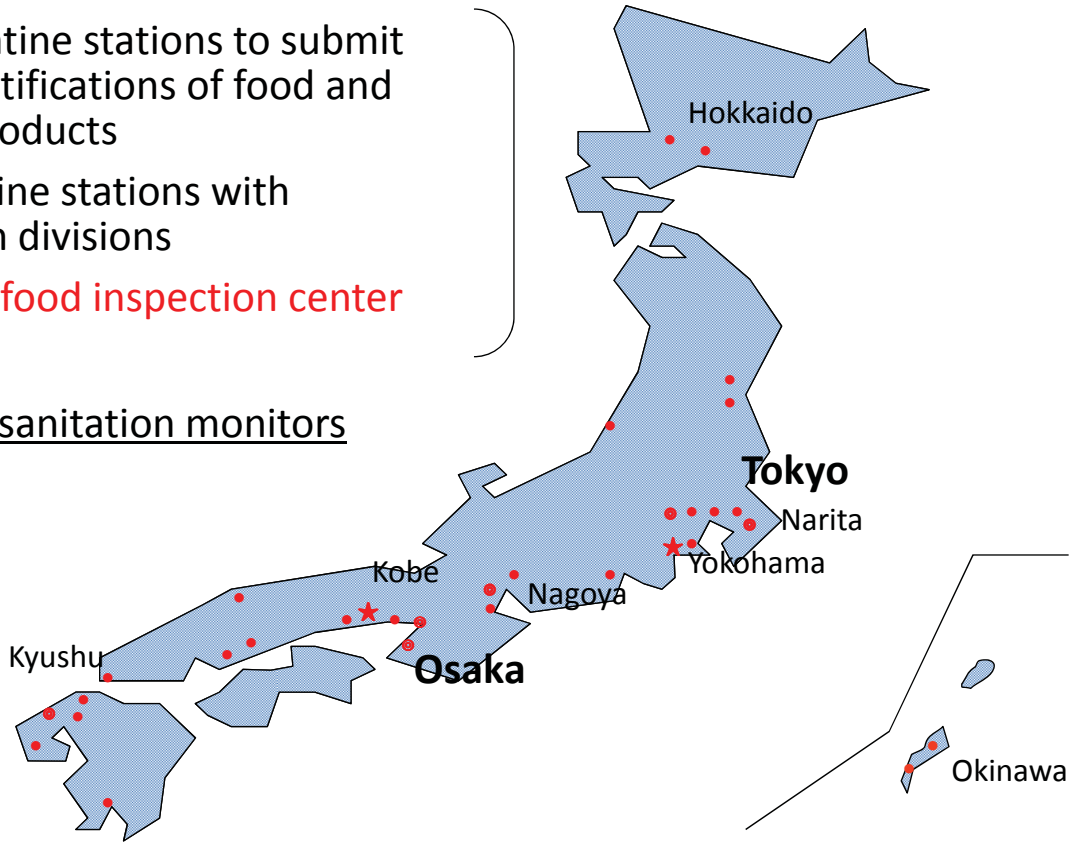


Quarantine Stations in Japan

* As of FY 2013

- 32 quarantine stations to submit import notifications of food and related products
- 6 quarantine stations with inspection divisions
- ★ Imported food inspection center

399 food sanitation monitors



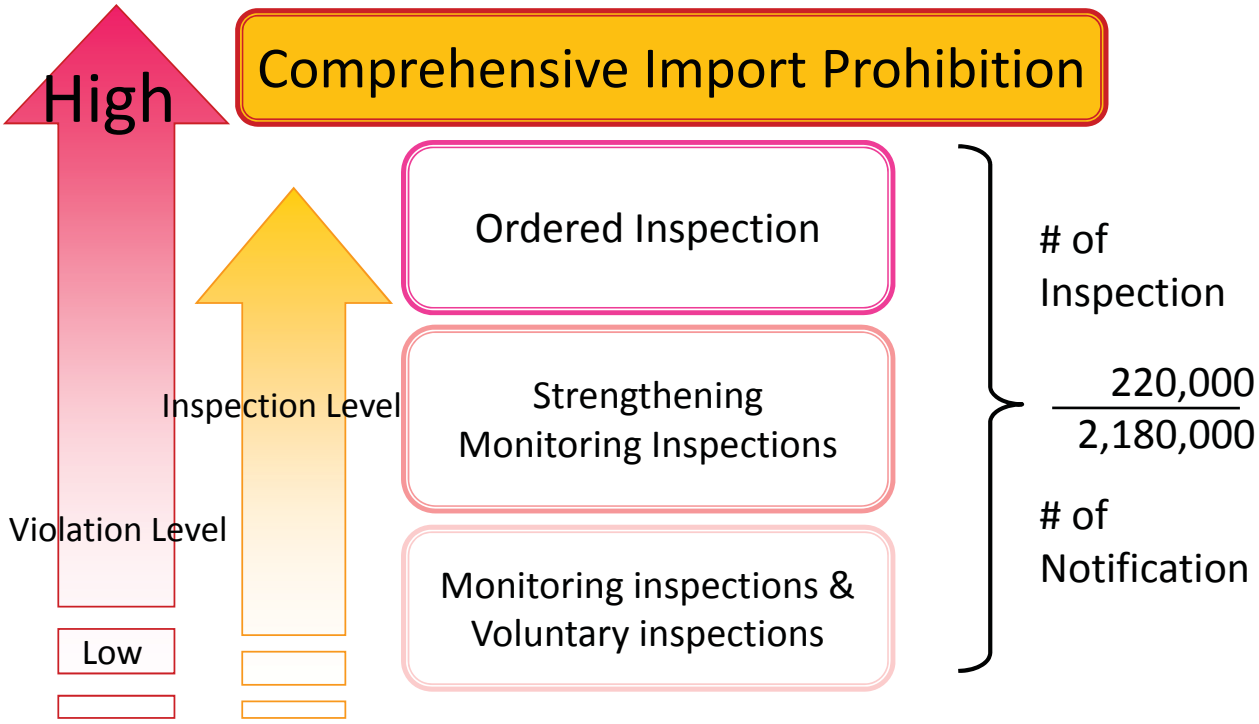
Outline of the Monitoring System for Imported Food

I. For Exporting Countries
   1. Promoting Sanitation Measures in Exporting Countries
      - ➢ Appropriate use of agricultural chemicals
      - ➢ Issuing certifications
      - ➢ Implementation of examination before exporting
   2. Bilateral Discussion
   3. On-site inspection

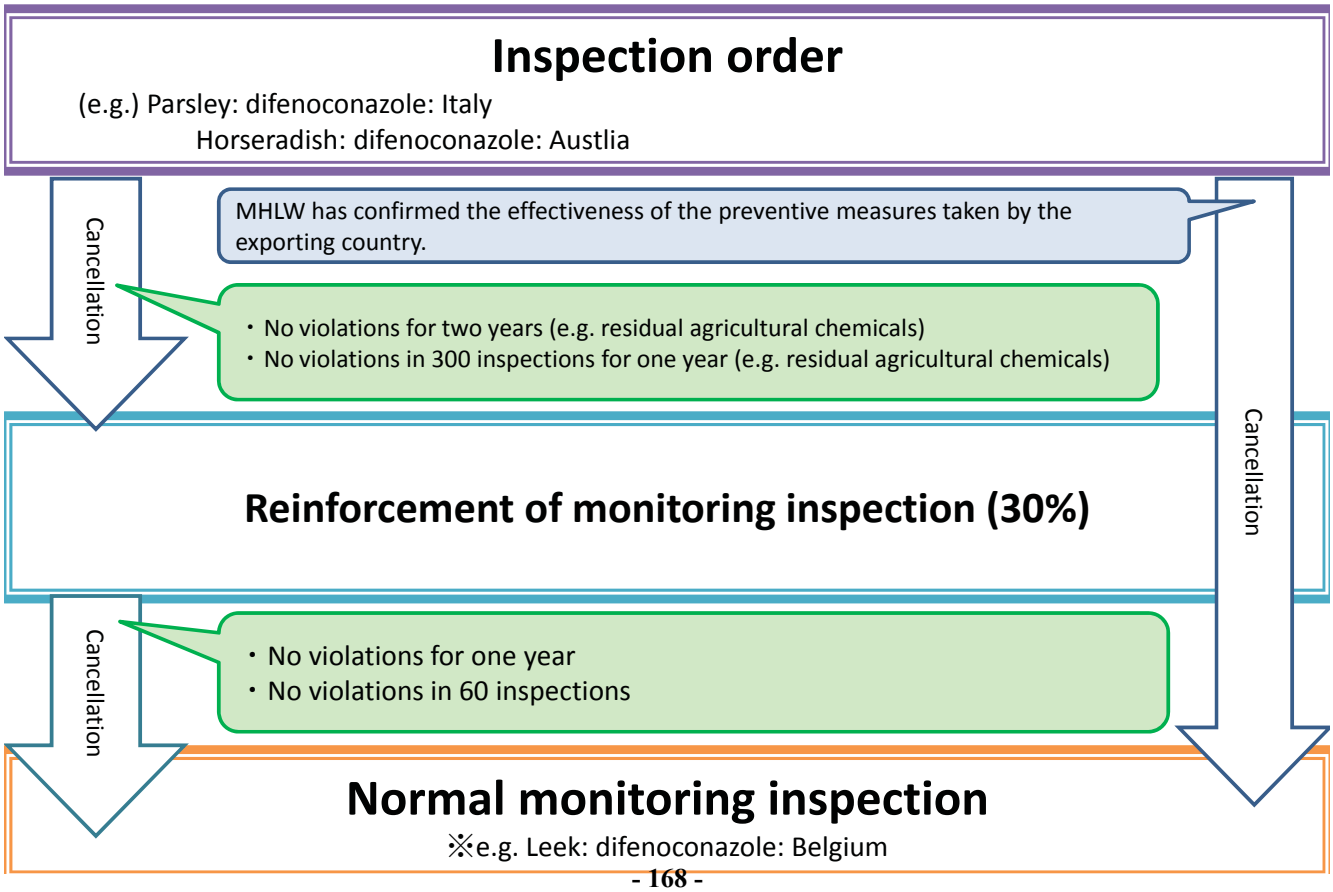
II. Border Control in Importing
   1. Assessment by Quarantine Stations
   2. Import Inspection System
      - ➢ Ordered inspection
      - ➢ Monitoring inspection
      - ➢ Voluntary inspection guidance

III. Post-importation Measures
   1. Hygienic Inspection based on the Prefectural Plan for Monitoring and Guidance on Food Sanitation
   2. Report to the Central Government by Local Government

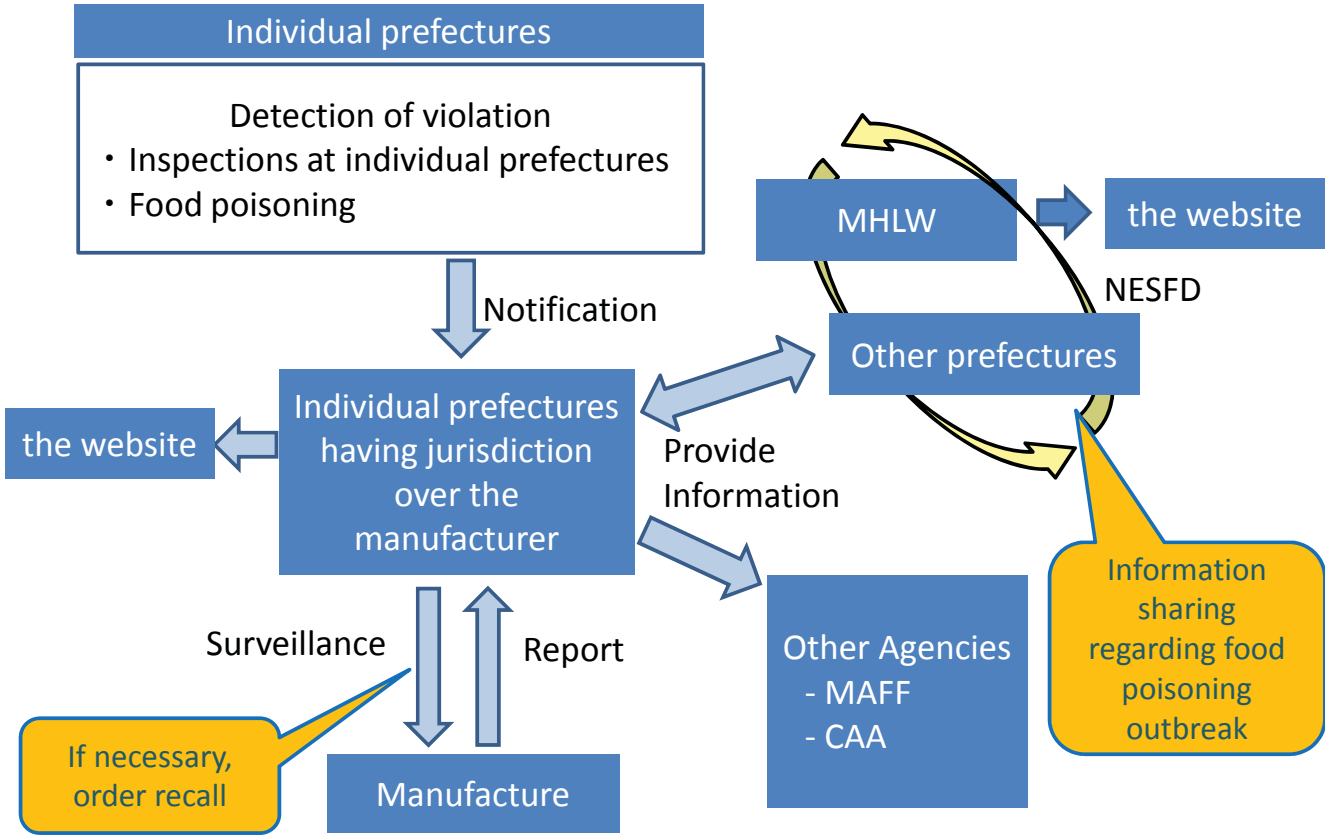
Outline of the Import Inspection System



Cancellation Requirements



Recall system of violating foods in Japan



Information Sources

Further information can be found on the Ministry's food safety website:

Policy Information on Food Safety

http://www.mhlw.go.jp/english/policy/health-medical/food/index.html

Imported Foods Inspection Services Home Page

(1) Import Procedure under Food Sanitation Act

(2) Imported Foods Monitoring and Guidance Plan

(3) Inspection Orders

(4) Monitoring Plan

http://www.mhlw.go.jp/english/topics/importedfoods/index.html

Thank you for your attention

Harmonization of Food Control System In SAARC Countries

By: Dr. S. K. Saxena , Director
Export Inspection Council of India
भारतीय निर्यात निरीक्षण परिषद
Ministry of Commerce and Industry, Government of India
वाणिज्य एवं उद्योग मंत्रालय, भारत सरकार

Celebrating 50 yrs

National Food Control System

Prime Responsibilities:

1. Consumer Safety
2. Fair Trade Practices

Objectives are Same at

WTO, SPS, TBT, CODEX, OIE, IPPC

Food Control System of India

National Food Control System

Internal Market
(Domestic + Imports)

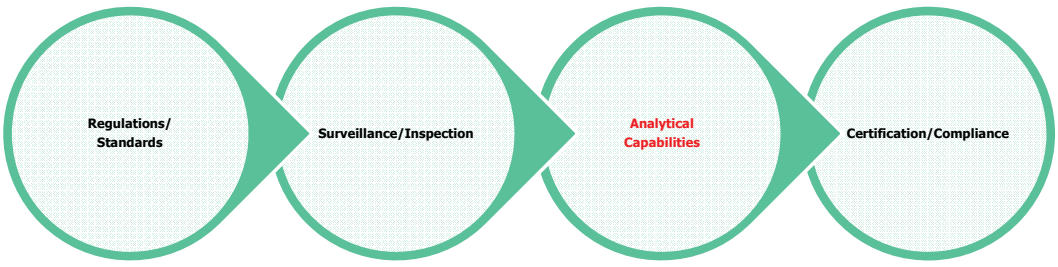
External Market
(Exports)

Food Safety & Standards Authority of India

fssai
Food Safety and Standards Authority of India

Export Inspection Council of India

Important Pillars of NFCSC



Regulation/Standards

- Science Based
- Transparent System
- Involvement of Relevant Stake Holders
- Harmonization
- Available to Public
- Practical/Implementable

Requires Huge Resources and Time

Resources: Money, Men & Machines

Surveillance/Inspection

- Risk Based
- Representative of Lot/Batch
- Sampling Tools/Conditions/Environment
- Transportation of Sample
- Sample Size/Huge Number of FBO
- Accreditation Based on ISO:17020

Requires Huge Resources and Time

Analytical Capabilities

- MRL/MRPL at ppb/ppt levels
- Method Development/Method Validation
- Sophisticated Instruments
- Trained Analytical Staff
- Accreditation of Labs as per ISO:17025
- PT/CRM/Calibration/AMC/CMC

Requires Huge Resources and Time

Certification/Compliance

- Risk Based/Science Based
- Accreditation/Certification: GMP/GHP/HACCP/ISO:22000
- Monitoring by Trained staff
- Huge Number and Size of FBOs
- RMP/Disease Monitoring System

Requires Huge Resources and Time

There is a Need for Elevating Food Control System Elements

- Food Law and Regulations
- Food Control Management
- Inspection Services
- Laboratory Services

Continuous Efforts are Needed

Science at Codex

Decisions:

- The Food Standards, Guidelines and other Recommendations shall be based on the **Principle of Sound Scientific Analysis.**
- Codex Standards must **withstand the most Rigorous Scientific Scrutiny**

Principles of Developing Scientific Advice at Codex Alimentarius

1. Excellence: International Expertise, Global Scientific Discussion and Best Practices

2. Independence : Experts works in Individual Capacity; Declare Conflict of Interest

3. Transparency: Access to the Reports, Evaluation and basic information

4. Universality: Broad Base of Scientific Data, Institutions and all interested through the world are invited to make data available.

Expert Committees & Consultations

- **JECFA**
- **JMPR**
- **JEMRA**
- Biotech Assessment
- Acrlamide
- **Malamine**
- Antimicrobial Substances

JECFA : History and Background

World Health Organization

Food and Agriculture Organization of the United Nations

- Since 1956
- Evaluation of:

-Food Additives

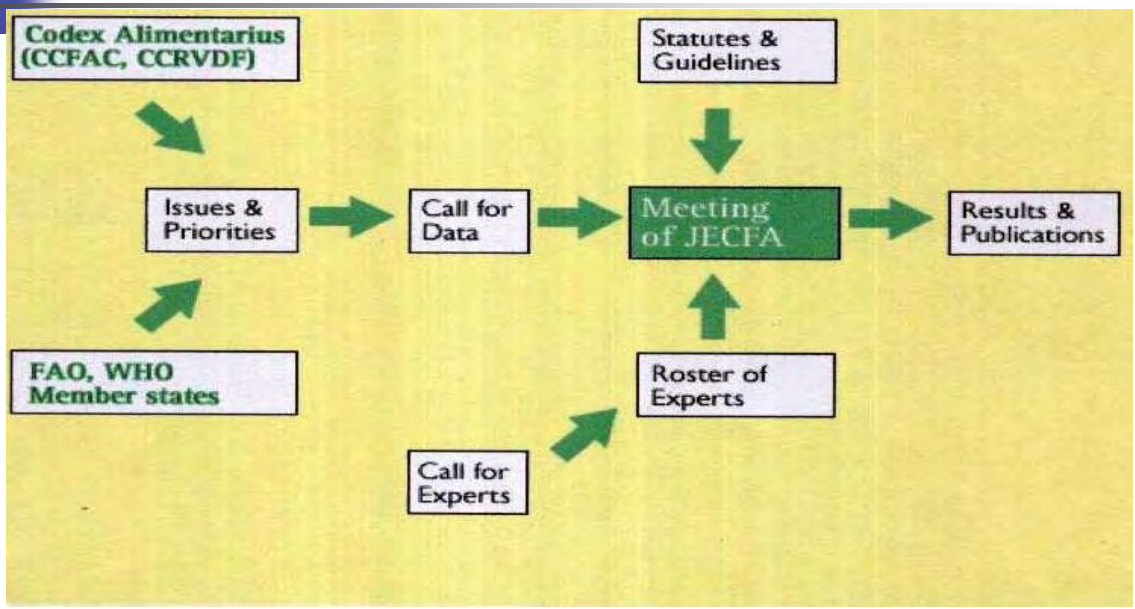
-Contaminants

-Natural Occurring Toxins

-Residues of Veterinary Drugs

- >1500 Food Additives; >40 Contaminants and NOTs; Approximately 90 VDRs

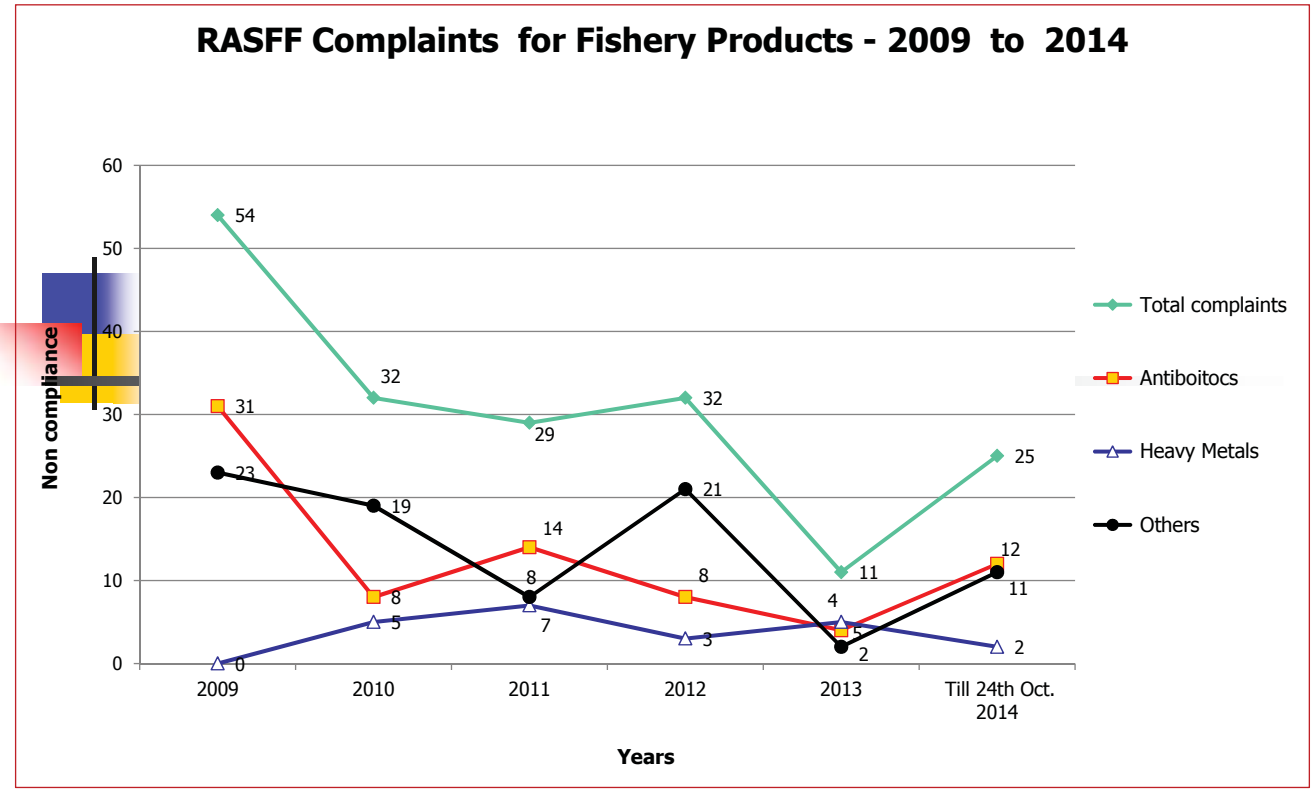
Transparent Process

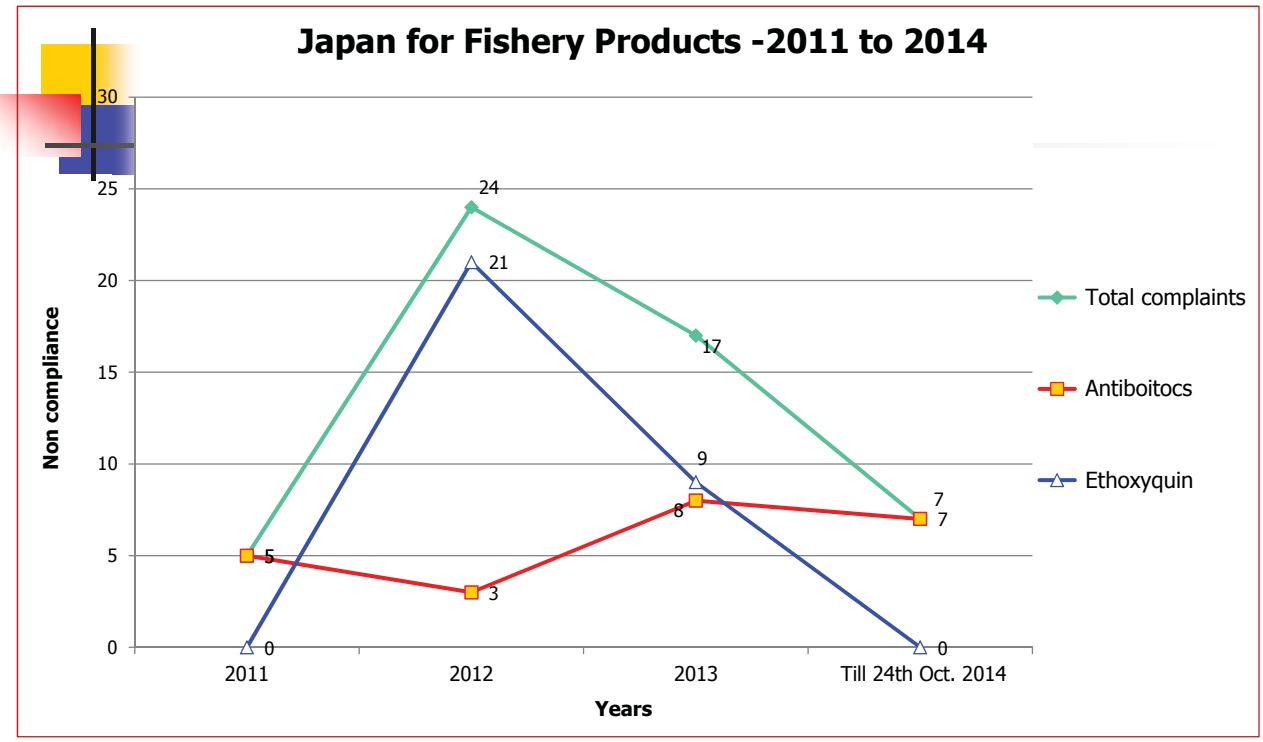


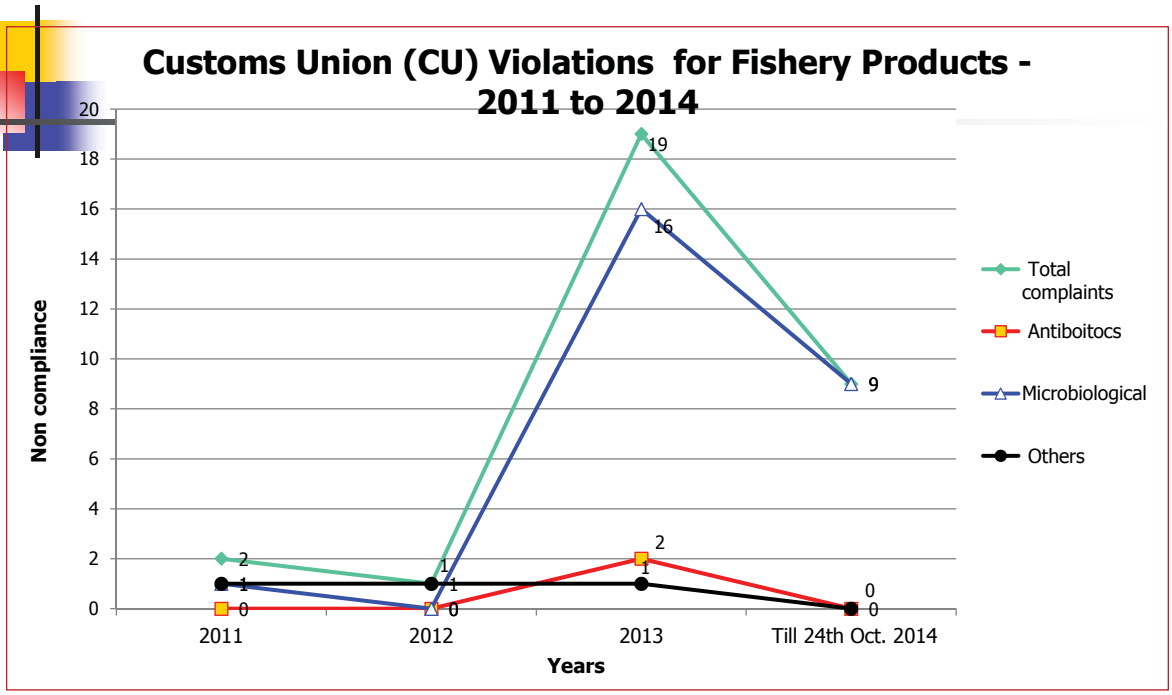
Outcome of Scientific Process

Advantages of Harmonization

- Trade Facilitation at Regional and International Level.
- Minimize the Efforts and Resources
- Resolve the TBT and NTB
- Acceptance by Trade partners
- Easy to be party to Trade Facilitation Agreement


RASFF Complaints for Fishery Products - 2009 to 2014
Non compliance
60
50
40
30
20
10
0
54
32
29
32
11
25
31
8
14
8
4
12
23
19
8
21
5
11
0
5
7
3
2
2009
2010
2011
2012
2013
Till 24th Oct. 2014
Years
Total complaints
Antiboitocs
Heavy Metals
Others


Japan for Fishery Products -2011 to 2014
Non compliance
30
25
20
15
10
5
0
24
21
17
9
7
8
7
5
3
0
0
2011
2012
2013
Till 24th Oct. 2014
Years
Total complaints
Antiboitocs
Ethoxyquin

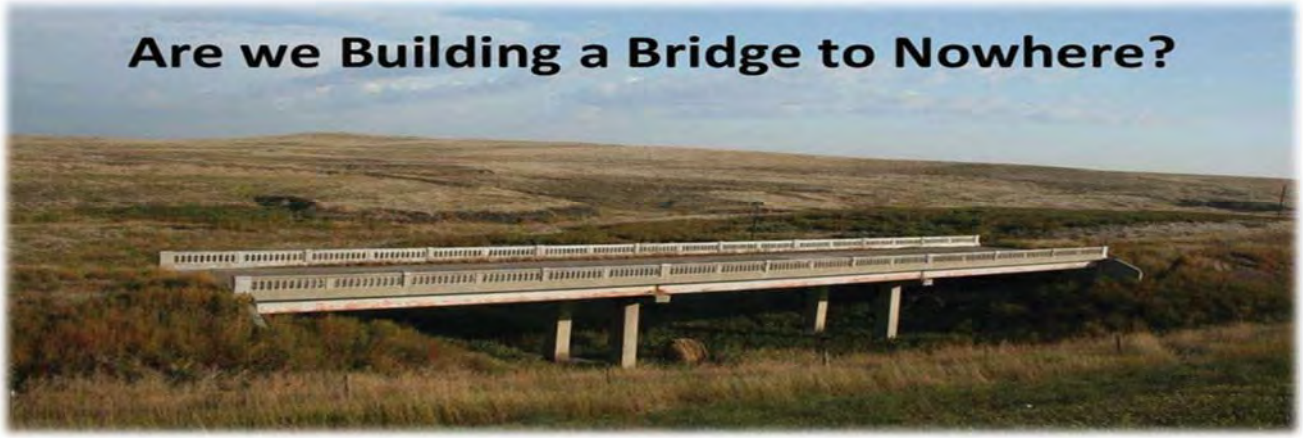


Good Initiatives

- MOU between India (EIC) and Bhutan(BAFRA) for Equivalence and Harmonization.
- Regional Guidelines on HACCP for implementation by NFCS
- CC Asia : India
- EIC can act as referral Lab for RMP and Product Testing

Roadblocks

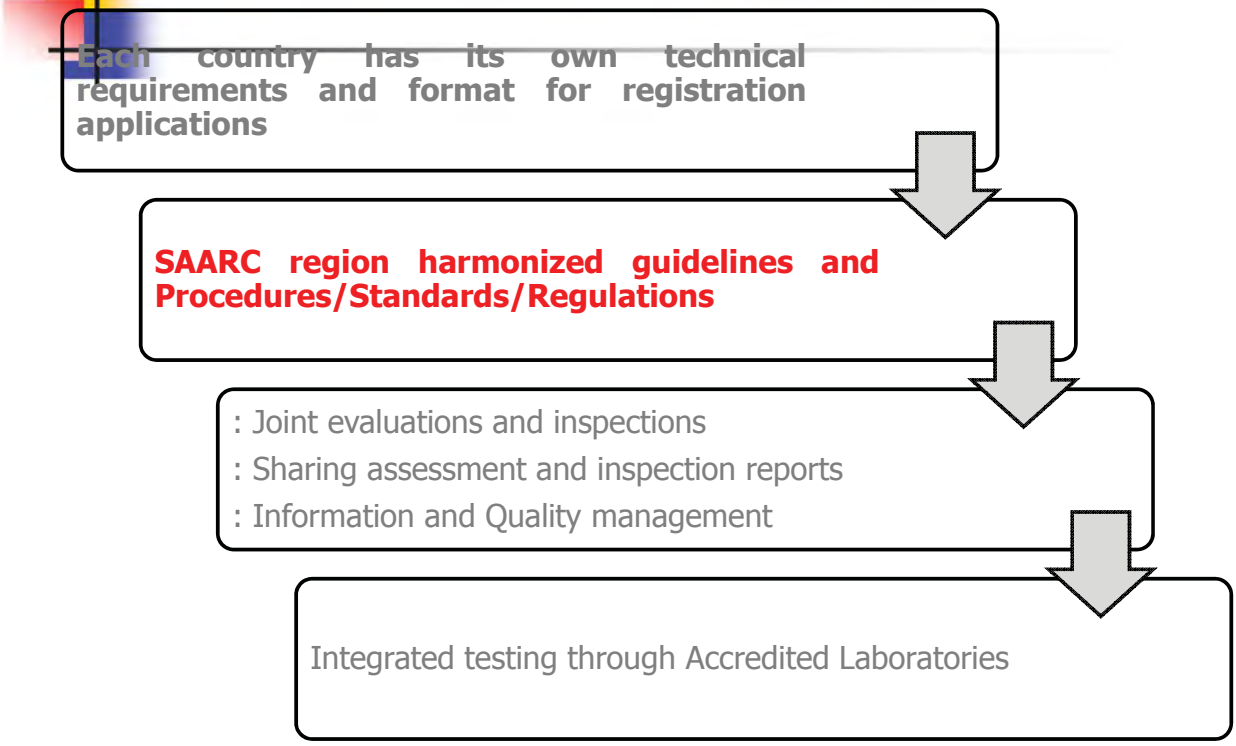
- Number of regulatory authorities governing regulations
- Regulator's capacity highly variable: Financial/Institutional
- Different requirements and formats, lack of clear guidelines
- Minimum transparency, No clear timeline



Way Forward

- Networking of NFCS at SAARC
- Information/Data Sharing
- Optimum Utilization of Resources
- Avoid Repetition of efforts
- Equivalence of recognizing the Systems
- Adopting Good NFC Practices
- Develop SAARC as Block like :EU/AU/CU/GCC/ASEAN to ensure Food Safety

Towards Harmonization



Conclusion

India can Play Important Role

- Notifying Referrals labs in SAARC Region depending on Technical Competence
- For Training NFC Staff
- Conformity Assessment (EIC/NABL/NABCB)
- Regional Issues at CAC (FSSAI)

Thank You

Any

Export Inspection Council

Facilitating Food Standards Harmonization in ASEAN -

ILSI Southeast Asia Region's Scientific Initiatives

Pauline Chan
Director,
Scientific Programs

ILSI
Southeast
Asia Region

Presentation Outline

- A closer look at ASEAN, AEC and its food standards framework
- ILSI SEA Region's initiatives and activities in supporting harmonization of food standards
  - Workshop Series on
    - Nutrition labeling and claims
    - Food safety standards
      - Database
    - Exposure assessment
- Challenges for harmonization

ILSI
Southeast
Asia Region

ASEAN Region – An Unique Region

- The Association of Southeast Asian Nations is a political and economic organisation of ten countries located in Southeast Asia, with the aims to
  - Accelerate economic growth, social progress, sociocultural evolution among its members
  - Protect regional peace and stability, and provide opportunities for member countries to discuss differences peacefully

ILSI Southeast Asia Region

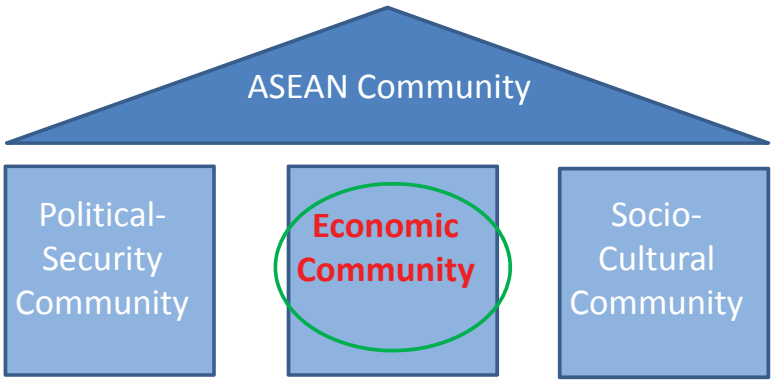
Brief History: From AFTA to AEC...

- In 1992, ASEAN Member States signed the **ASEAN Free Trade Area Agreement (AFTA)**, initiating first serious effort towards regional economic integration (primarily through tariff reductions)
- The 1997 financial crisis provided the catalyst for further regional integration, where ASEAN Leaders set out the **ASEAN Vision 2020**, which provided the policy foundation for a regional community
- In 2003, ASEAN Leader made the **Declaration of ASEAN Concord II** to establish an **ASEAN Community** by 2020 at the 9th ASEAN Summit
- In 2007, ASEAN Leaders agreed to bring forward the establishment of the ASEAN Community to 2015 and also adopted the **ASEAN Charter** to formalize ASEAN as a regional entity under international law

ILSI Southeast Asia Region

ASEAN Community 2015

- Overall objective of the ASEAN Community is to ensure "*durable peace, stability and shared prosperity in the region*"
- The ASEAN Community will comprise three key pillars:



ILSI Southeast Asia Region

ASEAN Economic Community

- Goals of the AEC is to transform ASEAN into:

  i) a single market and production base;
  ii) a highly competitive economic region;
  iii) a region of equitable economic development;
  iv) a region fully integrated into the global economy

- The main instrument to implement the single market and production base for the AEC is the **ASEAN Trade In Goods Agreement** (ATIGA) signed in 2009

ILSI Southeast Asia Region

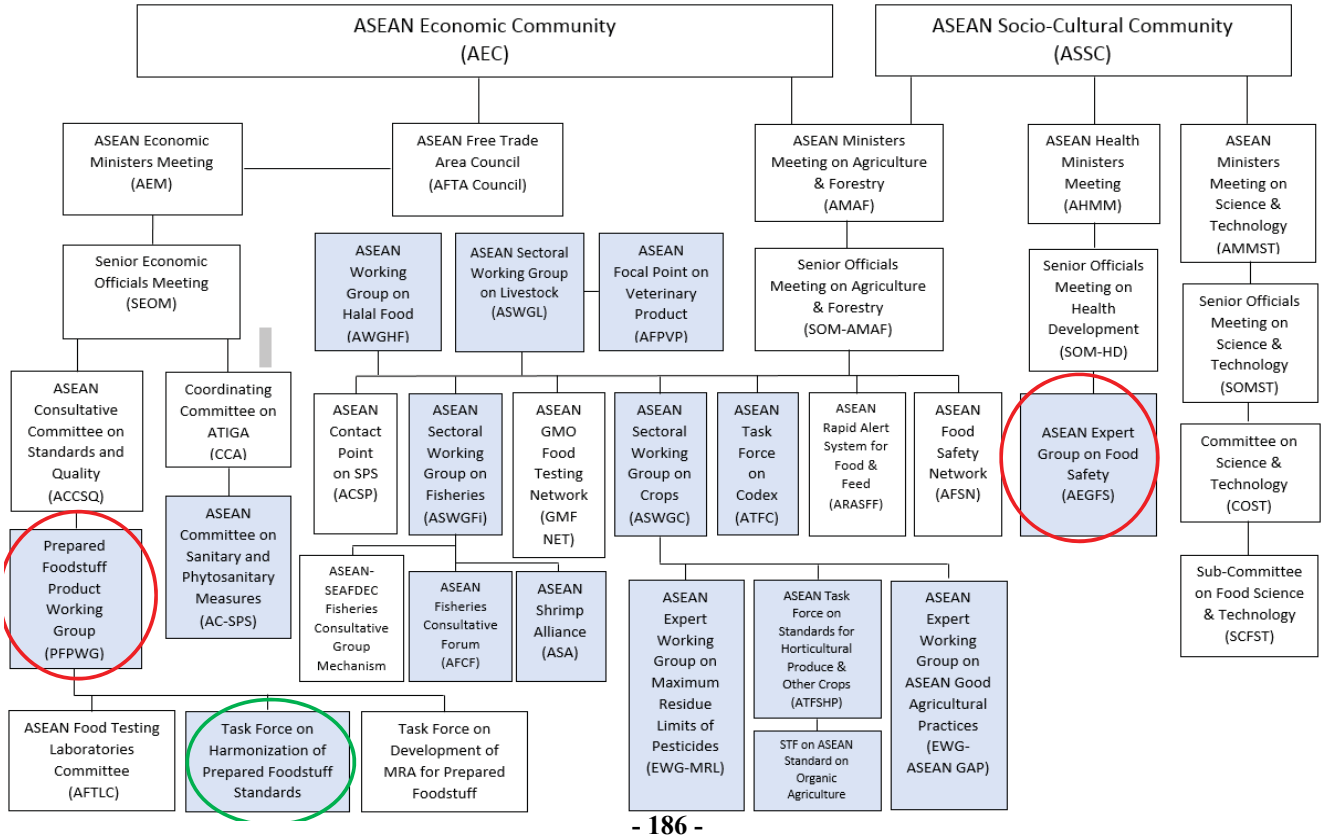
ASEAN Economic Community

Harmonization of ASEAN Food Safety Standards

- ASEAN Leaders identified agro-based sector (includes food) as one of the eleven priority sectors for integration within the ASEAN Framework Agreement for the Integration of Priority Sectors signed in 2004
- **Harmonization of various food safety standards** are also included as priority actions within the ASEAN Economic Community Blueprint and ASEAN Socio-Cultural Community Blueprint in 2007
- Harmonization of standards are implemented by a number of ASEAN Working Groups that have been established over the years

ILSI Southeast Asia Region

Harmonization of ASEAN Food Safety Standards



Prepared Foodstuff Product Working Group

- The Prepared Foodstuff Product Working Group (PFPWG) was established in 2003 under ASEAN Consultative Committee on Standards & Quality (ACCSQ) with key responsibilities to:

  i) Exchange information on food regulations and standards
  ii) Identify and develop sectoral mutual recognition arrangements(MRAs)
  iii) Identify areas for possible harmonization
  iii) Identify food safety capacity building and technical infrastructure needs

- Established a subsidiary Task Force on Harmonization of Prepared Foodstuff Standards in 2008, which addresses harmonization of standards for food additives, contaminants, food contact materials, etc.

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ASEAN Expert Group on Food Safety

- Established with the broad objective to improve food safety across ASEAN under the purview of ASEAN Health Minister

- Implement capacity building projects to improve AMS and ASEAN food safety and technical infrastructure

- Also help to promote harmonization of food safety standards and technical regulations with international standards

- Work is guided by the ASEAN Food Safety Improvement Plan (AFSIP)-Phase II (2011-2014)

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ILSI SE Asia Region…..Est.1993

Southeast Asia Region

ASEAN + Australasia

Unique Regional Set up

- 13 countries
- 1 Regional Office
  Singapore

- 5 Country Committees
  Australia, Indonesia, Malaysia, Thailand and Philippines

- Widely Diverse Region

ILSI SEA Region's Initiatives and Activities in Supporting Food Standards Harmonization in ASEAN

Recognizing the need for greater harmonization in scientific understanding, regulations and decision making in ASEAN region

- ILSI SEA Region identified several key issues and areas relevant to region
  - Nutrition labeling and claims
  - Food Safety Standards
  - Food Consumption and exposure assessment

ILSI Southeast Asia Region

ILSI SEA Region's Initiatives and Activities in Supporting Food Standards Harmonization in ASEAN

1) Nutrition Labeling and Claims Harmonization Workshop Series

- Organized 8 workshop series with regional regulatory authorities and experts from SEA since 2001:
  - Shared regulatory updates and experiences in evaluating scientific data submitted for substantiation of claims
  - Provide avenues to explore possibilities in the harmonization of relevant regulations in SEA Region
- The key outcomes/outputs :
  - Asian position of Functional Foods
  - Regulatory Framework for Nutrition Labeling and Claims for Food – Harmonization in SEA Region
  - Guidelines for the Scientific Substantiation of Nutrition and Health Claims for Foods/Functional Foods
  - Guidelines for Evaluation of Safety / Nutritional Safety of Functional Foods

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ILSI SEA Region's Role & Activities in Supporting Food Standards Harmonization in ASEAN

2) ASEAN Food Safety Standards Harmonization Workshop Series

- Organized workshop series with food safety authorities from ASEAN since 2001:
  - Initially started with FAO & WHO to determine whether possible for ASEAN to harmonize food safety standards with Codex Standards
  - Serves as a platform for different stakeholders (government, academia & industry) to discuss and share scientific issues and identify capacity gaps that are relevant to food safety standards harmonization
- One of the key outputs :
  - ASEAN Food Safety Standards Database

ILSI Southeast Asia Region

ASEAN Food Safety Standards Database

- **ASEAN Food Safety Standards Database** – an online database developed by ILSI Southeast Asia Region in 2003 (pilot), revised and upgraded in 2011
- Currently focuses only on compiling food additive standards of ASEAN compared with Codex General Standard for Food Additives (GFSA)
- Received by the PFPWG in 2012 as a technical infrastructure for food safety in ASEAN for harmonization prioritization and reference

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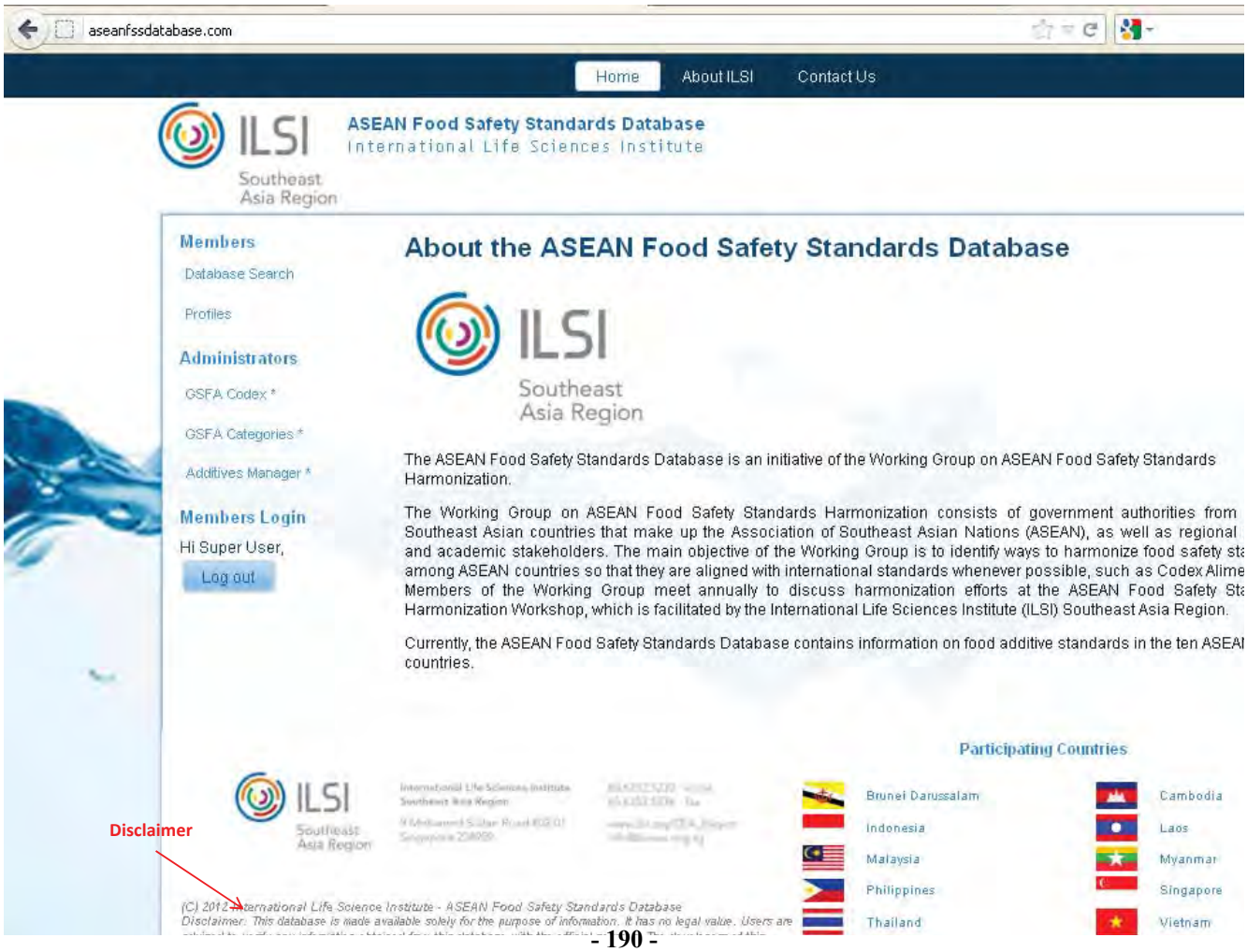

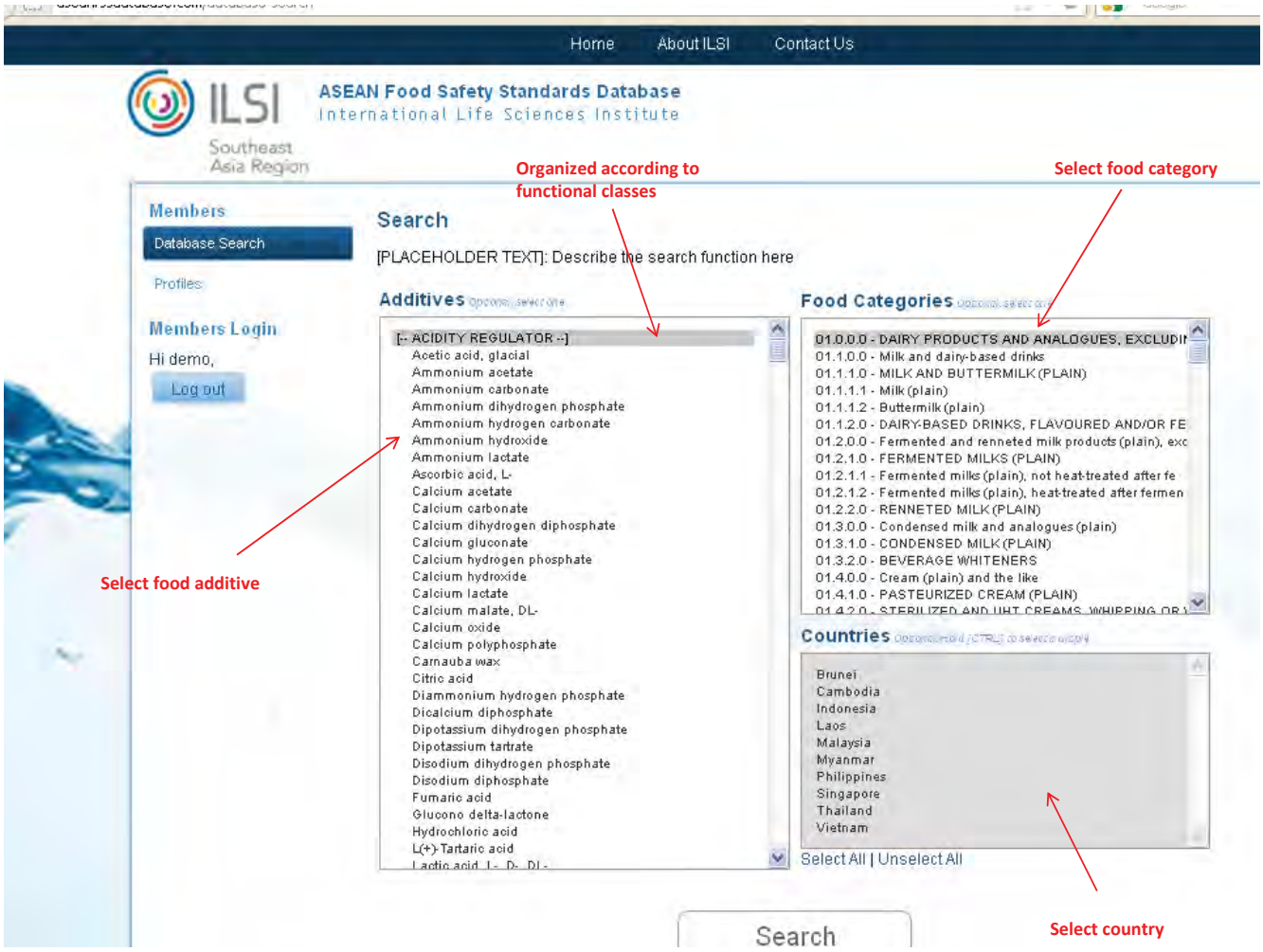
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Search
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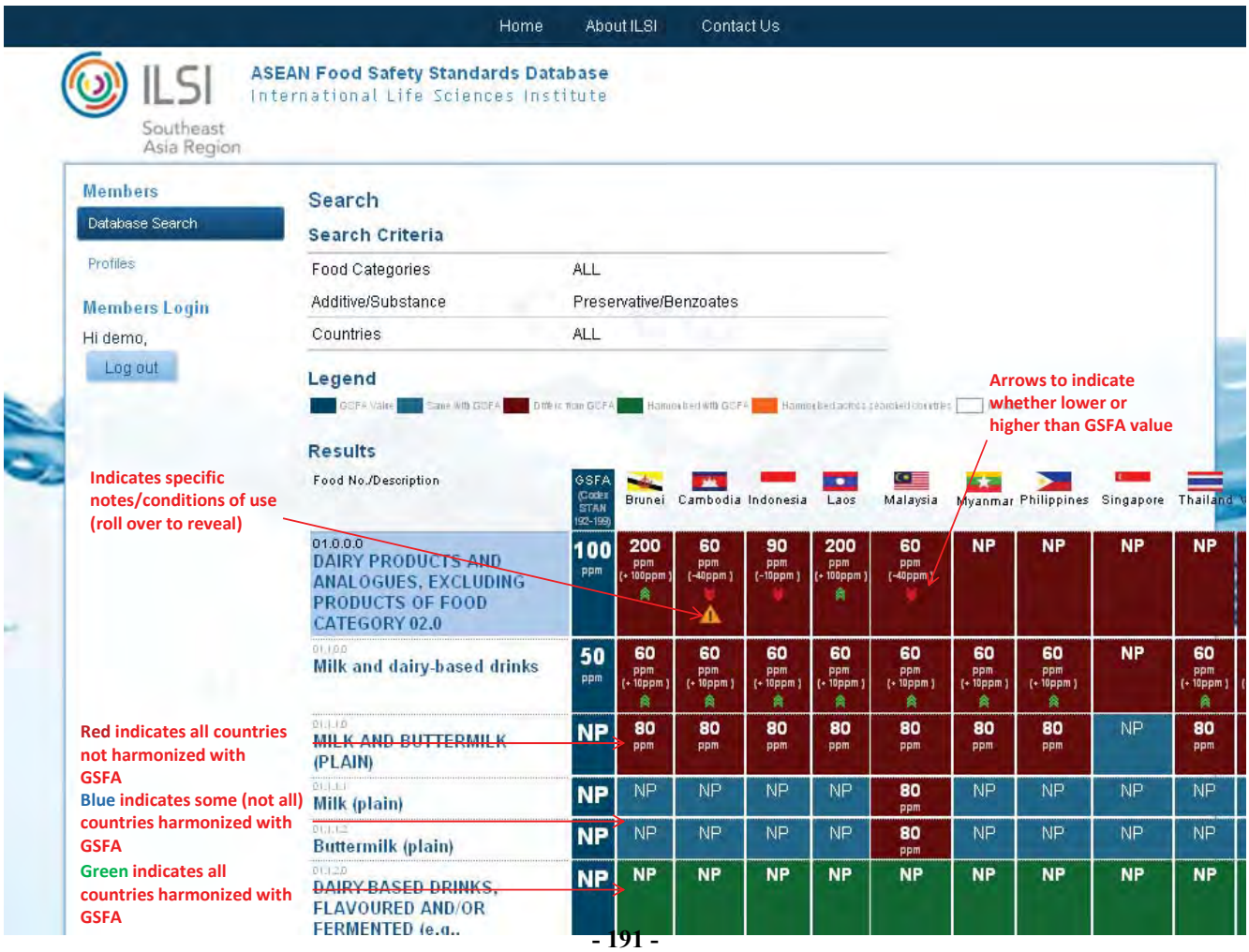
Additives
[- ACIDITY REGULATOR -]
Acetic acid, glacial
Ammonium acetate
Ammonium carbonate
Ammonium dihydrogen phosphate
Ammonium hydrogen carbonate
Ammonium hydroxide
Ammonium lactate
Ascorbic acid, L-
Calcium acetate
Calcium carbonate
Calcium dihydrogen diphosphate
Calcium gluconate
Calcium hydrogen phosphate
Calcium hydroxide
Calcium lactate
Calcium malate, DL-
Calcium oxide
Calcium polyphosphate
Carnauba wax
Citric acid
Diammonium hydrogen phosphate
Dicalcium diphosphate
Dipotassium dihydrogen phosphate
Dipotassium tartrate
Disodium dihydrogen phosphate
Disodium diphosphate
Fumaric acid
Glucono delta-lactone
Hydrochloric acid
L(+)-Tartaric acid
Food Categories
01.0.0.0 - DAIRY PRODUCTS AND ANALOGUES, EXCLUDI
01.1.0.0 - Milk and dairy-based drinks
01.1.1.0 - MILK AND BUTTERMILK (PLAIN)
01.1.1.1 - Milk (plain)
01.1.1.2 - Buttermilk (plain)
01.1.2.0 - DAIRY-BASED DRINKS, FLAVOURED AND/OR FE
01.2.0.0 - Fermented and renneted milk products (plain), exc
01.2.1.0 - FERMENTED MILKS (PLAIN)
01.2.1.1 - Fermented milks (plain), not heat-treated after fe
01.2.1.2 - Fermented milks (plain), heat-treated after fermen
01.2.2.0 - RENNETED MILK (PLAIN)
01.3.0.0 - Condensed milk and analogues (plain)
01.3.1.0 - CONDENSED MILK (PLAIN)
01.3.2.0 - BEVERAGE WHITENERS
01.4.0.0 - Cream (plain) and the like
01.4.1.0 - PASTEURIZED CREAM (PLAIN)
Countries
Brunei
Cambodia
Indonesia
Laos
Malaysia
Myanmar
Philippines
Singapore
Thailand
Vietnam
Select All | Unselect All
Search
Organized according to functional classes
Select food category
Select food additive
Select country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Search
Search Criteria
Food Categories ALL
Additive/Substance Preservative/Benzoates
Countries ALL
Legend
Results
Food No./Description
GSFA (Codex STAN 192-1995)
Brunei
Cambodia
Indonesia
Laos
Malaysia
Myanmar
Philippines
Singapore
Thailand
01.0.0.0 DAIRY PRODUCTS AND ANALOGUES, EXCLUDING PRODUCTS OF FOOD CATEGORY 02.0
100 ppm
200 ppm (+ 100ppm) 60 ppm (-40ppm) 90 ppm (-10ppm) 200 ppm (+ 100ppm) 60 ppm (-40ppm) NP NP NP NP
01.1.0.0 Milk and dairy-based drinks
50 ppm
60 ppm (+ 10ppm) 60 ppm (+ 10ppm) 60 ppm (+ 10ppm) 60 ppm (+ 10ppm) 60 ppm (+ 10ppm) 60 ppm (+ 10ppm) 60 ppm (+ 10ppm) NP 60 ppm (+ 10ppm)
01.1.1.0 MILK AND BUTTERMILK (PLAIN)
NP
80 ppm 80 ppm 80 ppm 80 ppm 80 ppm 80 ppm 80 ppm NP 80 ppm
01.1.1.1 Milk (plain)
NP
NP NP NP NP 80 ppm NP NP NP NP
01.1.1.2 Buttermilk (plain)
NP
NP NP NP NP 80 ppm NP NP NP NP
01.2.0 DAIRY-BASED DRINKS, FLAVOURED AND/OR FERMENTED (e.g..
NP
NP NP NP NP NP NP NP NP NP
Arrows to indicate whether lower or higher than GSFA value
Indicates specific notes/conditions of use (roll over to reveal)
Red indicates all countries not harmonized with GSFA
Blue indicates some (not all) countries harmonized with GSFA
Green indicates all countries harmonized with GSFA

Management of the Database

- Administrator (ILSI Southeast Asia Region):
  - Update values for GSFA additives when changes occur at CCFA
  - Update GSFA food categories when changes occur at CCFA
  - Update database to include new food additives (if any)
  - Maintenance and further upgrading of the database software
  - Administer user access to the database (report to ACCSQ PFPWG on list of users, see who has accessed it and from where)
- Moderators (ASEAN Focal Points):
  - Modify national data for own country
  - Able to add country-specific custom categories
  - Not able to modify another country's data

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ILSI SEA Region's Role & Activities in Supporting Food Standards Harmonization in ASEAN

3) ASEAN Food Consumption Data and Exposure Assessment Workshops

- Background:
  - Recognition among food safety authorities in ASEAN of need to have reliable food consumption data to perform accurate exposure assessments
  - However, existing food consumption data in ASEAN mostly collected for nutrition purposes and not available to risk assessors to do exposure assessments
  - ASEAN Expert Group on Food Safety (AEGFS) Project on 'Strengthening ASEAN Risk Assessment Capacities: Food Consumption Data' was proposed in 2010
  - Technical assistance requested to FAO and ILSI
  - WHO and local Malaysian consultants provided technical assistance for Phase 1 of the project (2010-2011)

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Project Phase 1

- **ILSI Southeast Asia Region**, **FAO** and **Food Safety & Quality Division, Ministry of Health, Malaysia** (Project lead country) jointly organized 1st Workshop on 'ASEAN Food Consumption Data and Exposure Assessment' October 10-13, 2011, Kuala Lumpur, Malaysia

- **Objectives:**
  - Discuss availability of food consumption data in ASEAN
  - Discuss food consumption survey methods
  - Identify steps to enable existing food consumption data to be used for dietary exposure assessment purposes among ASEAN countries

ILSI Southeast Asia Region

1st Workshop Outcomes

Work completed and agreements gained at the 1st Workshop:

- ASEAN countries agreed to
  - share food consumption data to be used for dietary exposure assessment purposes
  - compile existing food consumption data into a common ASEAN Food Consumption Database
- A draft list of harmonized food categories was developed as the basis for a common template to compile the national food consumption data
- List of food categories to be further discussed via electronic working group(led by Malaysia)
- ASEAN countries would consider future work to harmonize food consumption data collection and reporting within their countries

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Project Phase 2

- A 2nd workshop was needed to finalize the list of common food categories and other aspects (e.g. age groups, reported percentiles, etc.) for ASEAN food consumption database
- Also needed to discuss challenges involved in transferring national consumption data into a harmonized template
  - 2nd Workshop on 'ASEAN Food Consumption Data and Exposure Assessment' November 19-21, 2013, Kuala Lumpur, Malaysia
  - Jointly organized by ILSI SEA Region, FAO and Food Safety & Quality Division, Ministry of Health, Malaysia

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Potential Uses & Benefits of the ASEAN FCD

- Could be used to conduct dietary exposure assessment at both the national level and regional level
- Countries that do not have specific data (e.g. no FCD for children or no data for certain foods) can use data of other countries to calculate exposure estimates (using appropriate assumptions)
- Countries that do not have any national FCD could use data of other countries in the ASEAN FCD to calculate exposure estimates ('surrogate data' especially if dietary patterns considered similar, i.e. Lao & Thai)
- Could also be used to calculate what are 'ASEAN exposure estimates' to a particular hazard

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Next Steps for the Project

- ASEAN countries begin to enter their national FCD into the common template
- Electronic working group will continue the discussion of potential challenges and issues in transferring the national data into the common template
- Once the work is completed, the ASEAN Food Consumption Database will be developed and maintained by the ASEAN Risk Assessment Centre (ARAC) of the AEGFS
  - ARAC is the regional body set up to coordinate food safety risk assessment activities to support other ASEAN WGS in implementing science-based harmonization of food safety standards

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Harmonization of ASEAN Food Safety Standards- Not Without Challenges

- As harmonization of food safety standards is mainly based on science, there is a need for scientific data to be made available to support risk assessment activities
  - However, not all countries possess the necessary data to contribute to regional risk assessments (e.g. lack of nationally representative food consumption data)
- Apart from science, there are also other factors that may influence decisions to harmonize national standards within the region (e.g. for contaminants), such as different societal risk tolerances or views on what is deemed the 'appropriate level of protection'

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Harmonization of Food Safety Standards in ASEAN- Moving Forward

- Common elements in relation to work on harmonization of food safety standards across ASEAN WGs:

  - Adopt international standards such as those established by the Codex Alimentarius as the starting point for harmonization

  - Scientific risk assessment agreed to be the basis to decide on harmonization, especially in cases where international standards are not available or not suitable for the ASEAN situation

  - Harmonized ASEAN standards and guidelines that are developed by ASEAN WGs need to be adopted by AMS into their respective national legislation

ILSI Southeast Asia Region

Harmonization of ASEAN Food Safety Standards

ASEAN harmonization – may be a slow process but with solid foundation!

ILSI Southeast Asia Region

ILSI
Southeast
Asia Region

Thank you

Questions?

Website: www.ilsi.org/SEA_Region

INFOSAN

World Health Organization
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Dr Ritu Singh Chauhan, MD.
NPO-Microbiology
chauhanr@who.int

Outline

- Global Landscape of Food safety
- INFOSAN-Evolution & Purpose
- Linkages to IHR(2005)
- Activities and Progress so far
- Next steps

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Global Landscape of Food Safety: Key Drivers??

- Changing Food consumption patterns---More people expect a wider variety of foods, including those that are not in season, often eat away from home, new dietary habits
- Integration and consolidation of agricultural and food industries-new technologies, complexity of systems higher
- Globalization of food trade and human movements

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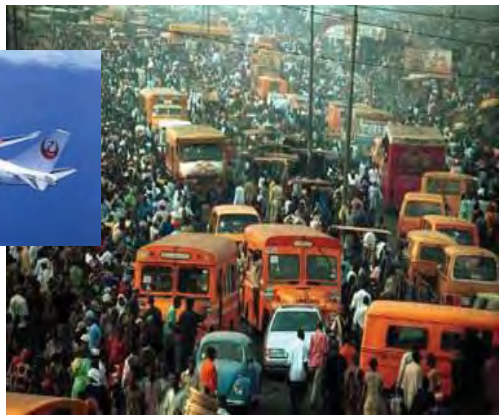
Our world is changing as never before!



Population growth
International travel
Urbanization
Weak PH infrastructure
Microbes adapt
Antimicrobial resistance
Crossover from one species to another to man
Climate change … environmental degradation

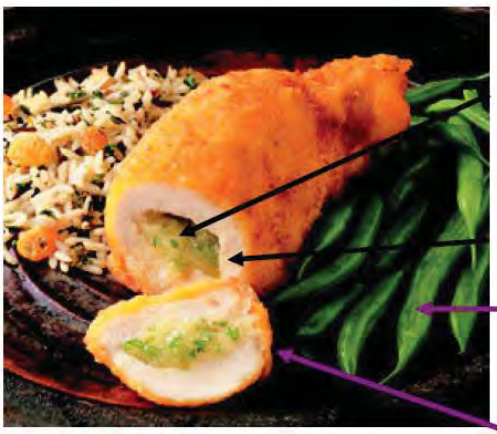
Threatening Global Public Health Security …

Food Safety- Keeping pace with growing demand

Increasing demand for growing global population alongside efforts to develop sustainable food production practices.

Global Picture of food safety: Vast disparities in infrastructure, risk assessment and verification of events

Globalisation of Trade :
"The World on your Plate"



Chicken Kiev

Herb Butter :	Salted butter	- Ireland
	Garlic puree	- China, USA, Spain
	Garlic salt	- China, USA, Spain
	Lemon	- USA
	Parsley	- France, UK
	Pepper	- Indonesia
	Water	- Ireland
Chicken Breast:	Chicken	- Ireland, Belgium UK, France etc.
Batter:	Flour	- Belgium, France
	Water	- Ireland
Bread Crumb:	Bread crumb	- Ireland, UK
	Rape-seed oil	- EU, Australia Eastern Europe

Courtesy A. Reilly, FSAI, Ireland

Evolution of INFOSAN

- Clear authoritative reliable information identified as global need
  - Resolutions of the World Health Assembly in 2000 and 2002 (improved communication re: food safety; WHO to coordinate identification/response to food safety emergencies)
- 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 –*International Network of Food Safety Authorities*--launched by WHO in 2004 in collaboration with FAO
  - In 2010, a resolution on advancing food safety was adopted reinforcing the mandate of INFOSAN

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Objectives of INFOSAN

Voluntary network of food safety authorities

Managed jointly by WHO and FAO

- Promote rapid exchange of information during food safety related events
- Share information on food safety issues of global interest
- Promote partnerships and collaboration between countries, and between networks
- Help countries strengthen their capacity to manage food safety emergencies

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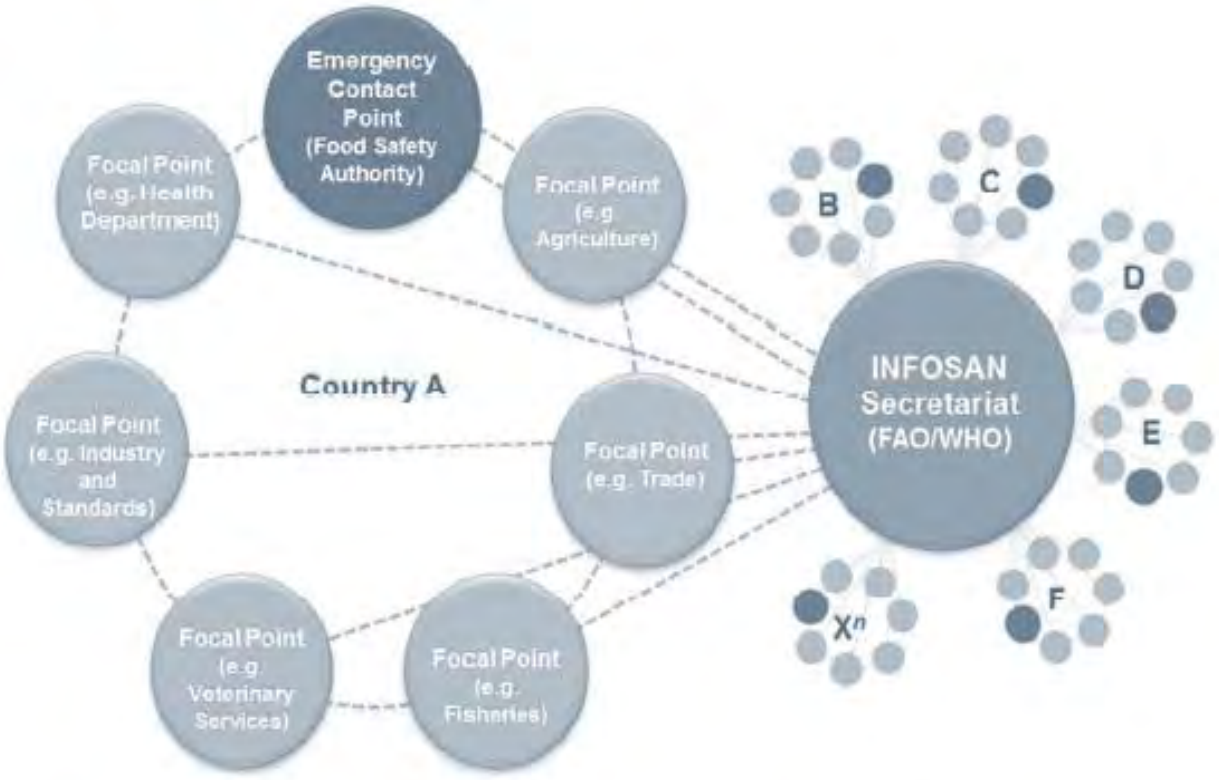
INFOSAN Membership

- **Emergency Contact Points** → From the national authority responsible for coordination of national food safety emergency response
- **Focal Points** → Other national authorities with a stake in food safety (i.e. human health, veterinary health, agriculture, trade, fisheries, etc.)
- **Other members** → Advisory Group Members, WHO Regional Food Safety Advisors; FAO Regional Food Safety Officers; Regional Food Safety Authorities (i.e. ECDC, OIRSA, etc.)

FIGURE 1 – EXAMPLE OF INFOSAN STRUCTURE AT NATIONAL LEVEL



Emergency Activities

- INFOSAN identifies, verifies and shares information on food safety-related events which involve contaminated foods in international commerce, and foodborne illness outbreaks, not limited to one country
- TA to national governments in managing food safety and food production-related events or emergencies
- INFOSAN secretariat coordinates information exchange between countries and can facilitate technical assistance in the field, if requested

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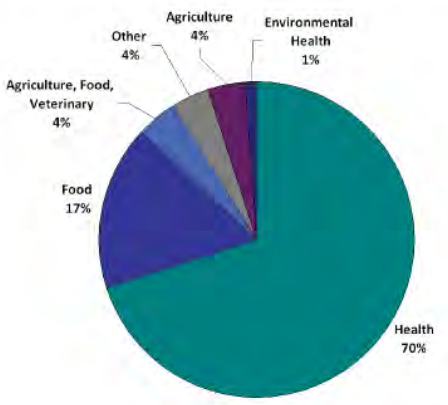
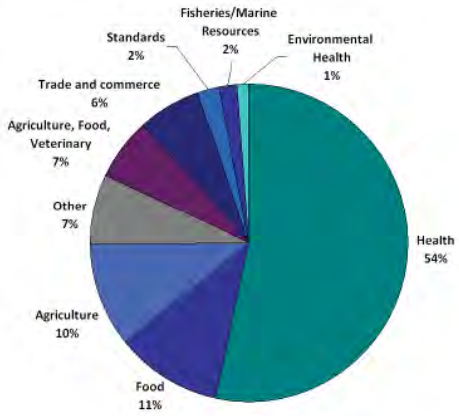
Distribution of INFOSAN Emergency Contact Points in national agencies or ministries



Distribution of INFOSAN Focal Points in national agencies or ministries



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INFOSAN Emergency Focal Point-----Coordinates activities with relevant national agencies Inform INFOSAN Secretariat -food safety related incidents and emergencies of international Respond to urgent queries

Take action on alerts , Request international assistance to respond to a food safety incident or emergency

INFOSAN: Global Collaborative Partnerships

- 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

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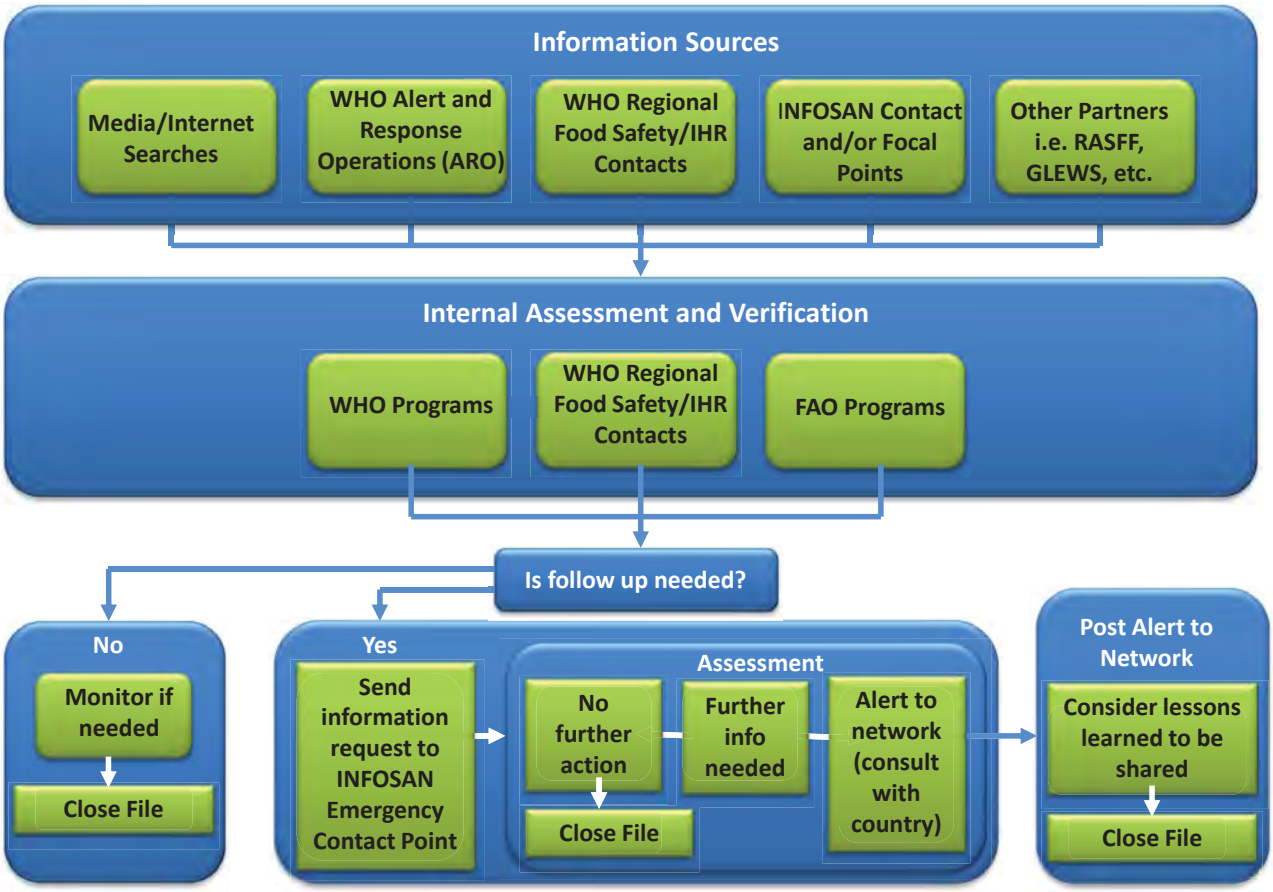
INFOSAN Secretariat Event Detection and Action



Routine Activities

- INFOSAN Information Notes --emergent or topical food safety issues
- Sharing---Food safety guidelines, questionnaires, surveys, newsletters and factsheets
- INFOSAN members aid routine in-country sharing of information to strengthen the national food control system
- INFOSAN Members engaged by the Secretariat for gathering information on emerging issues

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IHR(2005) and INFOSAN

- To effectively participate in INFOSAN, Member States must have an ability to **identify, assess, manage and communicate** issues during a food safety event.
  - core capacities as defined by the IHR(2005) and are integral components of a national food control system

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National Food Control Systems

- Food laws and regulations
- Food control management
- Inspection service
- Laboratory services and
- Information, education, communication, and training

INFOSAN is designed to complement national food control systems.

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International Health Regulations, IHR(2005)

- Needs Coordination
  - Within Sectors: all levels of the HC System
  - Across sectors: Chemical, Food safety, Radio nuclear…
  - Leadership
  - Advocacy

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Public Health Emergency of International Concern (PHEIC)

- The IHR decision instrument poses 4 critical questions
  - Is the public health impact of this event serious?
  - Is the event unusual or unexpected?
  - Is there a significant risk of international spread?
  - Is there a significant risk of international trade or travel restrictions?
- Any outbreak that meets two or more of the four criteria needs to be notified to WHO under Article 6 of the IHR (2005).

http://whqlibdoc.who.int/publications/2008/9789241580410_eng.pdf

Efficient response to public health events
Prerequisites

- Adequate and trained public health staff
- Strong information and communication systems
- Timely and reliable public health laboratory capacity
- Efficient and swift management of public health actions including logistics
- Adequate resources
- Coordination with other sectors
- Global commitment, transparency & legally bound obligations

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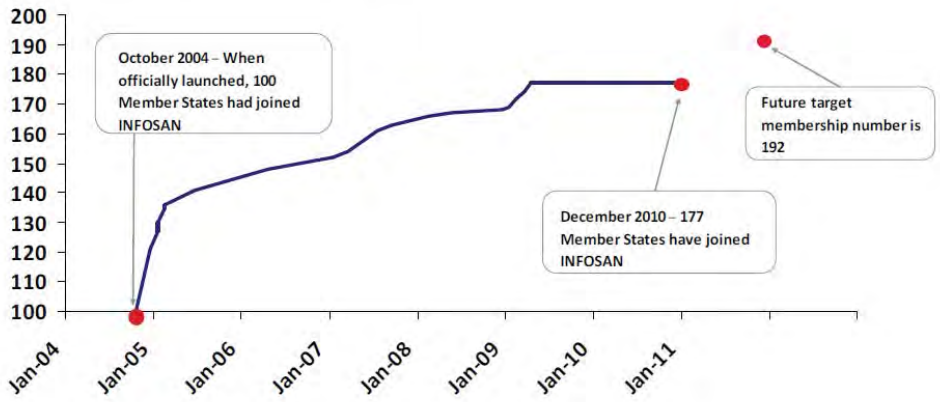
INFOSAN Membership

Fig. 2
Growth of INFOSAN membership (2004–2010)



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10 years to INFOSAN

INFOSAN-First Global technical meeting in Abu Dhabi, UAE; 150 participants from 65 different countries

Next Global meeting 2015

- INFOSAN has facilitated international communication for hundreds of food events
- Highlighting need for effective intersectoral collaboration
- Focusing on urgency of communication of events
- Fostering partnerships

Some examples: INFOSAN coordination

- Melamine in Infant formula and related dairy products, 2008, product recalls in 5 countries

http://www.who.int/csr/don/2008_09_19/en/
http://www.who.int/csr/media/faq/QAmelamine/en/

- Outbreaks of E. coli O104:H4 infection—contaminated sprouts, affected a total of 16 countries in Europe and North America

- Nuclear accidents and radio-nuclear contamination of foods http://www.fao.org/crisis/26810-0e345236a149154263c548a99d710f338.pdf

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INFOSAN Community website- launched in 2012

Allowing INFOSAN members to build & exchange knowledge

Interactive forum to strengthen community of practice

Share Documents, hold discussions

Thank You

"Only if we act together, can we respond effectively to international food safety problems and ensure safer food for everyone"

Dr Margaret Chan – Director General, WHO

Risk Perception and Risk Communication Associated with Food Safety

Dr. V. Sudershan Rao
National Institute of Nutrition
Hyderabad

ra structure needs to Promote Harmonization of Food Standard
d Modern Food Control System for SAARC Countries, 9-10th
cember, 2014. New Delhi

"I feel ill Mum. I think it's the pesticides in the veges. From now on I'm going to have to eat chips,burgers and pizzas."

The fundamental dilemma of health risk communication

The risks that kill people and the risks that alarm people are completely different

- Covello Sandman, 2001.

Most important tool over looked for improving Public health

Food Risk Perception

Perceptions about food safety risk are what the individuals believe would be the amount of health risk, if any, they would face from consuming a food product .

"People are disturbed, not by things, but by the view they take of them." Epictetus

Risk perception and food choice

Physical properties

Psychological factors

Food choice

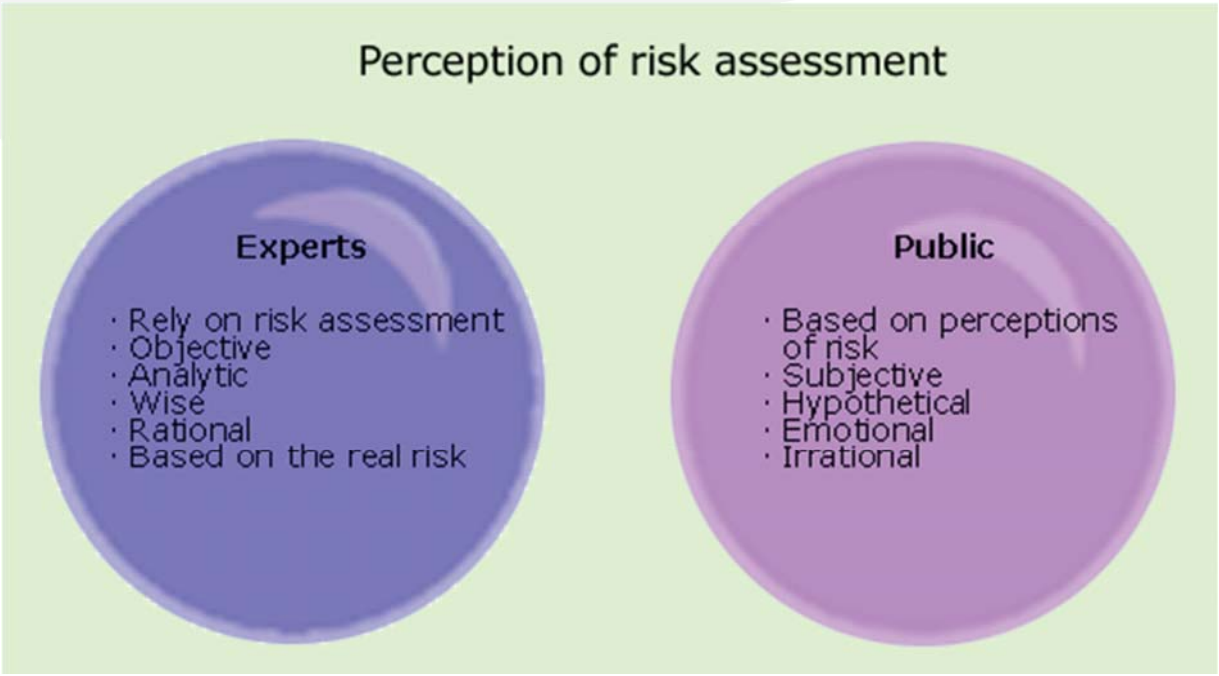
Food Preparers

90% of them are women in India*

* KABP report, 2006

To understand Risk Perception, we must answer the following questions:

1. What kind of individuals is *the public* made up of?
2. What factors determine risk perceptions and attitudes?
3. How are risk perceptions and attitudes manifested?
4. What can be done to soften attitudes regarding the risk?



Source:Canadian Food Inspection Agency

Public Perception of Risk

Expert decision making

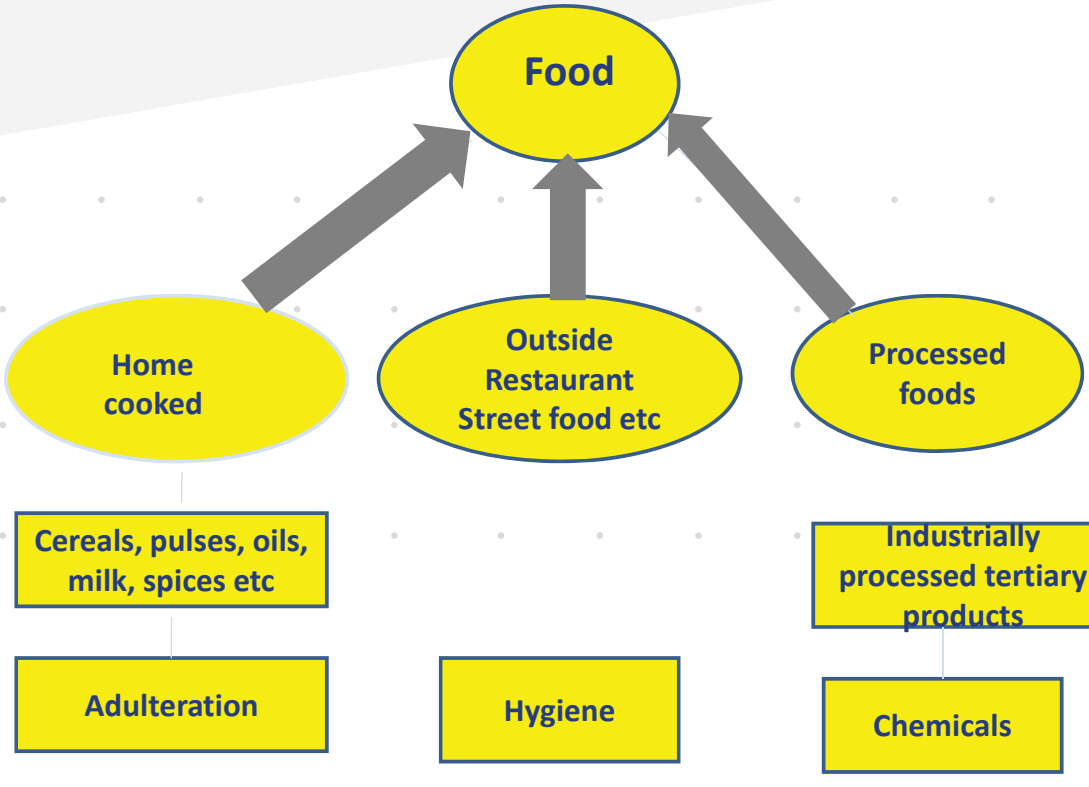
Risk Assessment → **Risk Guidelines** → **Risk Interventions**

Public decision making

Risk Perception → **Risk Acceptability** → **Risk Behaviours**

- Centuries old traditions vs Developments in food production, processing, distribution and consumption
- Increased consumer awareness on food safety
- Rising middle class
- Higher literacy levels
- Clearer food packaging
- Modernising retail (supermarkets)
- Media campaigns, advertisements

>50% Traditional channels of food supply



Comparison of Food Risk Perceptions

India*	Europe**
Adulteration - Major	Chemical contamination
Pesticide residues-fruits and vegetables	Pesticide residues
Chemicals-Fruits	Dioxins

Swetha etal, EJNFS,2014* * Eurobarometer survey,2010*

Health hazards perceived due to adulteration "Health Loss, Taste loss Lifestyle loss, Time loss"

No significant co-relation Income, habitat(Urban & Rural)& Education (Swetha etal, EJNFS,2014)

What Europeans do when they hear about food risks ?

>40% ignore the stories or do nothing despite worried

37% temporarily changed their eating habit

16% permanently changed their eating habit

(Eurobarometer survey, 2010)

Food Risk Perception and Traditional Practice

Consumers prefer fresh milk (unpasteurized)

Consumed only after boiling - Risk of Typhoid or any other disease is not perceived not real also

Complete food

Milk protein has high biological value (Eggs, Meat)

Rich source of bio available calcium

Milk fat important vehicle for Vitamin A, D & K

Most adulterated commodity in India

Type of adulteration found in milk in snap survey

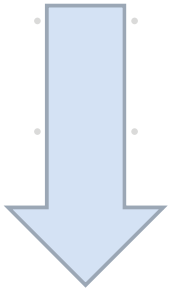
Type of adulteration	Percentage
Abstraction of fat & SNF	46.8 (574 including 147 with detergent)
Addition of skim milk powder	44.69 (548 including 477 with glucose)
Detergent	8.4%

Implications for health of consumers on account of abstraction of fat and addition of water

Recommended for children — 500ml of "Top milk"
21.5g protein
32.5g fat
1050 mg of Ca

At 20% addition of water and 50% abstraction of fat

Protein
Fat
Calcium
Calories



No risk assessment is done for other adulterants

Traditional compromise

BANNED DRUG
INJECTED INTO CATTLE IS
POISONING YOUR MILK

MID DAY Investigation

A two-month-long investigation by MID DAY has exposed how cattle in Tabelas are injected with a hormone called oxytocin every day, in violation of a government ban. While the drug forces the cattle to expel a few extra litres of milk, drinking it may severely harm young children.
Vinod Kumar Menon and Ranjeet Jadhav report on P6-8

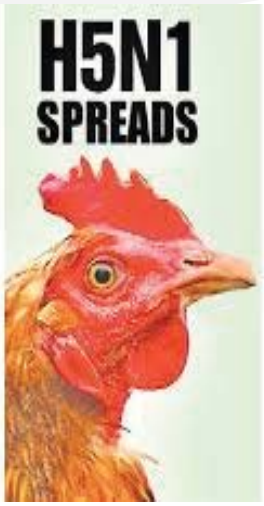
Perception VS Reality

Oxytocin –Peptide hormone-
Naturally present in Milk

Gets digested in the intestine*
No hormonal action
Risk Communication or
miscommunication ?

(* Raghu etal IJMR, 2014)

Food Risk Perception - Impact on food consumption



Kerala

1st Dec, 2014

THE TIMES OF INDIA

Bird flu scare: Chicken prices fall in TN as consumption dips

TIMES NEWS NETWORK

Chennai/Madurai: The bird flu that has hit Kerala may not have crossed the border, but fears have. A sudden fall in consumption of chicken and the accompanying plunge in prices across the state are signs.

In Chennai, the price of one kilogram of dressed chicken has fallen from ₹160 to ₹120 over the last one week, while the cost of a live chicken has dropped to ₹90 from ₹110. Some retailers are offering chicken for as low as ₹90 a kg.

Traders attribute the plunge to a drop in consumption following the outbreak of bird flu in duck farms in Kerala. "Also, ever since the movement of chicken to and from Kerala was stopped, we have a pileup of stock in Namakkal and Palladam. We are now selling them within the state," said P Mannivalan of Chennai Poultry Wholesale Dealers Association. Namakkal and Palladam are hubs for broiler trade in Tamil Nadu. Traders are now hoping the culling of birds in Kerala would stabilize the market.

R Kirubakaran, a retailer in Egmore, said consumption usually falls during the ongoing Sabarimala season. "It falls by around 30%, but now there's a further dip. We are selling around 60kg a day, when we usually sell 150kg on a day," said Kirubakaran.

In Madurai, consumption fell by half on Sunday, which is usually a big day for traders. Around 3 lakh kg of chicken is consumed on an average.

SLOW SALES

- In Chennai, **1kg dressed chicken fell from ₹160 to ₹120**
- **A live chicken costs ₹90 per kg** now from ₹110 earlier
- In Madurai, **retail prices fell to ₹90 per kg**
- **Farmers slashed wholesale price of chicken** from ₹68 to ₹60

▶Few takers for chicken, P 4

Factors to be considered for risk communication

Back yard poultry

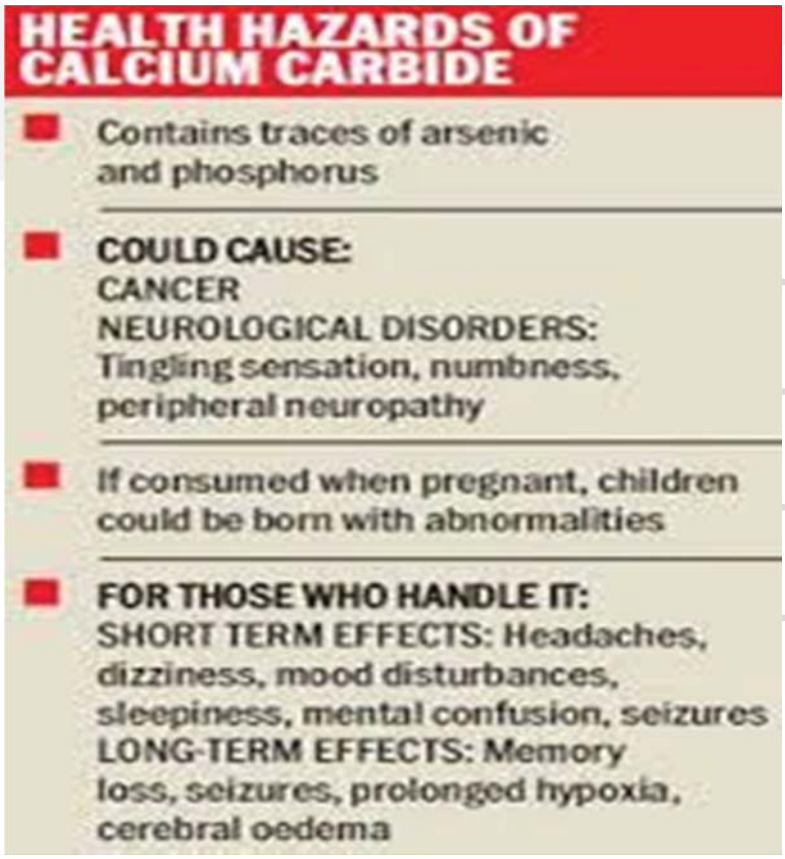
Organized poultry Industry

Live birds

Retailing – Fresh meat vs Processed meat

Traditional cooking methods

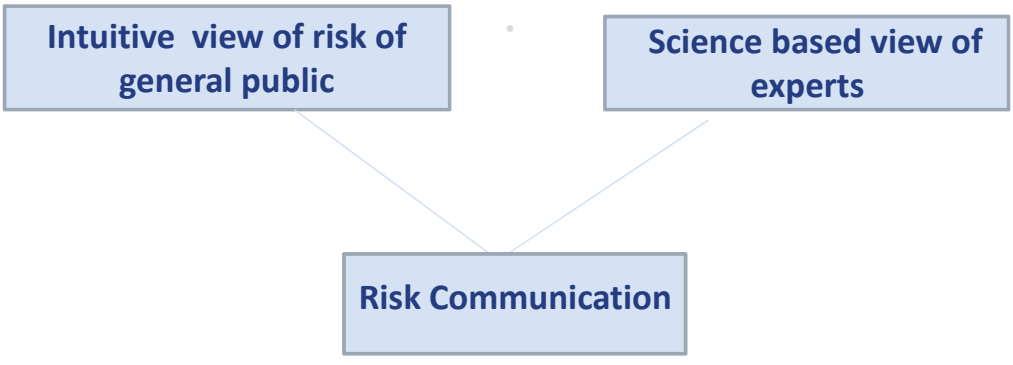
Artificial ripening

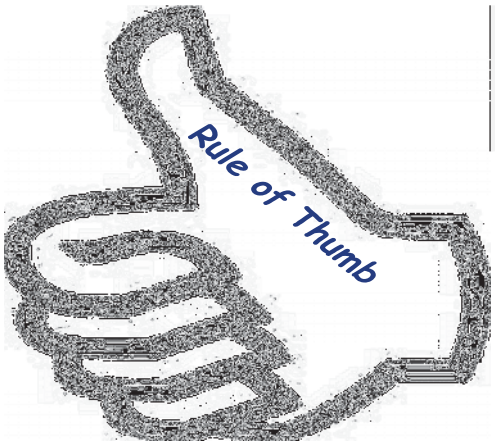


Communication or Miscommunication ?

Risk communication

Risk means something inherently different to lay public than what it means to scientist and regulators





Consumer decisions

If the media is paying attention, it must be bad

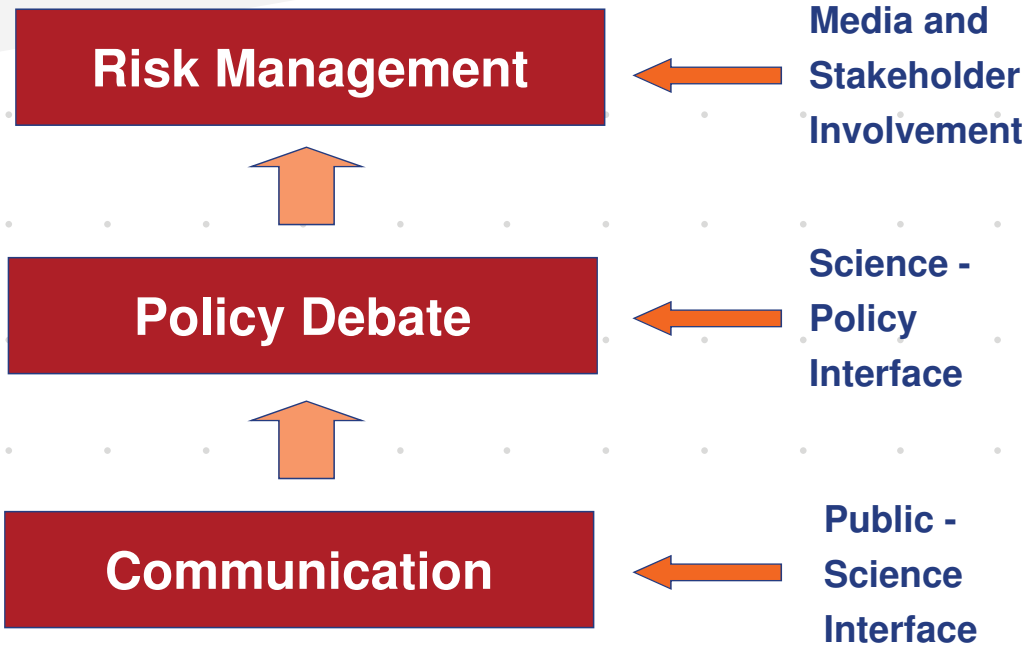
When in doubt, it is safer to do nothing

I have always done this way

That could not happen to me

If I am worried about, I might stop living

Roles of Risk Communication



Effective Risk Communication

Is aware of consumer perspective

Different approaches to defining risks

Inherent uncertainties of Risk

Highly technical communication interferes with understanding

Rule of thumb often used for decision making

Way forward

Need to initiate studies to capture Food Risk Perception

Identify Factors shaping them

Develop appropriate Risk Communication

Thank you