



GLOBAL QUALITY AND FOOD SAFETY STANDARDS: AN OVERVIEW

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*“Our goal is to
provide quality
products and services
that meet our
customers’ requirements
and expectations
at all times.”*

Codex Alimentarius Commission

- The Codex Alimentarius Commission was created in 1963 by FAO and WHO to develop
 - food standards,
 - guidelines and
 - related texts such as codes of practice under the Joint FAO/WHO Food Standards Programme.



India being a member of the Codex Alimentarius Committee since 1970, the Ministry of Health and Family Welfare (FSSAI acting as the National Codex Contact Point) has the primary responsibility for determination of government policy relating to food standards and enforcement of food control including national position on various issues relating to Codex.

Global food industry looking towards India as a food hot-spot.

National food legislation is aligned with Codex encouraging innovation and started facilitating trading of different food products without compromising consumer safety

Food Safety and Standards Regulations, 2010 is tuning of international best practices with the domestic ground realities

The Codex Alimentarius Commission(CAC)is an international food standards body established jointly by the Food and Agriculture organization (FAO) and the World Health Organization (WHO)in May 1963 with the objective of protecting consumer's health and ensuring fair practices in food trade. The Agreement on Application of Sanitary and Phytosanitary Measures (SPS)of the World Trade Organization (WTO) recognizes Codex standards, guidelines and recommendations as reference standards for international trade and trade dispute settlement

Currently the Codex Alimentarius Commission has 189 Codex Members made up of 188 Member Countries and 1 Member Organization (The European Union). India became the member of Codex Alimentarius in 1964.



What is the function of the CAC?

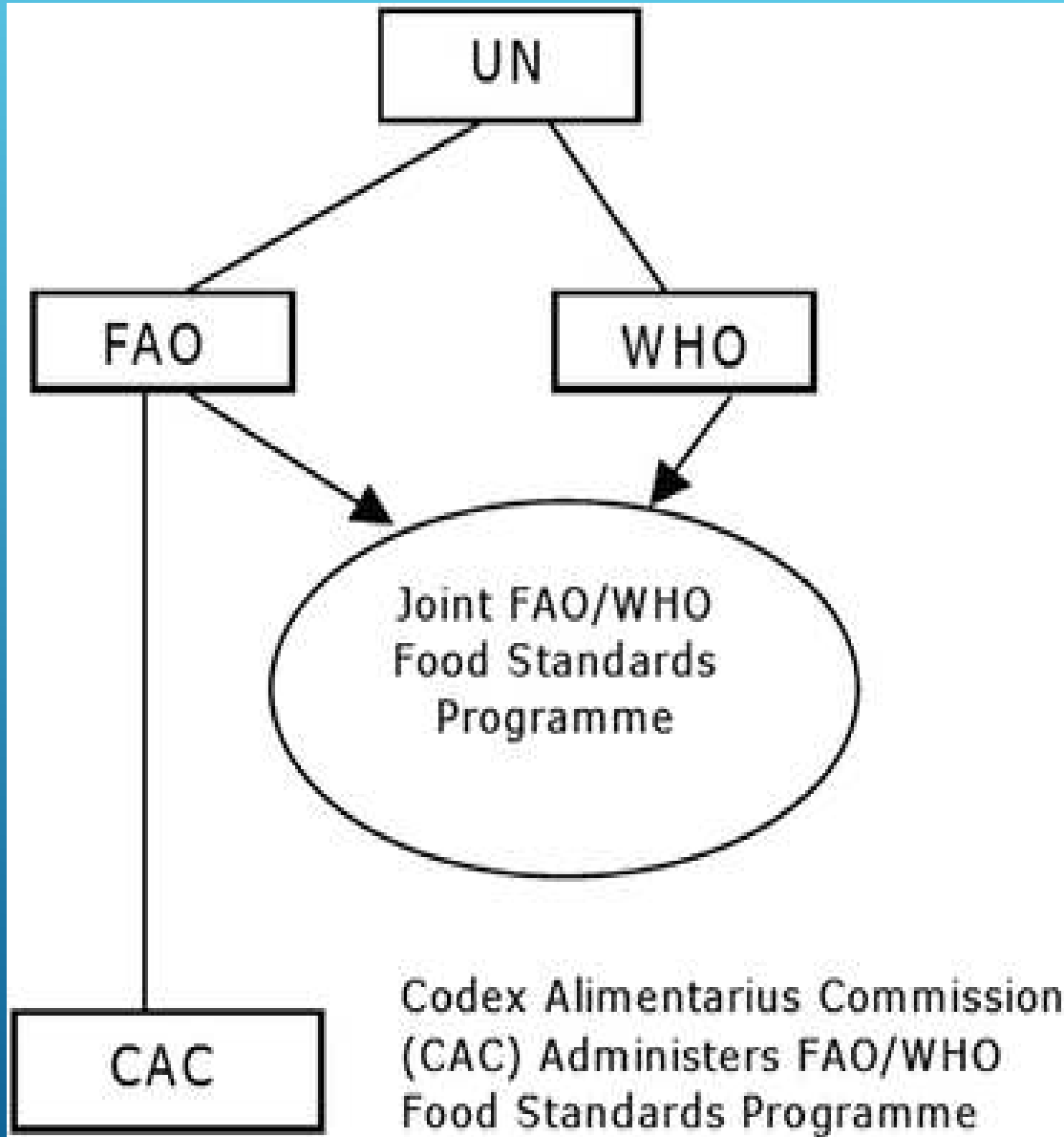
- To protect the health of consumers
- To ensure fair practices in the food trade
- To coordinate food standards work internationally
- To finalise and publish international standards, codes of practice and recommendations in the Codex Alimentarius

INTRODUCTION

- Codex Alimentarius is a group of international food standards, adopted by the Codex Alimentarius Commission and uniformly presented.
- The very term Codex Alimentarius is taken from the Latin term **Codex Alimentarius**, meaning **Food Law** or **Legal Food Code**.
- The Codex Alimentarius standards cover all basic food types, raw, semi-processed and processed, that are intended for distribution to the costumers.

Objectives:

To protect human health,
To accept food standards,
To protect consumer rights,
To ensure fair food trade practice.



Risk Analysis



Codex Alimentarius commission-CAC

- Coordinates food standards at the international level
- Objectives are to protect the health of consumers
- It has formulated international standards for a wide range of food products and specific requirements covering pesticides residues, food additives, veterinary drug residues, hygiene, food contaminants, labelling etc.
- Also activities based on risk assessment to address microbiological hazards in foods • To summarize: a continuous appraisal of the principles of food safety and quality at the international level.

CODEX ALIMENTARIUS COMMISSION

□ The Eleventh Session of the Conference of FAO in 1961 and the Sixteenth World Health Assembly in 1963 both passed resolutions to establish the Codex Alimentarius Commission. □ The two bodies also adopted the Statutes and Rules of Procedure for the Commission.

□ The Codex Alimentarius Commission (CAC) is an intergovernmental body that coordinates food standards at the international level.

□ Its main objectives are to protect the health of consumers and ensure fair practices in food trade.

□ The CAC has proved to be most successful in achieving international harmonization in food quality and safety requirements.

□ It has formulated international standards for a wide range of food products and specific requirements covering pesticide residues, food additives, veterinary drug residues, hygiene, food contaminants, labeling etc.

□ Codex work has created worldwide awareness of food safety, quality and consumer protection issues and has achieved international consensus on how to deal with them scientifically through a risk based approach.

□ As a result there has been a continuous appraisal of the principles of food safety and quality at the international level.

□ There is increasing pressure for the adoption of these principles at the national level.

THE COMMISSION OPERATIONS

- Compiling the Codex Alimentarius
- One of the principal purposes of the Commission is the preparation of food standards and their publication in the Codex Alimentarius.
- The legal base for the Commission's operations and the procedures it is required to follow are published in the Codex Alimentarius - Procedural Manual currently in its twelfth edition.
- Like all other aspects of the Commission's work the procedures for preparing standards are well defined open and transparent.

GENERAL STANDARDS TO COVER ALL TYPES OF FOODS

There are general standards or recommendations for

- Food labelling;
- Food additives;
- Contaminants;
- Methods of analysis and sampling;
- Food hygiene;
- Nutrition and foods for special dietary uses;
- Food import and export inspection and certification systems;
- Residues of veterinary drugs in foods; and
- Pesticide residues in foods.

Member Countries Acceptance of Codex Standards:

The harmonization of food standards is generally viewed as a prerequisite to the protection of consumer health as well as allowing the fullest possible facilitation of international trade. For that reason the Uruguay Round Agreements on the Application of Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT) both encourage the international harmonization of food standards. □ Harmonization can only be achieved when all countries adopt the same standards. The General Principles of the Codex Alimentarius specify the ways in which member countries may “accept” Codex standards.



SPS and TBT agreements

- Both these agreements are relevant in understanding the requirements for food protection measures at the national level and the rules under which food is traded internationally
- The SPS Agreement confirms the right of WTO member countries to apply measures to protect human , animal and plant life and health
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- Member States are asked to apply only those measures for protection that are based on scientific principles only to the extent necessary and not in a manner which may constitute a disguised restriction on international trade
- The Agreement encourages the use of international standards, guidelines or recommendations where they exists and identify those from Codex to be consistent with provisions of SPS
- Thus the Codex standards serve as a bench mark for comparison of national sanitary and phytosanitary measures
- The TBT Agreement requires that technical regulations on traditional factors fraudulent practices , packaging , labeling etc imposed by countries will not be more restrictive on imported products than they are on products produced domestically
- It also encourage use of international standards

HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP)

HACCP is a systematic approach to the identification, evaluation, and control of food safety hazards. It is a proactive strategy where hazards are identified and assessed, and control measures are developed to prevent, reduce, or eliminate a hazard. The HACCP system, which is science based and systematic, identifies specific hazards and measures for their control to ensure the safety of food. HACCP is a tool to assess hazards and establish control systems that focus on prevention rather than relying mainly on end-product testing. Any HACCP system is capable of accommodating change, such as advances in equipment design, processing procedures or technological developments.

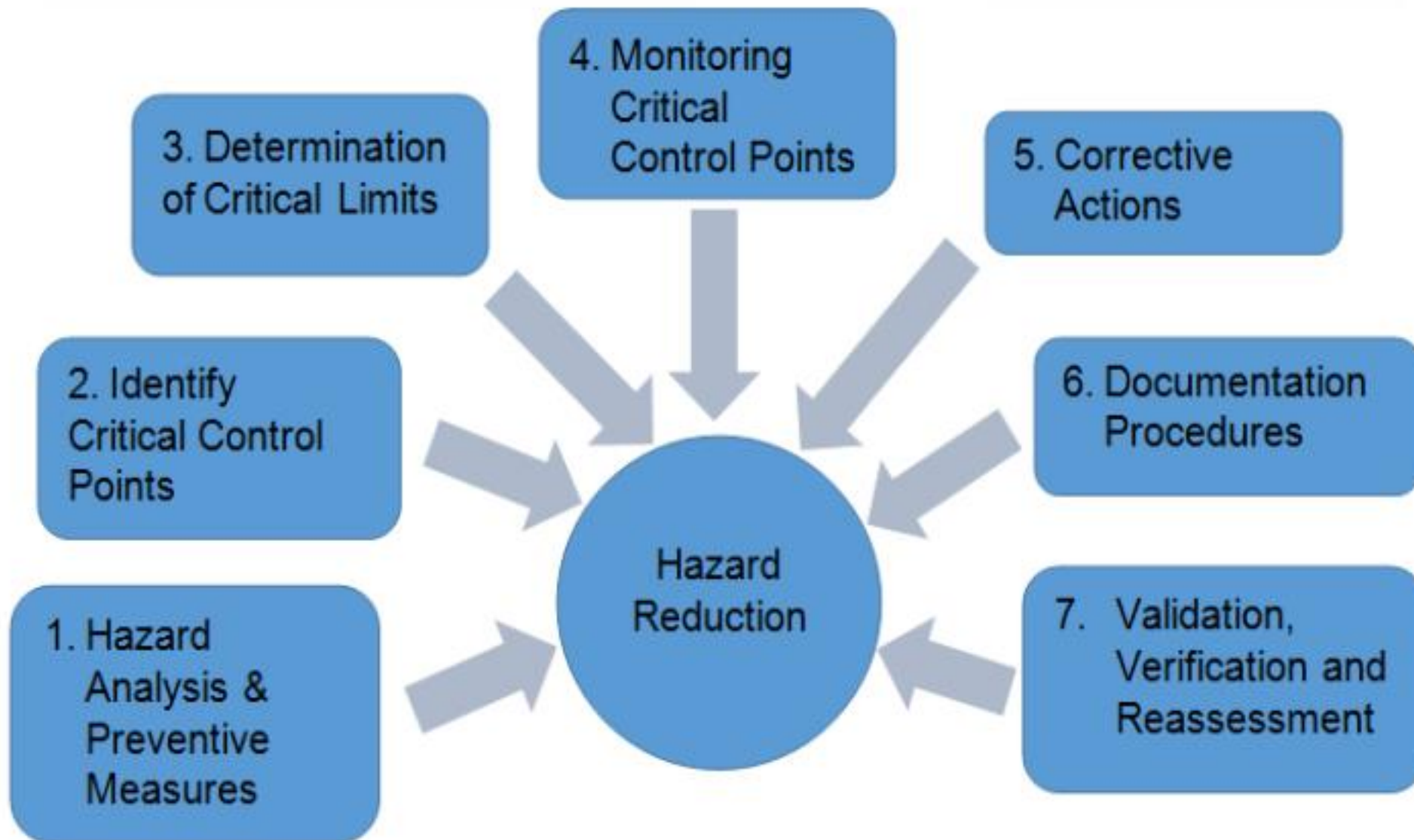
HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP)

- HACCP is a system that identifies, evaluates and controls hazards, which make a food unsafe for human consumption.
- HACCP is a systematic approach for the control of food safety throughout the commodity system of food chain.
- Before HACCP most of the food systems were based on end product testing which does not assure 100% safety.
- It required a good understanding of the relationship between cause and effect in order to be more proactive.
- HACCP is a key element in Total Quality Management HACCP
 - o Good Manufacturing Practices (GMP)
 - o Good Hygienic Practices (GHP)
 - o Good Agricultural Practices(GAP)
 - o Good Storage Practices(GSP)

GOOD MANUFACTURING PRACTICES (GMP) □ Establishment and design facility: Structure & location of processing plants, design to minimize contamination, maintain cleanliness disinfection, environmental facilities etc. □ Control Operation: Time, temperature humidity, potable water equipment maintenance etc. □ Maintenance of Sanitation - Throughout the GMP □ Personal Hygiene : Handlers awareness of hygiene □ Transportation: To prevent contamination and deterioration of quality, controlled temperature containers etc. □ Training: All handlers should be trained in HACCP.

GOOD AGRICULTURAL PRACTICES □ Land use for crop, horticulture, fodder and pasture production should be fit and free of problems and not contaminated with heavy metals, industrial affluent or biological waste. □ Farmers should also control production so that pest and disease of plants and animals do not contaminate food or feed. □ Good Agricultural practices include Good Hygienic Practices(GHP). □ This became more significant in animal products like milk, meat and egg. □ Good Storage Practices (GSP) should be followed when commodity is stored on farm. □ GSP related guidelines are covered in Food Hygiene Basic Texts (CODEX) there also four ISO procedures that cover storage of cereals & pulses (ISO 6322 series).

There are seven basic principles in HACCP which are essential for implementation of the system.



The 12 elements



1. Assemble a team
2. Describe the product
3. Document intended uses of the product
4. Construct a process flow diagram
5. Verify process flow diagrams
6. Identify hazards and preventative measures
7. Identify critical control points
8. Establish critical limits
9. Identify monitoring procedures
10. Establish corrective action procedures
11. Validate/verify HACCP plan
12. Establish documentation and record keeping

Codex work on milk and milk products

- Codex Committee on Milk and Milk Products
- Codex Committee on Food Hygiene
- Codex Committee on Contaminants in Foods
- Codex Committee on Pesticides
- Codex Committee on Residues of Veterinary Drugs in Foods
- Codex Committee on Food Additives
- Codex Committee on Nutrition and Food for Special Dietary Uses

Codex Standards for Milk and Milk Products - format

- Scope
- Description
- Essential Composition and Quality Factors
- Food Additive
- Contaminants
- Hygiene
- Labelling
- Methods of Analysis and Sampling

□ Food safety and standard bill 2005 (Ministry of Food processing and Industries). □ A Draft Bill was proposed by the Ministry, which has following provisions. □ Comments from various organizations NOGs and public are awaited for improving the Draft before putting for final approval. □ Under this following provisions are included: i. Food safety and Standard Authority of India (FSSAI) ii. General principles of food safety iii. General provisions as to articles of food iv. Special responsibility of food safety v. Analysis of articles of food and enforcement of act vi. General provisions relating to import and export vii. Offence and penalties viii. Adjudication and food appellate tribunal Schedule

i. Prevention of food adulteration act 1954 ii. Fruit products order 1955 iii. Milk and Milk products order 1992 iv. Meat food order 1973 v. The Vegetable oil product control order 1947 vi. The solvent extraction oil, de-oiled meal and edible flour and control order 1967. vii. Infant milk substitute, feeding bottle, infant foods (regulation of production supply and distribution Act 1992. viii. Any other order under essential commodities Act 1955 relating to food

Food control

Defined as a mandatory regulatory activity of enforcement by national or local authorities to provide consumer protection and ensure that all foods during production, handling, storage processing and distribution are safe, wholesome and fit for human consumption; conform to safety and quality requirements and are honestly and accurately labelled as prescribed by law

Specific concerns about food hazards

- Microbiological hazards
- Pesticides residues
- Misuse of food additives
- Chemical contaminants, including biological toxins
- Adulteration
- Genetically modified organisms
- Allergens
- Veterinary drugs residues
- Growth promoting hormones

Ideal food control should include:

- Effective enforcement of mandatory regulatory approach
- Training
- Education
- Community outreach programmes
- Promotion of voluntary compliance
- Preventive approaches as HACCP
- Industry taking greater responsibility

SUCH AN INTEGRATED APPROACH facilitates improved consumer protection; effectively stimulates agriculture and the food processing industry and promotes domestic and international trade

Continued global considerations

- Expanding world economy and Liberalization of food trade
- Growing consumer demand
- Development in food science and technology
- Improvements in transport and communication
- International trade in fresh and processed food
- Access of countries to food export markets will continue to depend on their capacity to meet the regulatory requirements of importing countries

Excellence in food quality and safety has taken a tangible form with the advent of ISO 9000 Quality Management System and HACCP standards. ISO 9000 encompasses all the activities of a company to ensure that it meets its quality objectives, while HACCP is directed towards ensuring food safety. The ISO 9000 standards were brought by the International Organization for Standardization (ISO) and the HACCP standards by the CAC.

ISO 9000 Quality Management Systems: The ISO 9000 system is looked at as a system with minimum quality requirements. It builds a baseline system for managing quality. The focus, therefore, is on designing a total quality management system, one that complies with external standards, but includes the specific requirement of industry and integrates elements of competitiveness.



Thank
you

