Capacity Development in Food Safety and Food Quality

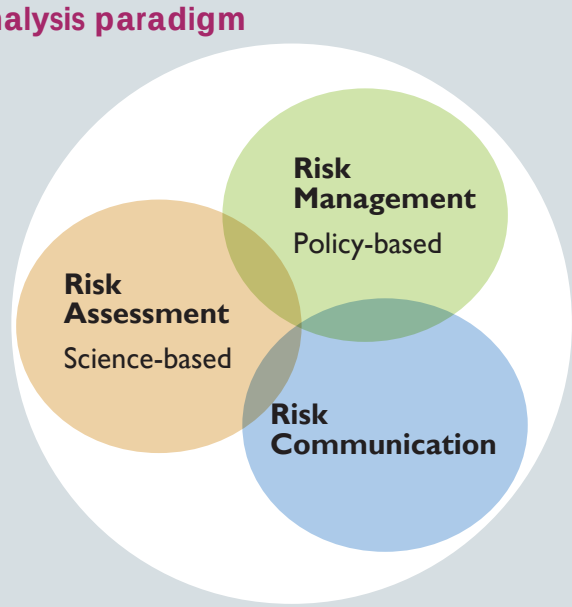
Food Safety Risk Analysis

Food Safety Risk Analysis: features and benefits

- *Adopted by Codex; thus supports international food safety harmonization and thereby trade*
- *Risk assessment and science-based food safety measures are recognised and promoted by WTO*
- *Provides a scientific evaluation of where in the food chain to take the most effective control steps; maximising consumer safeguards*
- *An adaptable approach: can be applied to address range of food safety concerns including emerging food pathogens*
- *Promotes stakeholder participation; facilitating balanced decision-making and compliance*
- *Supports informed decision making as it allows consideration of resources available and local situations*

Risks to consumer health may arise from various hazards in the food chain, including biological, physical and chemical hazards. Although traditional food control systems have been generally effective in reducing major food hazards, they have been less able to deal with the full range of complex, persistent and evolving hazards confronting different parts of the food supply chain; a supply chain that is increasingly becoming globalized. In response to these concerns, many governments and the Codex Alimentarius Commission have adopted the science and risk-based approach of **risk analysis** to enhance the efficiency and effectiveness of food control.

Risk analysis paradigm



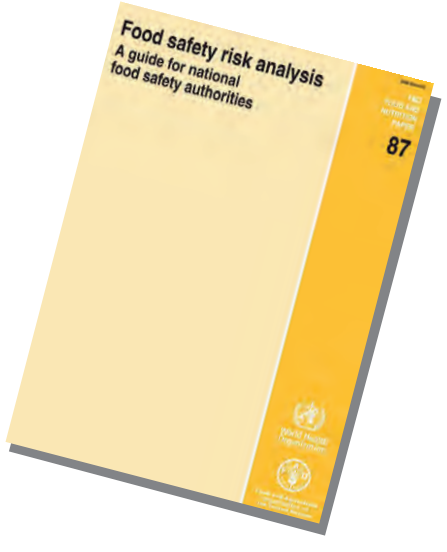
Adapting food control systems to risk analysis

Risk analysis is a structured approach to assessing food safety risks and consists of three interactive activities – risk assessment, risk management and risk communication. Risk assessment is the science-based component and provides a framework for collecting and interpreting data on hazards and risks in the food chain. While adopting risk analysis can require governments to re-orient their food control systems, it allows food safety interventions to be prioritized and resources applied according to risk, and tailored according to the nature of the product and/or food process, the hazard(s) involved, and the consumer group(s) affected. Risk analysis requires technical and investment inputs across a number of areas that may be limited in existing food control systems, governments moving to adopt risk analysis need to have a good understanding of its relevance, applicability, and limitations.

In order to assist governments implement food safety risk analysis the FAO has developed a range of tools and support programmes.

Implementing Food Safety Risk Analysis

In 2006 the FAO together with the WHO developed ***Food Safety Risk Analysis: A guide for national food safety authorities***. The Guide is in line with risk analysis principles adopted by Codex and aims to assist food safety control authorities understand and use risk analysis in food control frameworks. The Guide (which is used as the basis of FAO's training programmes on risk analysis for government officials) provides essential background information, guidance and a generic framework for application of the different components of risk analysis, and wide-ranging examples, rather than prescriptive instructions, on how to implement risk analysis.



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Food Safety Risk Analysis

FAO conducts numerous risk analysis training workshops both at the country and regional level. The main emphasis of FAO's risk analysis efforts is to enhance food safety professionals' ability to:

- Understand risk analysis and how it can be applied to national-level decision-making related to food safety management
- Understand internationally-accepted approaches applied to chemical and microbiological risk assessments as a basis for evaluation of domestic food safety risks
- Be aware of national data required to support risk assessment and the importance of risk assessor-risk manager interaction
- Promote transparency, stakeholder involvement and better coordination among government agencies involved in food safety issues at the national level

Recent FAO Risk Analysis training has been delivered to Armenia Azerbaijan, Belarus, Benin, Cuba, Georgia, Moldova, Russian Federation, Ukraine, Uruguay and Papua New Guinea, with an electronic course being delivered simultaneously to various Latin American countries. To ensure effectiveness this training often works synergistically with ongoing capacity development projects supporting countries and regions to implement essential components of food control systems: updating policy and legislation frameworks, upgrading laboratory capacity, and enhancing food disease surveillance systems.

FAO/WHO Scientific Advice Programme

Data collection and scientific information, as well the capacity to interpret this information is a challenge in many countries. It is not always necessary for each country to conduct extensive risk assessments on each hazard-food combination and the FAO/WHO *Scientific Advice Programme* provides a rich source of scientific advice, including comprehensive risk assessments on a wide range of both known and emerging safety hazards and food technologies. The Programme has been the leading global reference on food safety risks for over 50 years through standing expert bodies (Joint Expert Committee on Food Additives – JECFA; the Joint Meetings on Pesticide Residues – JMPR; and the Joint Expert Meetings on Microbiological Risk Assessment –JEMRA) or ad hoc expert meetings on specific food safety matters. This science also provides the basis for Codex texts. However, in the national context, skill in assessing the appropriateness of international scientific advice is required.

Future Tools for Food Safety Risk Analysis

In continuing its effort to assist countries implement risk analysis FAO is collaborating with WHO and the Industry Council for Development (ICD) in the development of a risk analysis toolkit. The toolkit will include a range of practical tools, in-depth training materials and information on the application of risk analysis to strengthen existing food control systems. Training materials within the toolkit will be tailored to specific audiences and field tested to ensure their effectiveness. FAO is also developing online technical tools to facilitate the implementation of risk management decisions. This includes a tool to assess the performance of sampling plans for the control of pathogens in foods and a decision support tool on the control of *Campylobacter* and *Salmonella* in poultry.

FAO is confident these risk analysis programmes, guidelines and tools will significantly contribute to enhanced understanding and implementation of risk analysis to improve consumer protection and trade outcomes both nationally and globally.

For further information, contact:
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To access FAO Food Safety and Quality guidelines and tools:
www.fao.org/ag/agn/agns