



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON CONTAMINANTS IN FOODS

Sixth Session

Maastricht, The Netherlands, 26 – 30 March 2012

MATTERS OF INTEREST ARISING FROM OTHER INTERNATIONAL ORGANIZATIONS

ACTIVITIES OF THE JOINT FAO/IAEA DIVISION OF NUCLEAR TECHNIQUES IN FOOD AND AGRICULTURE RELEVANT TO CODEX WORK¹

1. For almost 50 years, the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (the Joint Division) has uniquely promoted the mandates of both FAO, in its efforts to eliminate world hunger and reduce poverty through sustainable agricultural and rural development, improved nutrition and food security, and the International Atomic Energy Agency (IAEA), through peaceful uses of atomic energy to accelerate and expand the contributions of nuclear technologies to promote global health and prosperity.
2. The mission of the Joint Division is to strengthen capacities for the use of nuclear methods to improve technologies for sustainable food security and to disseminate these techniques through international activities in research, training and outreach in its Member States. The Joint Division is subdivided into five sections on food and environmental safety, soil and water management, plant breeding and genetics, animal production and health and insect pest control.
3. The Joint Division will continue to strengthen its joint efforts with sister divisions in FAO Headquarters to improve food safety, protect consumer health and facilitate international agricultural trade by providing assistance in four main areas, namely, coordinating and supporting research, providing technical and advisory services, providing laboratory support and training, and collecting, analyzing and disseminating information. The activities related to the work of Codex are the use of ionizing radiation, the control of food contaminants, and the management of nuclear and radiological emergencies affecting food and agriculture.

PREPAREDNESS AND RESPONSE TO NUCLEAR AND RADIOLOGICAL

EMERGENCIES AFFECTING FOOD AND AGRICULTURE

4. FAO works in partnership with the IAEA through the Joint Division in preparing for and responding to nuclear or radiological emergencies affecting food and agriculture, including the application of FAO capabilities as a critical counterpart in defining and implementing agricultural countermeasures and remediation strategies in response to such events.²
5. These activities are carried out within the context of FAO obligations as a full party to the IAEA Early Notification and Assistance conventions, and under the FAO cosponsored Joint Radiation Emergency Management Plan of the International Organizations (EPR JPLAN 2010), which provides the management tools for coordinating international organization arrangements in preparing for, and responding to, nuclear and radiological emergencies. These practical arrangements are also reflected in the Cooperative Arrangements between FAO and IAEA in Response to Nuclear or Radiological Emergencies.

Fukushima Nuclear Accident

6. Joint Division activities related to the Fukushima nuclear accident helped to ensure the dissemination of information on food monitoring and food restrictions, the consideration of agricultural countermeasures and remediation strategies to mitigate immediate and longer term effects arising from radionuclide contamination, and the interpretation of standards related to radiological contamination in food and agriculture, to FAO, IAEA, other international organizations and their Member States.

¹ Document prepared by and under responsibility of the Joint FAO/IAEA Division on Nuclear Techniques in Food and Agriculture, IAEA Headquarters, Vienna, Austria.

² For additional details, please see the [July 2011](#) and [January 2012](#) editions of the Food and Environmental Protection Newsletter.

7. Specifically, recent and on-going activities of the Joint Division in cooperation with FAO Headquarters Divisions include the following:

- As the focal point of FAO, the Joint Division has continually manned the FAO Desk in the IAEA Incident and Emergency Centre (IEC), which includes the preparation and presentation of briefing texts and slides on food contamination and monitoring data and restrictions on food distribution and/or consumption to Member State meetings, press conferences and postings on the IAEA website.
- Represented FAO and IAEA in video/teleconferences through the Interagency Committee on Radiological and Nuclear Emergencies (IACRNE) to ensure a unified approach in addressing issues related to food and agriculture.
- Established a multi-functional database for the management of data submitted by the Japanese authorities. This enabled the creation of predefined reports with "real time" data.
- Contributed to the preparation and dissemination of "questions and answers" related to food safety and the application of international standards, including the Codex Guideline Levels for Radionuclides in Foods (see also paragraphs 11-12 below).
- Participated in and followed-up to the Joint FAO/IAEA Food Safety Assessment Mission to Japan (26-31 March 2011) and the IAEA Mission on the Remediation of Large Contaminated Areas Off-Site the Fukushima Daiichi Nuclear Power Plant (7-15 October 2011).
- Promoted knowledge and information sharing on radioactive contamination affecting food and agriculture, including the mechanisms and persistence of such contamination, radionuclide transfer rates and international standards.
- Participated in and follows-up on the Joint WHO/FAO/IAEA International Experts Working Panel and on the First All-Expert Meeting for the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) Assessment of the Levels and Effects of Radiation Exposure due to the Nuclear Accident after the 2011 Great East-Japan Earthquake and Tsunami.

8. In addition to the above activities, a FAO Meeting on Internal Coordination - Preparedness and Response to Nuclear and Radiological Emergencies, was held at IAEA Headquarters in Vienna, Austria (30-31 May 2011) to discuss intra-agency coordination, preparedness and response to nuclear and radiological emergencies and to provide conclusions and recommendations in the context of lessons learned from the Fukushima nuclear emergency.

9. A follow-up FAO Technical Meeting on Preparedness and Response to Nuclear and Radiological Emergencies Affecting Food and Agriculture, including the Application of Agricultural Countermeasures and Remediation Strategies, was held from 14-18 November 2011 at FAO Headquarters in Rome, Italy.

10. The objective of the FAO Technical Meeting was to enhance FAO capacities in meeting its obligations under international conventions and agreements in assisting Member States on preparedness and response to nuclear and radiological emergencies affecting food, agriculture, fisheries and forestry based on existing information and potential future activities. The meeting provided a detailed road map on the development of appropriate contingency planning and capacity building in response to nuclear and radiological emergencies affecting food, agriculture, fisheries and forestry, with emphasis on the development of national and international laboratory networks and infrastructures, including coordination within existing networks, and designing and conducting emergency exercises with appropriate stakeholders, including the simulation of complex events.

Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995)

Codex Guideline Levels for Radionuclides in Foods

11. The FAO Technical Meeting also identified a need for the development of recommendations on how to estimate national reference levels in food and feed, including the establishment of action levels, for example on the basis of the General Safety Guide on Criteria for Use in Preparedness and Response to a Nuclear or Radiological Emergency ([GSG-2](#)) and the International Radiation Safety Standards for Radiation Protection and Safety of Radiation Sources ([GSR Part 3 - Interim](#)). In addition, the 16th Meeting of the Interagency Committee on Radiation Safety (IACRS)³ also noted that the excessively low values for iodine in the Joint FAO/WHO Codex Alimentarius Guideline Levels for Radionuclides in Foods could justify the revision of the Standard.

³ Report available upon request.

12. The Joint Division looks forward to future collaboration with the Joint FAO/WHO Codex Alimentarius Commission in further strengthening FAO preparedness and response to nuclear and radiological emergencies affecting food and agriculture, including collaboration in the potential revision of the Codex Guideline Levels for Radionuclides in Foods on the basis of established Codex procedures.

IAEA Technical Cooperation Projects – Radioactivity in Foods

13. An IAEA Regional Technical Cooperation Project on *Supporting a Database of Values of Radioactivity in Typical Latin American Food* recently commenced in the Latin American region under the technical direction of the Joint Division. Project participants include Argentina, Brazil, Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Peru, Uruguay and Venezuela. The general objective of the project is to develop a radiological characterization of typical food cultivated in Latin America and to create a geo-referenced database. Specific objectives of the project are to:

- Determine the most typical foods produced in each participating country.
- Establish an inventory of radio-elements to determine in identified foods.
- Harmonize analytical procedures for the determination of relevant radionuclides.
- Determine levels of activity concentration of radionuclides of relevance in different foods.
- Incorporate data from each country into a geographic information system (GIS).

14. The project will result in the establishment of a database and geographic information system with a harmonized radiological characterization of typical Latin American foods. The first project planning meeting was held in Rio de Janeiro, Brazil, from 27 February - 2 March 2012. The planning meeting decided on the distribution of assignments, agreed on the database design and finalized the project work plan.

MYCOTOXINS IN AGRICULTURAL COMMODITIES

15. The Joint Division participated in a FAO Workshop in Rome, Italy on Developing a Tool to Guide Sampling Plans for Mycotoxin Detection (24-25 October 2011). The Workshop discussed and tentatively agreed on parameters to determine the feasibility of developing a tool to help design sampling plans for mycotoxin detection; to define the main features that such a tool should have in order to be applicable for different food commodities under a range of different sampling scenarios; and to determine next steps for the development of the tool.

16. The Joint Division is also contributing to the Joint FAO/WHO project covering four pilot countries in Africa to collect samples and analyse mycotoxins and mycotoxin producing fungi in sorghum, and specifically in making specialized contributions to the development of a robust sampling plan and protocol; in advising on laboratory techniques; and in quality assuring the final data.