

**Fourth Meeting of the Emergency Preparedness and Response Standards Committee (EPReSC)**  
**Vienna, Austria**  
**6 – 8 June 2017**

**REPORTS FROM INTERNATIONAL ORGANIZATIONS**  
**Food and Agriculture Organization of the United Nations**

1. The Food and Agriculture Organization (FAO) of the United Nations is represented at EPReSC by the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture (Joint FAO/IAEA Division). This Division is a strategic partnership that continues to mobilize the talents and resources of both organizations to benefit their Member States in the peaceful application of nuclear science and technology in a safe and effective manner.
2. One of the FAO strategic objectives is to “increase the resilience of livelihoods to threats and crises”; this includes threats to food production and to people’s access to safe and sufficient amounts of food to meet their requirements. In terms of preparing and responding to emergencies, FAO’s mission is to help countries govern, prevent and mitigate risks and crises and to provide support. In the area of nuclear and radiological emergency preparedness and response, the Joint FAO/IAEA Division carries out these activities within the context of FAO obligations and as a full party to the IAEA Early Notification and Assistance conventions, and as cosponsor of the Joint Radiation Emergency Management Plan of the International Organizations (EPR JPLAN). For example, the FAO, through the Joint FAO/IAEA Division, works in partnership with the IAEA and other relevant international organizations within the framework of the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) and in accordance with the EPR JPLAN.

**Background**

3. The joint FAO/IAEA programme includes activities in five main areas: food and environmental protection; plant health and genetics; animal production and health; insect pest control; soil and water management and crop nutrition. These activities are underpinned by the international radiation safety standards of the IAEA as well as the international food safety and quality standards of the Joint FAO and WHO Codex Alimentarius Commission (Codex); the international phytosanitary standards of the FAO International Plant Protection Convention (IPPC), and; the animal welfare, health and zoonosis standards of the World Organization for Animal Health (OIE). Both FAO and IAEA through the activities of their Joint FAO/IAEA Division strive to mobilize commitment and concerted action towards meeting the Sustainable Development Goals for agriculture and food security through the appropriate development and integration of nuclear and related technologies.

**Standards for Radionuclides in Food**

4. In its report to this committee in 2016, the Joint FAO/IAEA Division mentioned the publication of an important new IAEA Technical Document entitled *Criteria for Radionuclide Activity Concentrations for Food and Drinking Water* (IAEA-TECDOC-1788). In the light of the considerable interest expressed at the Codex Committee on Contaminants in Foods and Feeds (CCCFF) a side event was held at the eleventh CCCF meeting in Rio de Janeiro, Brazil in April 2017. The side event was entitled “Radionuclides in Food: Standards, New National Guidance and Recent Developments”. It was arranged by the Joint FAO/IAEA Division and the presenters were experts from international organizations; the IAEA; the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD); and the Joint FAO/IAEA

Division. This event was attended by over 60 delegates and subsequent feedback has been very positive. In July, the Joint FAO/IAEA Division will participate at a meeting of the Codex Alimentarius Commission and will offer to arrange a similar side event at a future Commission meeting.

5. TECDOC-1788 is freely available online<sup>1</sup>. Prepared by the IAEA, FAO and the World Health Organization (WHO), TECDOC-1788 is important both as a reference source and as technical guidance. It is an authoritative reference on the various international standards that relate to radionuclides in food and drinking water, including on the guideline levels contained in the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995). For the sake of completeness, the TECDOC also summarizes the current international standards for radionuclides in food, milk and drinking water in 'emergency exposure situations'<sup>2</sup> that have been issued by the IAEA in joint sponsorship with a number of other international organizations, including the FAO.
6. This TECDOC highlights and discusses the circumstances in which such standards are intended to be used. However, its main focus is 'existing exposure situations', and in this regard the TECDOC provides technical guidance to help authorities develop activity concentration levels (expressed in becquerels per kilogram) for use as practical reference levels. It advocates the same approach as CODEX STAN 193-1995 and makes reference to the International Basic Safety Standards (BSS), which require regulatory bodies or other relevant authorities to establish specific reference levels for exposure due to radionuclides in food. Such reference levels should be based on an annual effective dose to the representative person that generally does not exceed a value of about 1 mSv. The TECDOC will therefore help countries develop national radionuclide reference levels that are required by the BSS<sup>3</sup> and are also consistent with the Codex guideline levels for radionuclides in food.

#### **Workshop in Latin America and the Caribbean Region**

7. In March 2017, the Joint FAO/IAEA Division participated at a regional workshop on Standards for Radioactivity in Food, Drinking Water and Commodities. The main purpose of the meeting was to seek feedback from countries in the Latin America and the Caribbean region on their experience in using international standards, including the identification of any aspects requiring further clarification or development. Discussions focused on the application of current international standards for managing radioactivity in food, drinking water and non-food commodities. The 46 participants from 18 countries of the Latin America and the Caribbean region supported further and improved harmonization of the standards for radioactivity in food, drinking water and non-food commodities and requested the responsible international organizations to work together to this end. The workshop was hosted in Buenos Aires, Argentina by Autoridad Regulatoria Nuclear of Argentina, and this organization held the workshop in collaboration with the IAEA, Joint FAO/IAEA Division, Pan American Health Organization and WHO. It was implemented within the framework of IAEA technical cooperation project RLA9078.

#### **Technical Workshop on Remediation of Radioactive Contamination in Agriculture**

8. In its report to the third EPreSC, the Joint FAO/IAEA Division provided an overview of the Technical Workshop on Remediation of Radioactive Contamination in Agriculture that was held at the IAEA headquarters, Vienna, Austria in October 2016. The event was hosted by the Joint

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<sup>1</sup> [http://www-pub.iaea.org/MTCD/publications/PDF/TE-1788\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/TE-1788_web.pdf)

<sup>2</sup> IAEA Safety Standards Series No. GSR Part 7 (2015) and No. GSG-2 (2011).

<sup>3</sup> IAEA Safety Standards Series No. GSR Part 3

FAO/IAEA Division in collaboration with Japan's National Agriculture and Food Research Organization (NARO). The presentations given at the workshop are now available online<sup>4</sup>. The workshop served to improve understanding of radioactive contamination in agriculture and a publication is being produced to record the proceedings of the meeting. The year 2016 marked the fifth anniversary of the accident at the Fukushima Daiichi nuclear power plant (NPP) and the 30th anniversary of the accident at the Chernobyl NPP, both classified as major accidents at Level 7, the highest on the IAEA's International Nuclear and Radiological Event Scale. The major focus of the workshop was therefore on residual levels of caesium radionuclides in countries affected by these accidents.

### **Radioactivity in Agriculture and a New Application**

9. A coordinated research project of the Joint FAO/IAEA Division has developed DSS4NAFA (Decision Support System for Nuclear Emergencies Affecting Food and Agriculture), an innovative system for monitoring radionuclides in food and agriculture production<sup>5</sup>. It supports data collection and management as well as visualization and mapping. The system can be accessed as an application on smartphones and is designed to link decision makers with field officers and analytical laboratories. A feature of DSS4NAFA is that the sampling, database and mapping functions can also be used in routine monitoring. The project is a collaboration that involves the European Commission and institutions in Belgium, China, the Former Yugoslav Republic of Macedonia, France, India, Japan, Morocco, Russian Federation and Ukraine. The DSS4NAFA software is undergoing an independent review to ensure that it meets strict internet and electronic security requirements. It will subsequently be made available online as a package that can be adopted and utilized by member countries.

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<sup>4</sup> <http://www-naweb.iaea.org/nafa/news/2016-FAO-IAEA-NARO.html>.

<sup>5</sup> <http://www-naweb.iaea.org/nafa/swmn/crp/swmncn-nuclear-emergency-food.html>