



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON CONTAMINANTS IN FOODS**

**Eleventh Session
Rio de Janeiro, Brazil, 3-7 April 2017**

MATTERS OF INTEREST ARISING FROM OTHER INTERNATIONAL ORGANIZATIONS

This document contains information on IAEA and OECD work relevant to CCCF activities

**PART I:
ACTIVITIES OF THE JOINT FAO/IAEA DIVISION OF NUCLEAR TECHNIQUES
IN FOOD AND AGRICULTURE**

(Prepared by the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture¹)

1. The Joint Food and Agriculture Organization of the United Nations (FAO) and International Atomic Energy Agency (IAEA) Division of Nuclear Techniques in Food and Agriculture (the "Joint FAO/IAEA Division") supports and implements activities related to improvement of food safety and control systems. Its activities are therefore closely related to the standards of Codex Alimentarius and its committees, including the Codex Committee on Contaminants in Foods (CCCF). Through its Food and Environmental Protection Section and Laboratory, it assists Member Countries of both FAO and IAEA in the peaceful application of nuclear techniques and related technologies. Activities of interest to the CCCF include the analysis and control of various chemical residues and food contaminants; food traceability and authenticity; food related radiation safety standards; preparedness and response to nuclear and radiological emergencies affecting food and agriculture, and; food irradiation. These are provided within the broad context of coordinating and supporting research worldwide; providing technical and advisory services for projects and training activities; providing applied research, laboratory support and training through the FAO/IAEA Agriculture and Biotechnology Laboratory situated at Seibersdorf, Austria; and collecting, analysing and disseminating information for the effective transfer of skills and technology. The Joint FAO/IAEA Division also provides technical support for national, regional and inter-regional development work through Technical Cooperation projects.

Technical Guidance on Radionuclides in Food and Drinking Water

2. In its report to this Committee in 2016, the Joint FAO/IAEA Division mentioned the importance of a new technical document (IAEA-TECDOC-1788) on Criteria for Radionuclide Activity Concentrations for Food and Drinking Water. In the light of the considerable interest expressed by CCCF10 delegates, a side event will be held on Monday lunchtime at CCCF11. The subject is Radionuclides In Food: Standards, New National Guidance and Recent Developments. The presenters are 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.
3. TECDOC-1788 was published by the IAEA after CCCF-10 and copies are available at this meeting, it is also freely available online². Prepared by the IAEA, FAO and the World Health Organization (WHO), TECDOC-1788 is important as a reference source and as technical guidance. It is an authoritative reference to the different international standards that relate to radionuclides in food and drinking water, and this includes the guideline levels in the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995). For completeness, the TECDOC also summarizes current international standards for radionuclides in food, milk and drinking water in "emergency exposure situations" issued by the IAEA in joint sponsorship with international organizations including FAO and WHO³.

¹ <https://www.iaea.org/topics/food-and-agriculture>

² http://www-pub.iaea.org/MTCD/publications/PDF/TE-1788_web.pdf

³ IAEA Safety Standards Series No. GSR Part 7 (2015) and No. GSG-2 (2011)

4. 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 (becquerel per kilogram) for use as practical reference levels. It advocates the same approach as CODEX STAN 193-1995 and relates to International Basic Safety Standards (IBSS)⁴ that 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 IBSS and are consistent with the Codex guideline levels for radionuclides in food.

Technical Workshop on the Remediation of Radioactive Contamination in Agriculture, IAEA Headquarters, Vienna, Austria, 17–18 October 2016

5. The National Agriculture and Food Research Organization of Japan and the Joint FAO/IAEA Division hosted this international technical workshop on Remediation of Radioactive Contamination in Agriculture and the presentations are available on-line⁵. It was attended by over 100 participants and served to improve understanding of radioactive contamination in agriculture. Authorities and organizations with responsibilities for food and agriculture were targeted, as were nuclear safety institutions and organizations. It provided an opportunity to forge collaborative working to facilitate future policy development and research planning. There have been few major nuclear accidents that have affected agricultural production in the long term. However, 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. Emergency preparedness related to food and agricultural production in all countries will be greatly improved by a broad understanding in this area. The workshop also helped to inform technical specialists and support collaborations and efforts to re-establish agricultural trade in food products from areas currently affected by residual levels of caesium radionuclides.

Technical Cooperation

6. The Joint FAO/IAEA Division is providing technical support to 59 IAEA Technical Cooperation Projects in the area of food safety and control⁶: 47 are national projects, 11 are regional and one is an inter-regional project to establish a world-wide network of analytical and control laboratories. Looking forward to the 2018-19 biennium, there are some 30 new project designs that are being developed and reviewed and we hope to provide more information on these at the next CCCF in 2018.

Coordinated Research Initiatives

7. In the period covered by this report the Joint FAO/IAEA Division has been implementing seven coordinated research projects (CRPs) in the area of food safety and control. Of particular interest to the CCCF is a new CRP on Integrated Radiometric and Complementary Techniques for Mixed Contaminants and Residues in Foods (Reference D52041). This was designed and planned in 2016 and is being initiated this year, with its first research coordination meeting planned for 19–23 June 2017, at the IAEA Headquarters in Vienna, Austria. An international network of participant laboratories and institutions is being recruited. The research network will develop systematic programmes for measuring mixtures of contaminants and residues and develop necessary multi-class analytical methods. The overall aim is to leverage the advantages of nuclear, isotopic and complementary techniques to strengthen the capacity of Member State analytical laboratories and national contaminant and residue monitoring programs thus contributing to food safety and enabling international trade. New multi-class analytical methods will be developed, validated and transferred to control laboratories. It is envisaged that the research could also yield data on contaminants that would be of interest to the CCCF.

⁴ IAEA Safety Standards Series No. GSR Part 3

⁵ <http://www.naweb.iaea.org/nafa/news/2016-FAO-IAEA-NARO.html>

⁶ A full list is available in our latest Newsletter, pages 18-23:

<http://www-pub.iaea.org/MTCD/Publications/PDF/Newsletters/FEP-20-1.pdf>

Activities and Training

8. As regards providing input to Codex and receiving feedback from Codex member countries for future research and development work, participation at Codex meetings over the past year has included the Codex Alimentarius Commission meeting, the previous CCCF, the meeting of the Codex Committee on Pesticide Residues, a meeting of the Coordinating Committee for Asia, and the Codex Committee on Residues of Veterinary Drugs in Foods. The Joint FAO/IAEA Division has been involved in providing data to Codex and helping develop many Codex standards, a recent example being participation in the electronic working group on maximum levels for cadmium in chocolate and cocoa products.
9. In 2016 many technical meetings and workshops were requested by our member countries and in addition, the Joint FAO/IAEA Division was also invited to participate at a full range of technical conferences and meetings. These included meetings and events to mark 30 years after Chernobyl (April, Belarus), The Third Food Integrity Conference (April, Czech Republic), EuroResidue VIII (May, the Netherlands), Asian Development Bank Food Security Forum (June, Philippines), The Korean Society for Environmental Agriculture 'Integrated Management of Agricultural Environment for Food' (July, Republic of Korea) and the INFOSAN (International Food Safety Authority Network) New Science for Food Safety: Supporting Food Chain Transparency for Improved Health (November, Singapore).
10. Over 780 food specialists, from all regions of the world, have been trained through our activities in 2016. Highlights include the following bespoke regional courses and workshops: Awareness on analytical methods and challenges in food authenticity, safety and traceability (hosted in Austria with the participation of specialists from Iraq, Libya, Syria, Kuwait & the Marshall Islands); Nuclear / Isotopic and Complementary Techniques in Food Safety (several countries of Africa and hosted in Malawi); Training on Sampling and Data Processing for Food Safety Laboratories (hosted in Botswana); Analytical Method Development and Validation (hosted in Benin); Food Microbiology Training (Namibia); Quality Management for Food Safety Laboratories (international participation and hosted in Indonesia); Food Sampling Training (hosted in Colombia), and; Training on Sampling for Pesticide and Mycotoxin Analysis (hosted in Bahrain).

Networks and Technical Publications

11. The Joint FAO/IAEA Division continues to promote the formation of regional laboratory/food safety networks, including the Latin American and Caribbean Analytical Network (RALACA)⁷; the African Food Safety Network (AFoSaN)⁸, and; a new food safety laboratory network of 18 countries in the Asia and the Pacific region is also developing. A new interregional project is also providing a platform for countries to collaborate and jointly address food safety and control issues and is helping to open up new opportunities to share experience and resources. Recent publications include a special issue of the journal *Food Control* reporting the proceedings of the FAO/IAEA Symposium on Food Safety and Quality⁹. The Food and Environmental Protection Section's Newsletter¹⁰ provides a full list of our technical and scientific publications but the overall statistics for 2016 are impressive and include 15 articles in peer reviewed journals, 14 conference papers, two special editions of scientific journals, two IAEA-TECDOCs, five manuals and one chapter in a specialist book series.

⁷ See: <http://red-ralaca.net>

⁸ See: <http://www.africanfoodsafetynetwork.org/>

⁹ <http://www.sciencedirect.com/science/journal/09567135/72/part/PB>

¹⁰ <http://www-pub.iaea.org/MTCD/Publications/PDF/Newsletters/FEP-20-1.pdf>