

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

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Agenda item 3

CX/CF 24/17/3

February 2024

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

Seventeenth Session
15-19 April 2024
Panama City, Panama

MATTERS OF INTEREST ARISING FROM FAO AND WHO INCLUDING JECFA

(Prepared by the Joint FAO/WHO JECFA Secretariats)

1. This document provides information on FAO and WHO activities in the area of provision of scientific advice to Codex, other United Nations (UN) agencies and FAO and WHO Member countries which are of interest to the Codex Committee on Contaminants in Foods (CCCF) and provides an update since the last session of the Committee in 2023.

Joint FAO/WHO Expert Committee on Food Additives

2. Since the last session of CCCF, two meetings of the Joint FAO/WHO Expert Committee on Food Additives (i.e. JECFA96 and JECFA97) have been held in 2023. These meetings addressed food additives.
3. All available full reports and the detailed monographs will be accessible at the relevant FAO¹ and WHO² sites.
4. Future meetings:
 - JECFA98 is scheduled for 20 -29 February 2024. The meeting is dedicated to the evaluation of some residues of veterinary drugs in food.
 - JECFA99 is scheduled for 4-13 June 2024. The meeting is dedicated to the evaluation of a number of food additives.

The call for data for JECFA98 and JECFA99 is available on the respective FAO³ and WHO⁴ websites:

The JECFA meeting dedicated to contaminants (i.e. JECFA101) is scheduled for October 2025 and will focus on the evaluation of Dioxins and Arsenic. The call for data is expected to be published in February 2024.

Requests for scientific advice

5. Both organizations continue to prioritise jointly the requests for scientific advice taking into consideration the criteria proposed by Codex as well as the requests for advice from Member Countries and the availability of resources.
6. In scheduling the JECFA meetings and developing the agenda, the Joint FAO/WHO Secretariats has to take into account the priorities requested by the Committees on Food Additives (CCFA), Contaminants in Foods (CCCF) and Residues of Veterinary Drugs in Foods (CCRVDF), and occasionally other committees (e.g. Committee on Fats and Oils (CCFO)). Due to the increasing requests for scientific advice to JECFA, not all requests can be addressed in the subsequent meeting.
7. To facilitate provision of extra-budgetary resources for scientific advice activities, please contact Dr Markus Lipp, FAO Food Safety and Quality Unit (jecfa@fao.org) and Dr Moez Sanaa Department of Nutrient and Food Safety, WHO (jecfa@who.int).

1 <http://www.fao.org/food-safety/resources/publications/en/>

2 [https://www.who.int/groups/joint-fao-who-expert-committee-on-food-additives-\(jecfa\)/publications](https://www.who.int/groups/joint-fao-who-expert-committee-on-food-additives-(jecfa)/publications)

3 <https://www.fao.org/food-safety/scientific-advice/calls-for-data-and-experts-expert-rosters/en/>

4 [https://www.who.int/groups/joint-fao-who-expert-committee-on-food-additives-\(jecfa\)](https://www.who.int/groups/joint-fao-who-expert-committee-on-food-additives-(jecfa))

Global Food Consumption Databases and ongoing activities to support countries to generate and to use data for risk analysis purposes

8. Reliable information on food consumption, collected at individual level, is needed to estimate dietary exposure to chemicals and biological agents in the general population and in vulnerable population groups. To address the issue of insufficient access to such data, FAO and WHO have continued the work on the two following tools (initiated in 2014), to develop global food consumption databases.
9. The FAO/WHO Global Individual Food Consumption Data Tool (FAO/WHO GIFT)⁵ is currently sharing 53 datasets (including 15 nationwide datasets). The database provides not only access to all microdata but also provides useful food-based statistics in the field of nutrition, dietary diversity, environmental impact, and food safety. FAO/WHO GIFT utilizes FoodEx2 as categorization tool, which has been upgraded for use at global level as the result of a collaboration between FAO, WHO and the European Food Safety Authority (EFSA). FAO/WHO GIFT also provides an up-to-date global inventory of individual quantitative food consumption surveys conducted, planned and ongoing, with detailed information on 320 identified studies. The platform is available online⁶.
10. A published report, co-published by FAO and Intake Centre of dietary assessment, details the relevance, and need for dietary data in Low- and Medium-Income Countries and is available online⁷ "Global Trends in the Availability of Dietary Data in Low and Middle-Income Countries" as well as additional resources⁸.
11. CIFOcOss (FAO/WHO Chronic Individual Food Consumption Data summary statistics) contains in 2023 the summary statistics of 68 datasets containing at least two days of consumptions and is regularly updated. These data on food consumption (CIFOcOss) and food contamination (GEMS/Food contaminants) are available on the same platform and offer the possibility to use a harmonized food classification/description system (FoodEx2).
12. The GEMS/Food database continues to actively support the work of CCCF by supporting several Codex electronic working groups (EWGs) in the collection and analysis of global food contamination data to derive recommendations for maximum levels (MLs).
13. The 6th International Conference on Total Diet Studies was organized in October 2022 by WHO and the German Federal Institute for Risk Assessment (BfR) following a hybrid modality. The conference promoted experience and expertise sharing about dietary exposure assessment methodologies and was preceded by a hands-on online tutorial.

Water and food safety nexus (focus on chemical safety)

14. The use of good quality water at different stages of the agrifood system – from irrigation, animal farming, aquaculture, cleaning, food processing up to drinking water – is crucial for food safety. This in turn effects public health and has implications for trade in food commodities. Currently, the growing evidence of various chemical substances and their mixtures in water is a major cause for concern, especially with no harmonized standards for chemical parameters. Intensified use of some compounds, as may be the case for agrochemicals, and synthetic fluorine compounds, can pose threats to human health through contamination of food commodities.
15. There are also concerns about other sources of water pollution such pharmaceuticals, personal care products and hazards linked to proliferation of mining activities amid demands from the global mobility industry. Food safety considerations for such cases depend not only on the concentration and toxicity of pollutants in water but also the fate of such compounds in plant and animal tissues. While, at the Codex level guidelines exist for microbiological safety of water (i.e. Guidelines for the safe use and re-use of water in food production (CXG 100-2023)), there are no such guidelines for chemical water safety.
16. FAO and WHO are starting a project that aims to fill in knowledge gaps in terms of chemical water safety and emerging contaminants, which can serve as the basis for future work by relevant Codex committees. The project will entail:

1. Compiling a review on the available information and knowledge gaps related to contaminants, both emerging and known, in water sources, including pharmaceuticals, cosmetics, agrochemicals, heavy metals and synthetic fluorine compounds, among others. The review will also consider differences in safety provisions, practices and technologies applied to ensure good water quality worldwide. Attention to chemical water safety is particularly pertinent considering the current emphasis on circular economy and the varied applications of recycled and re-used water, for instance in controlled environment agriculture practices. This will happen in 2024.

⁵ <https://www.fao.org/gift-individual-food-consumption/en/>

⁶ <https://www.fao.org/gift-individual-food-consumption/en/>

⁷ <https://www.fao.org/3/cc1351en/cc1351en.pdf>

⁸ <https://www.fao.org/gift-individual-food-consumption/resources/en>

2. Following the review, an expert meeting will be held to discuss the findings and provide recommendations. This will happen in 2025.

Other issues of potential interest to the Committee

Update from FAO

FAO's publication on Food safety implications from the use of environmental inhibitors in agrifood

17. At the end of last FAO has released a report on Food safety implications from the use of environmental inhibitors in agrifood systems. The report has been developed within the activities of the FAO Food Safety Foresight Programme. As a forward-looking approach, foresight seeks to facilitate preparedness for food safety challenges that may emerge in globalized and rapidly evolving agrifood systems. The challenge of feeding a growing world population while responding to the climate crisis requires developing practices and technologies that enhance the sustainability of agrifood systems and reduce harmful effects on the environment. Among those approaches, environmental inhibitors are used to improve the production efficiency of crops and livestock while reducing greenhouse gas emissions, such as methane, or limiting the loss of nitrogen from cultivated fields and pastures. An inadvertent presence of environmental inhibitors in food commodities can raise health concerns as well as trade disruption if standards are not established.
18. Challenges related to food safety risk assessment and management of these substances include the lack of internationally harmonized maximum residue limits (MRLs), agreed definition for environmental inhibitors and insufficient safety information for some compounds. This publication provides an overview of various synthetic and biological environmental inhibitors along with an analysis of possible food safety implications from their use. Regulatory frameworks relevant for environmental inhibitors in selected countries are presented as examples of current approaches being taken at national or regional level. Finally, food safety-related knowledge gaps are discussed together with some perspectives on how to move forward.
19. A webinar on this subject is scheduled for 9 May at 14.30 -15.30 CET. Details will be communicated through the Codex electronic distribution list (Codex-L) in due course. The publication is available online⁹. More information on FAO's work on foresight in food safety is also available online¹⁰.

Food safety and food aid

20. As previously reported, FAO continues to collaborate with the World Food Programme (WFP), United Nations Children's Fund (UNICEF), and Doctors without Borders to develop a roadmap to manage the specific risks food aid agencies are facing in ensuring safe and nutritious foods for humanitarian aid, taking into account food security, sustainability, and nutrition.
21. FAO has also provided risk assessment advice to these agencies on 3-monochloropropane 1,2-diol, glycidol, and their fatty acid esters in lipid-based nutrient supplements and ready to use therapeutic food. The report is currently being finalized and should be published soon.

FAO's publication on Early warning systems in Food Safety

22. Early warning systems have a critical role in the reduction of risks from various hazards. The capability and capacity to identify early signals and emerging food safety risks, and to provide on-time early warning that would allow for the mitigation of related upcoming risks is vital for national and international authorities and organizations dealing with food safety. With the rapid development of modern systems fed by numerous, real-time, and diverse data, as well as the advancements achieved in artificial intelligence and machine learning techniques, increasingly tested, and validated digital methods and models have become available for food safety early warning and analysis, allowing to support the shift from reactive towards proactive risk management.
23. Aiming to enhance the awareness of the available evidence-based innovative digital tools and provide information to support their wider use across countries, a scientific paper "[*Making food systems more resilient to food safety risks by including artificial intelligence, big data, and internet of things into food safety early warning and emerging risk identification tools*](#)" and a technical background "[*Early warning tools and systems for emerging issues in food safety*](#)" have been published. Both publications resulted from a collaborative work of FAO with the Wageningen Food Safety Research.

⁹ [Food safety implications from the use of environmental inhibitors in agrifood systems \(fao.org\)](https://www.fao.org/publications/defaultcard/collection/en/collection/1369227)

¹⁰ [Foresight | Food safety and quality | Food and Agriculture Organization of the United Nations \(fao.org\)](https://www.fao.org/foresight/en/foresight-2024-2025/foresight-2024-2025-1/foresight-2024-2025-1-1)

FAO/WHO Risk Benefits of Fish consumption

24. New evidence has become available regarding the risks and benefits of fish consumption since the last FAO/WHO assessment in 2010. For this reason, FAO and WHO convened an expert consultation to review the new evidence and update the conclusions and recommendations of the 2010 report¹¹ as needed. The expert consultation was held in October 2023. The consultation drew a number of conclusions on the health benefits and risks associated with fish consumption and recommend a series of steps that Members should take to evaluate and manage them better, more effectively communicating these risks and benefits to their citizens. The background document for the Expert Consultation and the Expert Consultation Report will be published in 2024. The Summary Report is available in the FAO¹² and WHO¹³ websites.

Bivalve mollusc monitoring

25. International trade has been one of the main driving factors for the rapid growth in the production of bivalve molluscs during the last six decades. However, only a very limited number of countries have effective monitoring programmes for bivalve molluscs. In this regard, the need for developing international guidance for implementation of bivalve mollusc sanitation programmes was addressed by FAO and WHO through the development of the Joint FAO-WHO Technical guidance for the development of the growing area aspects of Bivalve Mollusc Sanitation Programmes, recently updated by FAO and the FAO Reference Centre for Bivalve Sanitation, the United Kingdom Centre for Environment Fisheries and Aquaculture Science (Cefas), updated the content and the second edition is available online in English, Spanish¹⁴ and French¹⁵.
26. The guidance also serves as the basis for developing a four-module e-learning course on bivalve sanitation, jointly developed by FAO and Cefas targeting policymakers, development practitioners and programme managers, sectoral specialists and researchers, bivalve farmers, trainers, and extension agents. The first three modules are available online: “Growing area risk profile”¹⁶, “Growing area assessment and review”¹⁷ and “Growing Area Monitoring” Versions in French (Contrôle sanitaire des mollusques bivalves: profil de risques des zones de production conchylicole¹⁸, Contrôle sanitaire des mollusques bivalves: évaluation et examen des zones de production conchylicole¹⁹) and Spanish (Saneamiento de moluscos bivalvos: perfil de riesgo de la zona de cría²⁰, Saneamiento de moluscos bivalvos: evaluación y revisión de la zona de cría²¹) are being developed for the first two modules.
27. Over the last four years, FAO in collaboration with its Reference Centre for Bivalve Mollusc Sanitation, Cefas²², has delivered a number of capacity building activities for the provision of guidance on relevant laboratory protocols, accreditation, and use of methods for bivalve mollusc testing. Annual activities can be found in yearly reports²³.

Early warning systems for harmful algal blooms (HAB)

28. HABs have a significant impact on food safety and security due to contamination or mass mortality of aquatic organisms. Having forecast or early warning systems could help mitigate the effects of HABs and reduce the occurrence of HAB events. Surveillance systems have been developed to monitor HABs in many countries. However, the lead time or the type of data collected may not be sufficient to effectively take action for food safety management measures or other purposes, such as transferring aquaculture products to other areas.

¹¹ [Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption. Rome, 25-29 January 2010](#)

¹² [Joint FAO/WHO Expert Consultation on Risks and Benefits of Fish Consumption - Summary and Conclusions. Rome, Italy, 9-13 October 2023](#)

¹³ [jecfa-summary-risks-and-benefits-of-fish-consumption.pdf \(who.int\)](#)

¹⁴ <https://fao.org/documents/card/en/c/cb5072en/> and Spanish version <https://fao.org/publications/card/es/c/CB5072ES/>

¹⁵ <https://doi.org/10.4060/cb5072fr>

¹⁶ <https://elearning.fao.org/course/view.php?id=481>

¹⁷ <https://elearning.fao.org/course/view.php?id=629>

¹⁸ [Cours : Contrôle sanitaire des mollusques bivalves: profil de risques des zones de production conchylicole \(fao.org\)](#)

¹⁹ [Cours : Contrôle sanitaire des mollusques bivalves: évaluation et examen des zones de production conchylicole \(fao.org\)](#)

²⁰ <https://elearning.fao.org/course/view.php?id=911>

²¹ <https://elearning.fao.org/course/view.php?id=912>

²² FAO Reference centre work programmes and annual reports: <https://www.cefas.co.uk/icoe/seafood-safety/designations/fao-reference-centre-for-bivalve-mollusc-sanitation/fao-reference-centre-work-programmes-and-annual-reports/>

²³ [FAO Reference Centre work programmes and annual reports - Cefas \(Centre for Environment, Fisheries and Aquaculture Science\)](#)

29. In this regard, FAO led the development of a Joint FAO-IAEA-IOC Technical Guidance for the Implementation of Early Warning Systems for HABs²⁴. This document will guide competent authorities and relevant institutions involved in consumer protection or environmental monitoring to implement early warning systems for HABs in specific areas that may affect food safety or food security.

30. Joint FAO/IOC-UNESCO Intergovernmental Panel on Harmful Algal Blooms

Climate change is making it more challenging to predict HABs, impacting food security, food safety, and the environment. Over the past seven years, FAO and IOC/UNESCO have had a very productive partnership in many areas related to HABs. A joint IOC-FAO Secretariat was developed for the Intergovernmental Panel on Harmful Algal Blooms (IPHAB) to have a more robust and flexible collaborative structure. The IOC-FAO IPHAB, first established in 1991 as the organizational framework for a global partnership, encompasses decision-makers, policymakers, managers, scientists, international organizations, and non-governmental organizations (NGOs) to address the problem of harmful microalgae. More information about this collaboration and the first Joint Panel can be found in the report of the last session²⁵.

Microplastics

31. The FAO report on “Microplastics in food commodities”²⁶ was presented to the Subcommittee on Fish Trade at its 19th Session in 2023²⁷. The Sub-Committee emphasized the need for having standardized testing and requested FAO to play a role in the development of this standards. In this regard, FAO is exploring different possibilities to move forward in the process.

Update from WHO

WHO work on dioxin and dioxin-like compounds

32. On 17 to 21 October 2022 WHO held an ad-hoc expert consultation in Lisbon, Portugal during which the 2005 WHO toxic equivalency factors (TEFs) for dioxin-like compounds, including some polychlorinated biphenyls (PCBs), were re-evaluated.

33. There was consensus among the invited experts that the updated REP database indicated a need to re-evaluate the 2005 WHO TEF values for dioxins, furans, and dioxin-like PCBs. It was furthermore decided that the Bayesian method should be applied to validate the REP database which resulted in higher confidence and certainty in the outcome of the 2022 expert consultation.

34. The outcome, details, and the updated WHO 2022 TEF values for dioxin and dioxin-like compounds coming out of this expert consultation was published in Regulatory Toxicology and Pharmacology in January 2024²⁸.

FAO/WHO Codex Trust Fund-2

35. The Codex Trust Fund (CTF) continues increasing its global reach as seven additional countries (Botswana, Cook Islands, Kiribati, Lesotho, Solomon Islands, Tajikistan, and Vanuatu) were approved for funding, bringing the total number of CTF2 beneficiary countries to 59. Application round 8, which concluded in December 2023, resulted in 11 countries submitting applications for project support.

36. The CTF produced and launched three video stories highlighting the achievements of advanced CTF projects (Azerbaijan, Honduras, and the joint Bhutan-India-Nepal project).

37. In early 2023, the mid-term evaluation of the CTF was completed and confirmed the continued relevance and effectiveness of the trust fund. Furthermore, post-implementation evaluations conducted in countries that graduated from CTF support confirmed the achievement of expected outcomes.

²⁴ [Joint FAO-IOC-IAEA technical guidance for the implementation of early warning systems for harmful algal blooms](#)

²⁵ [Committee on fisheries. Sub-Committee on Fish Trade. Nineteenth Session, 11-15 September 2023 - Executive Summary, Decisions and recommendations of the 16th Session of the FAO/Intergovernmental Oceanographic Commission \(IOC\) International Panel on Harmful Algal Blooms](#)

²⁶ [Microplastics in food commodities \(fao.org\)](#)

²⁷ <https://www.fao.org/about/meetings/cofi-sub-committee-on-fish-trade/session19-documents/en/>

²⁸ The 2022 world health organization re-evaluation of human and mammalian toxic equivalency factors for polychlorinated dioxins, dibenzofurans, and biphenyls, RTP Volume 146, January 2024, 10525. <https://www.sciencedirect.com/science/article/pii/S0273230023001939>

WHO/PAHO workshop on evidence-informed decision on food safety risk management

38. In June 2023, WHO/PAHO organized a regional workshop on evidence-informed decision on food safety risk management with a focus on setting maximum levels of chemical contaminants in foods (MLs). The workshop was held in Ecuador and was attended by 27 government officials from 13 countries: Argentina, Brazil, Chile, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Panamá, Paraguay, Perú y Uruguay. This was the opportunity for participants to understand the importance, relevance, and context of food safety risk at national and international level in the development of Codex standards and how to apply them in the national and regional context.

Chemicals and pesticides management

39. The 76th World Health Assembly in May 2023 adopted resolution WHA76.17 on “The impact of chemicals, waste and pollution on human health”. Through this resolution the Director General was requested to, amongst other items, publish a report on the human health implications of chemicals, waste, and pollution, as well as reporting on existing data gaps, including through a One Health approach²⁹.
40. Resolution WHA76.17 also requested the Director General to advocate for multisectoral and multistakeholder approaches to address the health impacts of pollution and to develop an awareness-raising campaign on the health impacts of chemicals, waste, and pollution, including as contaminants in drinking-water and food, as well as preventing suicidal deaths using highly hazardous pesticides.
41. WHO is working jointly with the UN Environment Programme (UNEP) to update the report “State of the Science of Endocrine Disrupting Chemicals, 2012”, in line with the UN Environment Assembly resolution UNEA5/7. This updated report is planned to be published during 2025.
42. WHO is working jointly with FAO, UNEP, the UN Development Programme (UNDP), and the International Labour Organization (ILO) to establish a Global Alliance on Highly Hazardous Pesticides, as endorsed by resolution V/11 of the 5th International Conference on Chemicals Management (ICCM5) in September 2023 in Bonn, Germany, in parallel with agreement of the Bonn Declaration and the Global Framework on Chemicals³⁰. The Global Alliance aims to become operational during 2024.
43. WHO convened the 3rd Meeting of the WHO Chemical Risk Assessment Network in December 2023. The Network comprises 97 institutions concerned with chemical risk assessment from 55 countries. The 3rd in-person meeting of the Network reviewed collaborative Network activities since the previous in-person meeting in 2017, discussed developments in the field of chemical risk assessment and proposed new collaborative activities for the Network going forwards.

²⁹ https://apps.who.int/gb/ebwha/pdf_files/WHA76/A76_R17-en.pdf

³⁰ <https://staging.saicm.org/page/text-global-framework-chemicals>