



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

**Eighteenth Session
23-27 June 2025
Bangkok, Thailand**

**MATTERS OF INTEREST ARISING FROM FAO AND WHO
INCLUDING THE JOINT FAO/WHO EXPERT COMMITTEE ON FOOD ADDITIVES**

(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 2024.

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. JECFA 98 and JECFA 99) have been held in 2024. These meetings addressed residues of veterinary drugs in food and food additives, respectively.
3. All available full reports and the detailed monographs will be accessible at the relevant FAO¹ and WHO² sites.
4. Future meetings:
 - JECFA 100 is scheduled for 10-19 June 2025 in Rome. The meeting is dedicated to the evaluation of a number of food additives.
 - JECFA 101 is scheduled for 15-21 October 2025 in Geneva. The meeting is dedicated to the evaluation of Arsenic. While initially the meeting was scheduled for 14–23 October to also cover the evaluation of Dioxins, the meeting's duration and scope have been shortened due to the current financial constraints faced by WHO.
5. The calls for data are available on the respective FAO³ and WHO⁴ websites.

Requests for scientific advice

6. 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.
7. 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.
8. The activities of JECFA, which are supported by WHO, primarily rely on extra-budgetary resources from governmental institutions of WHO member states. Recently, there has been a significant reduction in donor contributions for scientific advisory activities, including those related to JECFA. Due to current budgetary limitations, WHO is unable to secure the necessary resources, leading to a need to reduce JECFA operations. Consequently, the JECFA 101 meeting scheduled for July 2025, focusing on veterinary drug residues in food, has been postponed. Additionally, the JECFA 102 meeting scheduled for October 2025 concerning food contaminants will be abbreviated to JECFA 101, with only one group of contaminants being assessed. It is premature to speculate on developments for 2026; however, WHO will need to evaluate the possibility of assessing fewer food additives and may also consider a reduction in the frequency and duration of future JECFA meetings in general.

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))

9. To facilitate provision of extra-budgetary resources for scientific advice activities, please contact Dr Markus Lipp, FAO Food Safety Unit (jecfa@fao.org) and Dr Moez Sanaa Department of Nutrient and Food Safety, WHO (jecfa@who.int).

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

10. Reliable information on food consumption, collected at the 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 availability and 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.
11. The FAO/WHO Global Individual Food Consumption Data Tool (FAO/WHO GIFT)⁵ is currently sharing 62 datasets (including 21 nationwide datasets). The database provides not only access to all microdata but also provides useful statistics in the field of nutrition, dietary diversity, environmental impact, and food safety. In addition, selected datasets available through FAO/WHO GIFT are integrated into the WHO Food Safety Collaborative Platform (FOSCOLLAB) and used for the assessment of food-safety exposure risk. FAO/WHO GIFT utilizes FoodEx2 as a harmonised food classification/description system, which has been upgraded for use at global level as a result of a collaboration with 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 352 identified studies. The platform is available online⁵.
12. 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 online⁶ "Global Trends in the Availability of Dietary Data in Low and Middle-Income Countries" as well as additional resources⁷.
13. CIFOcOs (FAO/WHO Chronic Individual Food Consumption Data summary statistics) contains the summary statistics of 68 datasets containing at least two days of consumptions and is regularly updated. These data on food consumption (CIFOcOs) 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).
14. 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).

Water and food safety nexus (focus on chemical safety)

15. 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.
16. 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 and processing (CXG 100-2023)), there are no such guidelines for chemical water safety.
17. As previously reported FAO and WHO are implementing 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.
18. A comprehensive background document 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) has been prepared. An ad hoc FAO/WHO expert meeting will be held on 20-23 May 2025 in Rome to facilitate the finalization of this document, discuss the findings and provide recommendations.

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

⁶ <https://www.fao.org/3/cc1351en/cc1351en.pdf>

⁷ <https://www.fao.org/gift-individual-food-consumption/resources/en>

Other issues of potential interest to the Committee

Update from FAO

Food Safety in the Circular Economy and work in the area of food packaging

19. FAO has published reports^{8,9} and a series of related policy briefs that analyse the current and emerging evidence around the various challenges and opportunities to manage food safety in the context of a circular economy (Food safety in a circular economy¹⁰). One of the focus areas of this work is related to *food packaging waste and recycling*.

Initiatives and innovations to build circular agrifood systems include recycling and reusing food packaging to limit waste outputs. All these initiatives offer considerable promise in improving environmental sustainability and delivering potential gains for socioeconomic sustainability. However, there is growing evidence that contaminants, whether microbiological, chemical or physical, can be introduced and potentially accumulate during these circular processes. Embedding food safety within transformed agrifood systems requires raising food safety outcomes to an equal level of importance as sustainability and economic performance. The characterization of food safety risks underpins the assurance that food is safe throughout the value chain.

20. A review “*Recent and emerging food packaging alternatives: chemical safety risks, current regulations and analytical challenges*”¹¹ has recently been published in the journal *Comprehensive Reviews in Food Science and Food Safety*. The review examines the potential risks and opportunities associated with recycled and bio-based materials used in food packaging, reusable and hybrid packaging, and innovations such as nanotechnologies and active and intelligent packaging. Reviewing regulations governing recent and emerging food packaging materials, the authors find a lack of harmonization among regulatory requirements globally.

21. FAO will continue to work on the food safety implications of food contact materials (FCMs) - exploring innovations, and new solutions in this area.

FAO work on new foods and production systems

22. New food sources and production systems (NFPS)¹² can play a critical role in the transformation of our agrifood systems by encouraging dietary shifts and diversifying our current ways of producing food. NFPS are attracting significant interest, driven by international trade, changing consumer preferences, potential sustainability benefits, and innovations in climate-resilient food production systems. However, with increasing attention on these novel foods, questions are arising regarding their safety and regulatory oversight.

23. A recent review¹³ on new food sources and production systems by scientists from the Singapore Food Agency and FAO has been published in the journal *Comprehensive Reviews in Food Science and Food Safety*. The review outlines known food safety hazards associated with NFPS products, in particular, plant-derived proteins, seaweeds, jellyfish, insects, and microbial proteins as well as foods derived from cell-based food production, precision fermentation, vertical farming, and 3D food printing. It was found that, while most food safety hazards linked to new foods have also been identified in traditional foods, some can be unique, arising from new food ingredients, inputs and processes.

24. The review outlines also the need for stakeholders from governments, the food industry and the research community to work collectively in order to address and communicate the safety of NFPS products. Through multi-stakeholder collaborations, the international community can harness the potential of NFPS in contributing to sustainable and climate-resilient food production.

25. This review is part of the ongoing foresight work by FAO examining the future of food safety¹⁴. In November 2023, FAO gathered experts at the Food Safety Foresight Technical Meeting on New Food Sources and Production Systems¹⁵ to discuss the food safety hazards and future trends of three new foods:

1. *Plant-based food products (that mimic animal-derived foods)*
2. *Products from precision fermentation*
3. *3D food printing.*

⁸ <https://openknowledge.fao.org/items/86013cbe-5172-42aa-954a-fcee0e65e935>

⁹ <https://openknowledge.fao.org/items/37b211f8-1acb-42a5-b467-16600145e174>

¹⁰ <https://www.fao.org/food-safety/scientific-advice/foresight/food-safety-in-a-circular-economy/en/>

¹¹ <https://openknowledge.fao.org/items/0e6c2b26-260a-4426-b330-49f72569eb41>

¹² <https://openknowledge.fao.org/server/api/core/bitstreams/0aa558d4-57c7-498d-87f7-b9e37577882f/content/src/html/new-food-sources-and-food-production-systems.html>

¹³ <https://openknowledge.fao.org/items/167bcc42-5685-4f22-9bb4-cf10eeef2390>

¹⁴ <https://openknowledge.fao.org/items/45ad5b86-4013-4a53-be29-62761baff1d8>

¹⁵ <https://openknowledge.fao.org/server/api/core/bitstreams/e58778f3-b3b9-49ed-95d3-6c932016ff14/content>

26. The full meeting report along with a series of video interviews and an infographic are available on the FAO website¹⁶.
Alternative animal source foods: A comprehensive review of the evidence on their benefits and risks for nutrition, environment, livelihoods, and food safety
27. FAO will produce a comprehensive review with related recommendations for the current state of evidence on this topic. To do so FAO has commissioned a series of background reviews of the evidence on the benefits and risks of A-ASFs for nutrition, environment, socio-economic considerations, and food safety. FAOs work will include defining A-ASFs and their sub-categories and developing a glossary of relevant terminology and synonyms. In addition to the FAO document, the background papers will be published as scoping/ narrative reviews on the topics mentioned.
Food safety in personalized nutrition: a focus on food supplements and functional foods
28. In recent years, the understanding of how food interacts with molecular mechanisms and influences physiological states has revolutionized people's approach to diet and health. Research has demonstrated that specific nutrients can affect cellular functions, modulate responses, and regulate numerous metabolic pathways through genomic interactions, impacting various health parameters. This evolving knowledge has invigorated the "food is medicine" concept, integrating nutritional interventions into healthcare systems to prevent and treat chronic conditions, improve health outcomes, and promote health equity. The relationship between diet, health, and disease susceptibility has long been known, forming the basis of dietary recommendations. However, by recognizing the significant variations in individual physiological responses to different foods, there is a shift from the traditional 'one size fits all' approach to personalized nutrition, which tailors dietary interventions based on unique genetic makeup, gut microbiota, lifestyle factors, medical conditions, and phenotypic factors to optimize health outcomes and prevent diseases effectively. Personalized nutrition, though gaining substantial recent attention, is deeply rooted in traditional medicine systems such as Ayurveda and Traditional Chinese Medicine, among others, which have long applied empirical knowledge about the health impacts of specific foods. A significant aspect of this personalized approach is the use of food supplements and functional foods, which aim to modulate physiological functions according to individual needs.
29. Since the field of personalized nutrition continues to evolve and expand, ensuring the safety of these products becomes increasingly important, given their perceived safety by consumers and the varying regulatory frameworks across jurisdictions. As part of the food safety foresight programme, FAO is finalizing a report on this topic that will be published in the coming months. The report will provide a comprehensive analysis of the food safety and regulatory implications associated with personalized nutrition, focusing specifically on food supplements and functional foods. It will illustrate examples of regulatory frameworks for these products across different countries and provide insights into trends and innovations. The report will also examine consumer behaviour and will offer different perspectives for a way forward.
Food safety implications from the use of environmental inhibitors in agrifood
30. FAO has released a report on the Food safety implications from the use of environmental inhibitors in agrifood systems¹⁷. 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 issues 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.
31. 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.
32. A webinar on this subject was organized by FAO on 9 May 2024. The summary and the recoding of the webinar are available online¹⁸.
33. FAO will continue to work on this area providing guidance on how to assess the food safety implications of environmental inhibitors.

¹⁶ <https://www.fao.org/food-safety/news/news-details/en/c/1711882/>

¹⁷ <https://openknowledge.fao.org/items/68ec6807-6934-48a3-a55d-6b22824f8a80>

¹⁸ <https://www.fao.org/food-safety/news/news-details/en/c/1698034/>

Food safety in the context of limited food availability

34. Lipid-based nutrient supplements (LNS) and ready-to-use therapeutic food (RUTF) are fortified foods designed to prevent and treat malnutrition in children. LNS and RUTF are delivered by humanitarian organizations such as the World Food Programme (WFP), the United Nations Children's Fund (UNICEF) and Médecins Sans Frontières, as part of nutritional programmes to treat malnutrition or severe wasting in children over a specified period of time. They are often produced locally in regions experiencing food insecurity. Before consumption, all edible oils used in products such as LNS/RUTF must be refined to remove undesirable substances and create a palatable, shelf-stable product, a process that typically involves the use of heat.
35. However, the refining process of edible oils can lead to the formation of heat-induced contaminants such as 3-monochloropropane-1,2-diol (3-MCPD) fatty acid esters and glycidyl fatty acid esters (GEs), with high levels typically observed in refined palm oil, used extensively in the manufacture of LNS/RUTF products. Studies on experimental animals have shown that these substances or their metabolites can be toxic, raising concerns about their presence in food.
36. FAO, in collaboration with the WFP, UNICEF and Médecins Sans Frontières, released a report titled *Food safety in the context of limited food availability – Risk assessment of 3-MCPD and fatty acid esters in nutrient supplements and therapeutic food*¹⁹. The report provides an overview of risk assessments for 3-MCPD and GEs previously performed by the Joint FAO/WHO Expert Committee on Food Additives (JECFA), European Food Safety Authority (EFSA) and other authorities, based on chronic exposure. As the use of LNS/RUTF is intended to be of finite duration and confined to a specific life stage, this report also provides a risk assessment of less-than-lifetime exposure to 3-MCPD (including 3-MCPD fatty acid esters) and GEs via nutrient supplements and therapeutic food.
37. The report identifies thresholds for concentrations of 3-MCPD and glycidol equivalents in LNS/RUTF products that are considered to represent a level of exposure of low concern for human health. Moreover, any theoretical risks from these contaminants must be weighed against the benefits of these products in managing malnutrition in children and infants experiencing food insecurity.

FAO/WHO Risk Benefits of Fish consumption

38. As previously reported, FAO and WHO convened an expert consultation in 2023 to review the new evidence and update the conclusions and recommendations of the 2010 report²⁰ as needed. The background document for the Expert Consultation and the Expert Consultation Report, containing 5 systematic literature reviews on health benefits of fish consumption, health effects of dioxins and dioxin-like polychlorinated biphenyls (dl-PCBs), health effects methylmercury (MeHg), the role of selenium with regard to the health effects of MeHg, and occurrence data for MeHg, dioxins and dl-PCBs in fishery and aquaculture products have been published in the FAO²¹ and WHO websites. The conclusions and recommendations resulting from the expert consultation can be found in the Meeting Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption²².

Bivalve mollusc monitoring

39. 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). The content and the second edition is available online in English²³, Spanish²⁴ and French²⁵.

¹⁹ <https://openknowledge.fao.org/items/edad8a64-d912-4a6a-b663-a6c3fe955725>

²⁰ [Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption. Rome, 25-29 January 2010](#)

²¹ FAO & WHO. 2024. *FAO/WHO background document on the risks and benefits of fish consumption*. Food Safety and Quality Series, No. 27. Rome. <https://openknowledge.fao.org/items/e05fa8ac-9619-4ff1-a6a5-52e8633aba7a>

²² FAO & WHO. 2024. *Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption: Meeting report, Rome, 9–13 October 2023*. Food Safety and Quality Series, No. 28. Rome. <https://doi.org/10.4060/cd2394en>

²³ FAO and WHO. 2021. *Technical guidance for the development of the growing area aspects of Bivalve Mollusc Sanitation Programmes. Second edition*. Food Safety and Quality Series No. 5A. Rome. <https://openknowledge.fao.org/items/220beeeaa-dfef-4bb0-b21c-3854863a688a>

²⁴ <https://fao.org/documents/card/en/c/cb5072en/> and Spanish version <https://fao.org/publications/card/es/c/CB5072ES/>

²⁵ <https://doi.org/10.4060/cb5072fr>

40. The guidance also served as the basis for developing a four e-learning courses 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. Since January 2025, the four courses are available online in English²⁶ and French²⁷, and the first two courses in Spanish²⁸.
41. Over the last six years, FAO in collaboration with its Reference Centre for Bivalve Mollusc Sanitation, Cefas²⁹, has delivered several 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 reports³⁰.

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

42. 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, collaborating in the production of relevant HABs³¹ and toxins³² related publications and tools³³ that were instrumental for the rapid development and adoption of the Codex Code of Practice for the Prevention and Reduction of Ciguatera Poisoning. FAO and IOC-UNESCO decided to formalize their collaboration through a Memorandum of Understanding signed in April 2024 by which a joint IOC-FAO Secretariat was established for hosting the Secretariat of the Intergovernmental Panel on Harmful Algal Blooms (IPHAB) to have a more robust and flexible collaborative structure. The IOC-FAO IPHAB, first established by IOC 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. The next IOC-FAO IPHAB Session will take place from 18-20 March in Paris. The panel counts on task teams that will support the area of scientific advise for work related to HABs and marine biotoxins. The development of technical guidance for monitoring marine biotoxins is envisaged as an area of work to be supported by the panel task teams.

Microplastics

43. The FAO report on "Microplastics in food commodities"³⁴ was presented to the Subcommittee on Fish Trade at its 19th Session in 2023³⁵. The Sub-Committee emphasized the need for having standardized testing and requested FAO to play a role in the development of these standards. In this regard, FAO informed the Codex Committee on Methods of Analysis and Sampling (CCMAS) about the importance of having appropriate sampling and testing methods, which is key for determining the exact number, size, and shape of the particles, as well as the type of polymers and additives present in microplastics. This is also critical for exposure and risk assessments. CCMAS 43 noted the information provided by the FAO representative, requested FAO and WHO to keep the Committee updated on initiatives on microplastics and that the Committee would consider how to make efforts in this regard. FAO is considering carrying out a review of sampling and testing methods for microplastics, which could be the basis for further discussions.

FAO's work on AMR at the food-environment interface

44. FAO is considering undertaking a scoping review to better understand the impact of contaminants in food and the food production environment on the evolution of antimicrobial resistance. Interested Members should contact the FAO JECFA representative (jecfa@fao.org) for more information.

Early warning systems in Food Safety

45. 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.

²⁶ <https://elearning.fao.org/course/view.php?id=481>

²⁷ <https://elearning.fao.org/course/view.php?id=913>

²⁸ <https://elearning.fao.org/course/view.php?id=911>

²⁹ 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/>

³⁰ <https://www.cefas.co.uk/icoe/seafood-safety/designations/fao-reference-centre/work-programmes-and-annual-reports/>

³¹ FAO, IOC and IAEA. 2023. Joint technical guidance for the implementation of early warning systems for harmful algal blooms. Fisheries and Aquaculture Technical Paper No. 690. Rome, FAO. <https://doi.org/10.4060/cc4794en>

³² FAO and WHO. 2020. Report of the Expert Meeting on Ciguatera Poisoning. Rome, 19–23 November 2018. Food Safety and Quality No. 9. Rome. <https://doi.org/10.4060/ca8817en>.

³³ <https://elearning.fao.org/course/view.php?id=648>

³⁴ [Microplastics in food commodities \(fao.org\)](https://www.fao.org/microplastics-in-food-commodities)

³⁵ <https://www.fao.org/about/meetings/cofi-sub-committee-on-fish-trade/session19-documents/en/>

46. 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. The above publications triggered interest of some experienced competent food safety authorities, to support in collaboration with FAO, low- and middle-income countries on operational practical modalities to apply innovative digital tools for proactive prevention of food safety emergencies.
47. In November 2024 within the INFOSAN meeting for Asia and Pacific regions, FAO in collaboration with WHO have provided a tabletop simulation exercise consistent with food safety risk analysis concept on addressing food safety in international fish trade and value chains with focus on scombrotoxin fish poisoning (histamine/biogenic amines). Forty-three officials from competent authorities from 22 countries participated in the event.

Update from WHO

Key ingested PFAS and key health effects of PFAS

48. WHO will commence a second phase of initiatives to evaluate Per- and PolyFluoroAlkyl Substances (PFAS) in 2025, which involve systematically collecting and reviewing key health effects evidence for prioritized PFAS, informed by the key ingested PFAS and key health effects identified in the current first phase concluding June 2025. The second phase will also involve developing PFAS groupings for mixtures risk assessment, informed by the PFAS grouping and mixtures risk assessment methodology developed in Phase 1. Phase 2 also involves deriving an illustrative range of potential PFAS Tolerable Daily Intakes (TDIs) and drinking water guideline values for prioritized PFAS, and identifying data gaps and research needs, particularly in relation to health-based guidance value development.
49. Like Phase 1, Phase 2 will be overseen by a second WHO Technical Advisory Group on PFAS Assessment. These PFAS initiatives facilitate the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the WHO Guidelines for Drinking-water quality expert meetings in developing formal, normative WHO/FAO health-based guidance values for key ingested PFAS, planned for 2027.

Water and food safety nexus (focus on chemical safety)

50. As previously reported FAO and WHO are implementing 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.
51. A comprehensive background document 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) has been prepared.
52. An ad hoc FAO/WHO expert meeting will be held on 20-23 May 2025 in Rome to facilitate the finalization of this document, discuss the findings and provide recommendations.

WHO's role in negotiations to develop a legally binding instrument on plastic pollution, including marine pollution

53. As mandated by the 76th World Health Assembly, WHO has been participating in the negotiations to develop a treaty to address plastic pollution³⁶. WHO's view in the negotiations has been guided by the overriding principles of pursuing the highest attainable standard of human and environmental health and addressing the known and predicted health risks and exposures associated with plastic polymers, chemicals and additives, microplastics and nanoplastics at all stages of the plastics lifecycle. This includes addressing the contamination of food and drinking-water by chemical additives and microplastics, applying a one health approach to the treaty to help ensure that health risks and environmental impacts are comprehensively evaluated, reducing the overall production of plastic polymers and moving towards a non-toxic circular economy for plastics, environmentally sound waste management and including within the treaty robust processes to manage conflicts of interest.

Chemicals and pesticides management

54. WHO continues to work jointly with the UN Environment Programme (UNEP) to update the report "State of the Science of Endocrine Disrupting Chemicals, 2012", to be presented to the UN Environment Assembly in December 2025. The report will summarize the state of the science on some key health outcomes linked to endocrine-disrupting chemicals (EDCs), along with considerations of testing and assessment of EDCs, sources of exposures and substitutions for EDCs, socio-economic and policy analysis and identification of research gaps and options for ways forward for policy-makers.

³⁶ <https://www.who.int/initiatives/plastics-and-health-initiative>

55. WHO continues to work 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 when the Global Framework on Chemicals was established³⁷. The Global Alliance aims to achieve the targets related to highly hazardous pesticides of the Global Framework on Chemicals³⁸.

Pesticide metabolites in water

56. While the WHO Guidelines for drinking-water quality (GDWQ) covers pesticides, more guidance is needed on evaluating pesticide metabolites. To this end, in 2024 WHO commissioned an evaluation of existing pesticide metabolite schemes and initiated establishment of guidance to support Member States in assessing the risks from these compounds in drinking-water. Schemes evaluated included the WHO/FAO assessment scheme to evaluate pesticide metabolites in plants and animal tissues (WHO, 2015). WHO also initiated an assessment of select pesticide metabolites that have been identified in drinking-water. This work is being overseen by an expert group established by WHO.

Guidance for drinking-water regulators and water suppliers on cyanobacteria

57. At the end of 2024, WHO published a technical brief to support management of cyanobacteria in drinking-water supplies. The guidance focuses on measures to prevent the formation of cyanobacterial blooms and options to manage blooms and their toxins when they occur. This updated guidance is based on the second edition of the WHO publication “Toxic cyanobacteria in water – a guide to their public health consequences, monitoring and management”.

³⁷ <https://www.unep.org/global-framework-chemicals>

³⁸ https://wedocs.unep.org/bitstream/handle/20.500.11822/46002/Global-Framework-on-Chemicals_Brohure.pdf