



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Forty-fourth Session

FAO/WHO SCIENTIFIC SUPPORT TO CODEX: REPORT ON ACTIVITIES, BUDGETARY AND FINANCIAL MATTERS

(Prepared by FAO and WHO)

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PART II: FINANCIAL AND BUDGETARY MATTERS

PART I: RECENT FAO/WHO EXPERT MEETINGS AND OTHER RELEVANT INFORMATION

1. **The delivery of scientific advice continues at an accelerated level.** For example, FAO and WHO have started considerable work to develop the requested scientific advice on antimicrobial resistance (AMR), JECFA continues to meet twice a year, JMPR and JEMRA continue to meet several times a year, and JEMNU implemented its first work and met in July 2019. This enhanced level of activity has been made possible through the contributions of Australia, Canada, the European Union, Japan, and the United States of America (USA). **These activities are the result of the high priority FAO and WHO assigns to the scientific advice programme**, realizing the importance of a strong scientific foundation for all Codex standards. The CAC remains the primary client of the joint FAO/WHO scientific advice programme, as the results are used extensively in the development of Codex texts and standards. However, also other UN agencies (for example the World Food Programme) are requesting scientific advice from FAO/WHO. Furthermore the outputs of this joint programme are also used by member countries of FAO and WHO, to strengthen the science-based decision making on food safety and nutrition issues at national and regional levels. The following summarises the scientific advice provided in the 2020-2021 period since FAO and WHO's previous report to the Commission (CAC43 INF/2).

Joint FAO/WHO Expert Committee on Food Additives (JECFA)

2. Since the last session of CAC, three JECFA meetings (i.e. JECFA 90, JECFA 91 and JECFA 92) have been convened in a virtual format. These meetings addressed food additives and contaminants.

3. **Joint FAO/WHO Expert Committee on Food Additives (JECFA), 90th Meeting, Virtual Meeting, 26 October – 6 November 2020 with an additional day for approval of the report on 24 November 2020¹:** This meeting was held in the framework of the on-going programme on the risk assessment of food additives and contaminants in foods. The Committee evaluated 18 substances that may occur as previous cargoes and the trichothecenes T-2 and HT-2. The tasks before the Committee were (a) to elaborate principles governing the evaluation of the acceptability of previous cargoes; (b) to undertake toxicological evaluations and dietary exposure assessments, and (c) to undertake toxicological evaluations and dietary exposure assessments in relation to contaminants in food. It became apparent during the meeting that the time limitations precluded the toxicological evaluation of the trichothecenes T-2 and HT-2. The toxicological evaluation and overall risk assessment will therefore follow at a future meeting.

¹ https://cdn.who.int/media/docs/default-source/food-safety/jecfa/summary-and-conclusions/jecfa90_26-october-6-november-2020_summary-and-conclusion.pdf?sfvrsn=52aef206_5

4. **Joint FAO/WHO Expert Committee on Food Additives (JECFA), 91st Meeting, Virtual Meeting, 1 - 12 February 2021**²: This meeting was held in the framework of the on-going programme on the risk assessment of food additives and contaminants in foods. The Committee evaluated the contaminants cadmium and ergot alkaloids, and 5 substances that may occur as previous cargoes, as well as revising the specifications for steviol glycosides. The tasks before the Committee were (a) to undertake toxicological evaluations and dietary exposure assessments in relation to certain contaminants in food, and (b) to revise the specifications for certain food additives.

5. **Joint FAO/WHO Expert Committee on Food Additives (JECFA). The 92nd Meeting of food additives, 7 - 18 June 2021**³: This meeting was held in the framework of the on-going programme on the risk assessment of food additives and contaminants in foods. The Committee undertook the toxicological evaluations and dietary exposure assessments and developed specifications for six food additives and revised the specifications for another group other group of food additives.

Joint FAO/WHO Meeting on Pesticide Residues (JMPR)

6. **Joint FAO/WHO Meeting on Pesticide Residues (JMPR), Virtual, September 2020**: The agenda of the September 2020 evaluation at FAO Headquarters, Rome, Italy, has been postponed to 2021. Evaluation of scheduled pesticide residues have proceeded through the means of written online peer reviews and virtual meetings on 14, 16, 18 September 2020 to the extent possible.

7. **Extraordinary Joint FAO/WHO Meeting on Pesticide Residues (JMPR), Virtual, Session I: 17-21 May 2021 and Session II: 7-11 June 2021**⁴: The meeting evaluated 30 compounds listed in the prioritization list of the Codex Committee on Pesticide Residues (CCPR) and proposed 200+ new MRLs.

Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA)

8. **Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA) on Shiga toxin-producing *Escherichia coli* (STEC) associated with Meat and Dairy Products, virtual meeting, 1 - 26 June 2020**: Having identified foods most frequently associated with illness, the Codex Alimentarius Commission (CAC) approved new work at the 42nd Session, July 2019, on the development of guidelines for the control of STEC in beef, raw milk and cheese produced from raw milk, leafy greens and sprouts. To support this work, JEMRA convened the meeting virtually from 1 to 26 June 2020. This meeting focused on microbiological hazards associated with meat and dairy products, and reviewed relevant measures for pre- and post- harvest controls of STEC in animals and foods of animal origins. The executive summary of this meeting was submitted to the EWG CCFH, and the meeting report is in development.

9. **Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA) on Microbiological Risk Assessment of *Listeria monocytogenes* in Ready-to-Eat (RTE) Food: Attribution, Characterization and Monitoring, virtual meeting, 20 October – 6 November 2020**: The purpose of the meeting was to review recent data on *L. monocytogenes* and determine the need to modify, update, or develop new risk assessment models and tools for this pathogen. After a thorough review of source attribution, virulence, monitoring programs, laboratory methods, hazard characterization, exposure assessment, the expert group identified several critical gaps in the current FAO/WHO risk assessment model and collectively agreed that updating the model would be valuable for informing risk analysis strategies, including in low and middle-income (LMIC) countries. The meeting report is in development and the executive summary is available at FAO/WHO website⁵.

10. **Joint FAO/WHO Expert meeting on Microbiological Risk Assessment (JEMRA) on the microbiological safety and quality of water used in the production of fishery and dairy products, virtual meeting, 14 June - 2 July, 2021**: This meeting is the fourth in a series of meetings examining appropriate and fit-for-purpose microbiological criteria for water sourcing during food production with application to the fishery and dairy sectors. The scientific advice will support decision making when applying the concept of fitness for purpose of water for use in fish and fishery products from primary production to retail and for dairy products from milk harvest to manufacturing.

² https://cdn.who.int/media/docs/default-source/food-safety/jecfa/summary-and-conclusions/jecfa91-1to12march2021-summary-and-conclusions.pdf?sfvrsn=1d79351f_5

³ <http://www.fao.org/3/cb5597en/cb5597en.pdf>

⁴ <https://www.who.int/publications/m/item/summary-report-acceptable-daily-intakes-acute-reference-doses-residue-definitions-recommended-maximum-residue-limits-supervised-trials-median-residue-values-and-other-values-recorded>

⁵ https://cdn.who.int/media/docs/default-source/food-safety/jemra/listeria-meeting-summary-and-participantlist-oct-nov-2020.pdf?sfvrsn=eada9f9_5

Ad hoc Joint FAO/WHO Expert Consultation on Risk Assessment of Food Allergens

11. **Ad hoc Joint FAO/WHO Expert Consultation on Risk Assessment of Food Allergens Part 1: Review and validation of Codex priority allergen list through risk assessment, Virtual meeting, 30 November – 11 December 2020, 28 January 2021, 8 February 2021:** The main purpose of this first meeting was to validate and update the list of foods and ingredients listed in section 4.2.1.4 of the General Standard for the Labelling of Packaged Foods (GSLPF) based on risk assessment. Based on systematic and thorough assessments which used all three criteria (prevalence, severity and potency), the Committee recommended that the following should be listed as priority allergens: Cereals containing gluten (i.e., wheat and other *Triticum* species, rye and other *Secale* species, barley and other *Hordeum* species and their hybridized strains), crustacea, eggs, fish, milk, peanuts, sesame, specific tree nuts (almond, cashew, hazelnut, pecan, pistachio and walnut). The executive summary is available at FAO/WHO website⁶. The meeting report is in development.

12. **Ad hoc Joint FAO/WHO Expert Consultation on Risk Assessment of Food Allergens Part 2: Review and establish threshold levels in foods for the priority allergens, Virtual meeting, 15 March – 2 April 2021:** The Expert Committee assembled for the 1st FAO/WHO Expert Consultation on risk assessment of food allergens meeting reconvened to establish threshold levels for priority allergenic foods and recommend analytical methods for detection in food and food processing environments. The Expert Committee established recommended reference doses, based on health-based guidance values that should reflect a range of exposure without appreciable health risk for the priority allergens for which data was available. The executive summary is available at FAO/WHO website⁷. The meeting report is in development.

Risk Assessment Methodology Work

13. In addition to the scientific advice requested directly, the FAO/WHO secretariats have been working to update risk assessment methodologies, taking into account recommendations from expert meetings and the latest scientific developments. This is critical to assure that the scientific advice provided is based on up-to-date methodology and scientific knowledge.

14. Several activities have been finalized to address the following areas of risk assessment methodology: included in chapter 4, 5, 6 and 9 of the international guidance Environmental Health Criteria (EHC) 240 "Principles and methods for the risk assessment of chemicals in food".

15. Section 4.5 - Genotoxicity⁸: The updated section 4.5 on genotoxicity published in November 2020 will be incorporated in the online version of the EHC 240 in the coming months.

16. Chapter 5 - Dose-Response Assessment and Derivation of Health-Based Guidance Values⁹: The updated chapter 5 on dose-response assessment and derivation of health-based guidance published in December 2020 will be incorporated in the online version of the EHC 240 in the coming months.

17. Chapter 6: Dietary Exposure Assessment of Chemicals in Food¹⁰: The updated chapter 6 on Dietary Exposure Assessment of Chemicals in Food published in November 2020 will be incorporated in the online version of the EHC 240 in the coming months.

18. Section 9.1.4.2 Enzymes¹¹: The updated section 9.1.4.2 on enzymes had been incorporated into EHC240.

19. The Microbiological Risk Assessment Guidance for Food (MRA36) updates three previous guidance documents (MRA3, MRA7 and MRA17) and brings them into a single volume, providing an overall umbrella for microbiological risk assessment¹².

Other activities

Contributions to international harmonization and update of risk assessment methodology to be used by JECFA and in harmonized risk management. Update of the 2005 WHO toxic equivalency factors values for dioxin and dioxin-like compounds.

⁶ <http://www.fao.org/3/cb4653en/cb4653en.pdf>

⁷ <http://www.fao.org/3/cb6388en/cb6388en.pdf>

⁸ https://www.who.int/docs/default-source/food-safety/publications/section4-5-genotoxicity.pdf?sfvrsn=8ec3434_2

⁹ https://www.who.int/docs/default-source/food-safety/publications/chapter5-dose-response.pdf?sfvrsn=32edc2c6_5

¹⁰ https://www.who.int/docs/default-source/food-safety/publications/chapter6-dietary-exposure.pdf?sfvrsn=26d37b15_6

¹¹ https://www.who.int/docs/default-source/food-safety/publications/section9-1-4-2-enzymes.pdf?sfvrsn=e238e86e_2

¹² <https://www.who.int/publications/i/item/9789240024892>

20. Since the early 1990's, WHO has organized expert meetings with the objective to harmonize the toxic equivalency factors (TEFs) for dioxin and dioxin-like compounds on the international level, thereby giving recommendations to national regulatory authorities. TEF expresses the toxicity of dioxins, furans and PCBs in terms of the most toxic form of dioxin, 2,3,7,8-TCDD. The latest WHO TEFs for dioxin and dioxin-like compounds were established by WHO through expert consultations in 2005. Since then new data including data on relative potencies (REPs) have been published and compiled into REP databases. TEFs are determined using a database of REPs that meet WHO established criteria using different biological models or endpoints.

21. The new data indicate a need to update the 2005 WHO TEFs and therefore WHO has established an advisory group of international experts. The experts will support WHO in setting up the criteria for the REP database to be used. To manage the technical handling of the REP database WHO will collaborate with the European Food Safety Authority (EFSA). When EFSA has compiled the data from the refined REP database based on the criteria established by WHO the data will be used by WHO to re-evaluate the TEFs. It is expected that the refined REP database can be ready during the last quarter of 2021 at which time WHO will organize expert consultations aiming at re-evaluating the TEFs for dioxin and dioxin-like compounds

FAO work on risk profile of Group B *Streptococcus* (GBS) – *Streptococcus agalactiae* sequence type (ST) 283 in freshwater fish

22. In Singapore during 2015, Group B *Streptococcus* (GBS), *Streptococcus agalactiae* sequence type 283 (ST283) caused the only reported foodborne outbreak of invasive GBS disease. Subsequent investigations found that ST283 GBS has been common among GBS causing disease in humans and in tilapia across Southeast Asia for at least 20 years, whereas it was almost non-existent outside this region. Given the novelty of the outbreak, FAO conducted an expert consultation in 2020 – 21 to develop a risk profile consolidating the current knowledge to identify data gaps about GBS ST283 along the freshwater fish supply chain in Southeast Asia. The risk profile is available at <http://www.fao.org/documents/card/en/c/cb5067en> in various eBook formats and a 4-page factsheet is also available at: <http://www.fao.org/3/cb4901en/cb4901en.pdf>.

WHO Nutrition Guidance Expert Advisory Group (NUGAG) Subgroup on Diet and Health

Saturated fatty acids, trans-fatty acids, total fat, carbohydrates and non-sugar sweeteners

23. Four meetings of the NUGAG Subgroup on Diet and Health were held since 2019: the 13th, 14th, 15th and 16th meetings, the last three of which were held virtually. At the meetings, the NUGAG reviewed evidence from updated systematic reviews for saturated fatty acids, *trans*-fatty acids, total fat and non-sugar sweeteners and finalized evidence-informed recommendations for all of these nutrients as well as carbohydrates (including dietary fibre), taking into consideration the quality of the evidence, as well as additional criteria including the balance of evidence on benefits and harms, values and preferences, resource implications, priority of the problems, equity and human rights, acceptability and feasibility. Guidelines for all nutrients are being finalized, following a public call for comment on the draft total fat guideline held in April 2021 and calls for comment on the carbohydrates and non-sugar sweeteners planned for late 2021.

Polyunsaturated fatty acids

24. At the 13th meeting, evidence was reviewed from an updated Cochrane review on the effect of n-3 polyunsaturated fatty acid intake on cardiovascular disease, and several recently published and submitted systematic reviews on the effects of n-3 polyunsaturated fatty acid intake on other health outcomes identified by the NUGAG as important, including diabetes, cancer, neurocognitive function and depression. Evidence from another Cochrane review assessing health effects of n-3 polyunsaturated fatty acid intake in pregnant women was also preliminarily reviewed. Evidence from two additional systematic reviews assessing health effects of n-3 polyunsaturated fatty acid intake in pregnant women and children will be reviewed and recommendations finalized at the meeting of the NUGAG to be held virtually in late 2021.

Dietary patterns

25. The systematic review has been finalized and will be reviewed and recommendations formulated at the meeting of the NUGAG to be held virtually in late 2021.

Low-sodium salt substitutes

26. Issues related to the use of low-sodium salt substitutes to reduce sodium/salt consumption will be discussed due to increasing need and requests for WHO guidance as to whether it would be an effective public health approach for reducing sodium/salt intake in populations. NUGAG will review the evidence from the updated systematic review and formulate recommendations at the next meeting of the NUGAG to be held in late 2021.

WHO Nutrition Guidance Expert Advisory Group (NUGAG) Subgroup on Policy Actions

27. Currently four guidelines on policy actions are being developed by the NUGAG, namely nutrition labelling policies, policies to protect children from the harmful impact of food marketing and fiscal and pricing policies, and school food and nutrition policies. Following the first meeting in December 2018, the second meeting was held in December 2019 during which the NUGAG reviewed the draft systematic reviews and formulated draft recommendations on nutrition labelling policies, policies to restrict food marketing and fiscal policies, and also discussed and finalized the scope, PICO (Population, Intervention, Comparator, Outcome) questions and priority outcomes to guide the undertaking of the systematic reviews and subsequently to formulate the recommendations for the guideline on school food and nutrition policies.

28. Due to the COVID-19 pandemic, a series of virtual meetings were held in 2021 to progress the finalization of pending guidelines. The third meeting was held virtually on 8, 10 and 12 March 2021 during which the NUGAG reviewed the systematic review evidence and formulated recommendations on school food and nutrition policies while the fourth meeting was held also virtually on 5, 6 and 9 July 2021 during which the NUGAG reviewed the systematic review evidence and formulated recommendations on policies to protect children from the harmful impact of food marketing. Furthermore, the fifth meeting is planned to be held on 13, 14 and 17 September 2021 with a view to review the systematic review evidence on the effectiveness of fiscal policies and formulate the final draft recommendations on fiscal policies to promote healthy diets.

29. To support the development of the guidelines on four policy actions to improve food environment, reviews of contextual factors were conducted, including on values; resource implications, including the costs and cost-effectiveness of interventions; equity and human rights; acceptability, reflecting the perspectives, attitudes and opinions of consumers, government and industry and their support of the policies; and feasibility, focusing on the feasibility of developing, implementing, administering, monitoring, evaluating and enforcing the policies. These reviews of contextual factors complement the evidence on effectiveness of those policy actions when formulating the recommendations.

FAO/WHO updating of nutrient requirements for infants and young children aged 0 – 4 years

30. FAO and WHO last updated vitamin and mineral requirements for all age groups in 2004. Since then, new data have emerged suggesting that requirements for some micronutrients may need to be updated, particularly for infants and young children. Therefore, in part to inform the planned updating of WHO guidance on complementary feeding and also to contribute to the on-going work of CCNFSU in establishing NRV-R for persons aged 6 – 36 months, FAO and WHO established an expert group to initiate the updating of nutrient requirements for infants and young children aged 0 – 4 years. Prior to initiating the process for updating the requirements, WHO conducted an initial review of the recent scientific literature on nutrient requirements, and compilation of national dietary guidelines from all regions, containing detailed information about nutrient requirements in the age group of interest. Using the data obtained from this preparatory work done by WHO, FAO and WHO was able to prioritize the nutrients to be updated (i.e. calcium, vitamin D and zinc as the first three nutrients to be updated). Based on the results of the scoping reviews, the scope of the work including the establishment of key questions in PICO format (Population, Intervention, Comparator, Outcome) was determined to guide the undertaking of systematic reviews which were completed in late 2020. A virtual meeting was held in January 2021 to review the results of systematic reviews and a follow-up meeting to discuss the additionally requested data for zinc was held in June 2021, at which further analyses and data were requested by the expert group. Meanwhile the revised systematic reviews for calcium and vitamin D were completed. Additional meetings to complete the work on all three nutrients are planned for the last quarter of 2021. While the work on the first three nutrients was underway, the work on the next four nutrients (i.e. iron, vitamin A, folate and magnesium) was initiated, including establishing a new expert group and commissioning scoping reviews for all four nutrients, the latter of which was completed in July 2021. A virtual meeting or offline working session to establish the scope of work for the next four nutrients is planned for late 2021.

FAO/WHO GIFT (FAO/WHO Global Individual Food consumption data Tool)

31. The FAO/WHO Global Individual Food consumption data Tool (FAO/WHO GIFT) is an open-access online platform, hosted by FAO and supported by WHO, providing access to harmonised individual quantitative food consumption data, especially in low- and middle-income countries. The platform is a growing data repository; in 2018, FAO/WHO GIFT received a four-year grant from the Bill & Melinda Gates Foundation to transform the platform into a robust global tool that will contain at least 50 datasets by 2022. FAO/WHO GIFT provides sex and age-disaggregated microdata, which are needed in the field of nutrition and dietary exposure. To facilitate the use of these data by policy makers, ready-to-use food-based indicators are provided under the form of infographics for a user-friendly overview of key information by population segments and by food groups. The synergy between the FAO/WHO GIFT platform and the dashboards of FAO/WHO FOSCOLLAB (Global platform for food safety data and information) hosted by WHO has great potential for enhancing the monitoring of food systems. In fact, in order to enhance the consistency and reliability of nutrient intake and dietary

exposure assessments, all datasets available as microdata in FAO/WHO GIFT are harmonised with the food classification and description system FoodEx2. FoodEx2 is also the system used to map all food chemical occurrence microdata available on FAO/WHO FOSCOLLAB. The combination of the two platforms will make it much easier to perform refined dietary exposure assessment for a large variety of food chemicals in all regions of the world. Moreover, all datasets available as microdata in FAO/WHO GIFT are also being made available as summary statistics on FAO/WHO FOSCOLLAB.

32. For datasets where microdata are not yet available in FAO/WHO GIFT, the platform provides an up-to-date inventory of individual quantitative food consumption surveys conducted or ongoing in low- and middle-income countries, with detailed survey information on identified studies. The FAO/WHO GIFT platform is available at <http://www.fao.org/gift-individual-food-consumption/en/>. The dashboards of FAO/WHO FOSCOLLAB are available at <http://apps.who.int/foscollab>.

Toxicological profiling of compounds and less-than-lifetime dietary exposure assessment

33. Following the recommendations of the electronic working group for the toxicological profiling of chemicals, the JMPR agreed in 2019 to report estimated dietary exposures based on national dietary survey data in addition to the International Estimated Daily Intake (IEDI) results at future JMPR meetings because these data give a more realistic estimate of actual exposure for different populations around the world. Where there is an identified concern about shorter-than-lifetime exposures for the mean or high consumer, additional information on subpopulation groups are provided that is of use to risk assessors and risk managers. This level of information is not available using the IEDI.

Acute probabilistic dietary exposure assessment for pesticide

34. The FAO/WHO Scientific Advice Programme collected pesticide monitoring plans and individual food consumption data in order to perform a probabilistic assessment of the acute exposure for 47 pesticides having an acute reference dose. Data were submitted by Brazil, Canada, European Union (EU) and the United States of America (USA). A scientific Committee was established to ensure the quality and the transparency of the assessment to be done by an independent consultant. Results should support the ongoing review of the international estimated short-term intake (IESTI) equation.

FAO work on food safety and genome editing

35. FAO has initiated its work to develop a technical paper on genome editing and food safety with a consideration of the impact of the technology on the work of Codex Alimentarius. The nature of the paper is technical and fact-based. The paper is expected to be published in late 2021 or early 2022.

FAO work on food safety and cultured/cultivated meat¹³

36. In June 2021, FAO has initiated its work on provision of scientific advice for countries to assure safety of cultured meat / poultry / seafood / dairy / egg products. Since 2013, at least 55 companies are developing such products in 19 different countries and at least 10 countries, mostly high-income countries, are reported to be looking into the safety assessment methodology as well as approval protocols within their regulatory frameworks. While high-income countries have a good access to the technology, sufficient resources and technical capacity to conduct the safety evaluation of these relatively new type of products in many low- and middle-income countries (LMICs) may pose significant technical, financial and regulatory challenges. Thus FAO, in collaboration with relevant partner agencies, national authorities, academia/research institutes and private sector, will prepare a compilation of current technical knowledge on food safety aspects of cultured meat to assist LMICs in their preparations to address these new product types. The work will involve global expert consultations and is expected to have the first set of deliverables in 2022.

¹³ Various terminologies exist in relation to the production of analogues of animal products, such as meat, poultry, seafood, dairy and egg products through "cell culture" techniques. Some call the whole process of producing such products as "cellular agriculture" and the products themselves can be called cultured/cultivated meat, for example. There is no internationally harmonized definition for this yet, thus calling it "cultured meat" is a tentative working solution for the purpose of this document.

Publications

JECFA publications

37. Peer-reviewed external publications:

- *Alan Chicoine, Holly Erdely, Vittorio Fattori, Anke Finnah, Samuel Fletcher, Markus Lipp, Pascal Sanders, Stefan Scheid*, Assessment of veterinary drug residues in food: Considerations when dealing with sub-optimal data, *Regulatory Toxicology and Pharmacology*, 118, 2020, <https://doi.org/10.1016/j.yrtph.2020.104806>
- *Luc Ingenbleek, Philippe Verger, Marie-Madeleine Gimou, Abimbola Adegboye, Samson B Adebayo, Sètondji Epiphane Hossou, Abdoulaye Zié Koné, Eric Jazet, Anaclet D Dzossa, Julius Ogungbangbe, Sylvestre Dansou, Zima J Diallo, Petru Jitaru, Thierry Guérin, Lionel Lopes-Pereira, Renwei Hu, Michael Sulyok, Rudolf Krska, Philippe Marchand, Bruno Le Bizec, Sara Eyangoh, Jean Kamanzi, Blaise Ouattara, Caroline Merten, Markus Lipp, Renata Clarke, Jean-Charles Leblanc*, Human dietary exposure to chemicals in sub-Saharan Africa: safety assessment through a total diet study, *The Lancet Planetary Health* 4 (7), e292-e300, [https://doi.org/10.1016/S2542-5196\(20\)30104-2](https://doi.org/10.1016/S2542-5196(20)30104-2)

38. JECFA publications are available on the following websites:

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

WHO <http://www.who.int/foodsafety/publications/jecfa/en/>

39. Recent publications include:

- Compendium of Food Additive Specifications, 91st Meeting. FAO JECFA Monograph 26, 2021, <http://www.fao.org/documents/card/en/c/cb4737en>
- Compendium of Food Additive Specifications, 89th Meeting. FAO JECFA Monograph 25, 2021, <http://www.fao.org/documents/card/en/c/cb3310en>
- Residue evaluation of certain veterinary drugs Joint FAO/WHO Expert Committee on Food Additives - 88th Meeting 2019, FAO JECFA Monograph 24 <http://www.fao.org/documents/card/en/c/ca9167en>

JMPR Publications

40. JMPR publications are available on the following websites:

FAO: <http://www.fao.org/agriculture/crops/core-themes/theme/pests/jmpr/en/>

WHO: <https://www.who.int/joint-fao-who-meeting-on-pesticide-residues>

41. Recent publications include:

- The 2019 JMPR Report. Report of the Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and WHO the Core Assessment Group. https://www.who.int/foodsafety/areas_work/chemical-risks/JMPR_2019_Sep_Report.pdf?ua=1
Pesticide residues in food 2019 - Evaluations part I – Residues, <http://www.fao.org/documents/card/en/c/ca7953en>

JEMRA Publications

42. JEMRA publications are available on the following websites:

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

WHO [https://www.who.int/groups/joint-fao-who-expert-meetings-on-microbiological-risk-assessment-\(jemra\)/microbiological-risk-assessment-series](https://www.who.int/groups/joint-fao-who-expert-meetings-on-microbiological-risk-assessment-(jemra)/microbiological-risk-assessment-series)

43. Recent publications include:

- Microbiological risk assessment - Guidance for food. Microbiological Risk Assessment Series No. 36. <http://www.fao.org/documents/card/en/c/cb5006en>
<https://www.who.int/publications/i/item/9789240024892>
- Advances in science and risk assessment tools for *Vibrio parahaemolyticus* and *V. vulnificus* associated with seafood. Microbiological Risk Assessment Series No. 35.

- <http://www.fao.org/documents/card/en/c/cb5834en>
<https://www.who.int/publications/i/item/9789240024878>
- Microbial safety of lipid-based ready-to-use foods for management of moderate acute malnutrition and severe acute malnutrition – Second report. Microbiological Risk Assessment Series No. 29.
<http://www.fao.org/documents/card/en/c/cb3223en>
<https://www.who.int/publications/i/item/9789240019904>
 - In brief: Assessing the risk of microbiological hazards in foods.
 - Arabic, <http://www.fao.org/documents/card/ar/c/cb4709ar>
 - Chinese, <http://www.fao.org/documents/card/zh/c/cb4709zh>
 - English, <http://www.fao.org/documents/card/en/c/cb4709en>
 - French, <http://www.fao.org/documents/card/fr/c/cb4709fr>
 - Russian, <http://www.fao.org/documents/card/ru/c/cb4709ru>
 - Spanish, <http://www.fao.org/documents/card/es/c/cb4709es>
 - <https://www.who.int/publications/m/item/in-brief-assessing-the-riskof-microbiological-hazards-in-foods>
 - Microbiological Risk Assessment (MRA) for Food (Infographic).
 - Arabic, <http://www.fao.org/3/cb5037ar/cb5037ar.pdf>
 - Chinese, <http://www.fao.org/3/cb5037zh/cb5037zh.pdf>
 - English, <http://www.fao.org/3/cb5037en/cb5037en.pdf>
 - French, <http://www.fao.org/3/cb5037fr/cb5037fr.pdf>
 - Russian, <http://www.fao.org/3/cb5037ru/cb5037ru.pdf>
 - Spanish, <http://www.fao.org/3/cb5037es/cb5037es.pdf>
 - [https://www.who.int/multi-media/details/microbiological-risk-assessment-\(mra\)-for-food](https://www.who.int/multi-media/details/microbiological-risk-assessment-(mra)-for-food)
 - Risk-based examples and approach for control of *Trichinella* spp. and *Taenia saginata* in meat, Revised edition. Microbiological Risk Assessment Series No. 25.
<http://www.fao.org/tenure/resources/results/card/en/c/CB1672EN>
<https://www.who.int/publications/i/item/9789240012431>

JEMNU Publications

44. Recent publications include:

- The report of the meeting of JEMNU on nitrogen to protein conversion factors for soy-based and milk-based ingredients used in infant formula and follow-up formula:
 FAO: <http://www.fao.org/publications/card/en/c/CA8805EN>
 WHO: <https://www.who.int/publications/i/item/9789240000216>
- Nitrogen and protein content measurement and nitrogen to protein conversion factors for dairy and soy protein-based foods: a systematic review and modelling analysis
 FAO: <http://www.fao.org/documents/card/en/c/ca8862en>
 WHO: <https://www.who.int/publications/i/item/9789241516983>

Other publications

- FAO. 2021. Risk profile - Group B *Streptococcus* (GBS) – *Streptococcus agalactiae* sequence type (ST) 283 in freshwater fish. Bangkok. <https://doi.org/10.4060/cb5067en> (4-page factsheet available at <http://www.fao.org/3/cb4901en/cb4901en.pdf>)
- FAO. 2021. Review of derivation methods for dietary intake reference values for older infants and young children (in publication)

- FAO.2021. Computing PDCAAS for Protein Quality Assessment in Follow-up Formula for Young Children (in publication)
- FAO.2021. Manuel sur l'étiquetage des denrées alimentaires pour la protection des consommateurs (in publication)
- FAO. 2020. FAO guide to ranking food safety risks at the national level. Food Safety and Quality Series No 10. Rome. <https://doi.org/10.4060/cb0887en>
- Ad hoc Joint FAO/WHO Expert Consultation on Risk Assessment of Food Allergens. Part 1: Review and validation of Codex priority allergen list through risk assessment. Summary and conclusion. <http://www.fao.org/3/cb4653en/cb4653en.pdf>
https://cdn.who.int/media/docs/default-source/food-safety/jemra/1st-allergen-summary-report-10may2021.pdf?sfvrsn=c505375a_7
- Ad hoc Joint FAO/WHO Expert Consultation on Risk Assessment of Food Allergens. Part 2: Review and establish threshold levels in foods of the priority allergens
<http://www.fao.org/3/cb6388en/cb6388en.pdf>
https://cdn.who.int/media/docs/default-source/food-safety/jemra/2nd-allergen-summary-report-20aug2021.pdf?sfvrsn=915a8417_8

Upcoming meetings

45. **Joint FAO/WHO Expert Meeting on the prevention and control of microbiological hazards in fresh fruits and vegetables, 26 and 28 July 2021, 20 September to 1 October 2021, 22 – 26 November 2021:** The meeting will identify and characterise fresh fruits and vegetables and microbiological hazard combinations of great concern to public health, and review mitigation/intervention measures being used at different points along the food continuum and assess their effectiveness at reducing microbiological hazards in commercial settings.

46. **Ad hoc Joint FAO/WHO Expert Consultation on Risk Assessment of Food Allergens: Part 3 Review and establish precautionary labelling in foods of the priority allergens, virtual meeting, 18- 29 October 2021:** The meeting will focus on evaluating the evidence in support of precautionary labelling.

47. **Joint FAO/WHO Meeting on Pesticide Residues (JMPR), Virtual. 6-17 September 2021:** The agenda of 2020 has been postponed to 2021. Besides, a new list of compounds is also scheduled for 2021 evaluation. FAO and WHO are reviewing agenda options jointly from 2020 and 2021. Priority will be given to finalize evaluations from the 2020 schedule that are available in advanced drafts in both toxicology and residue parts.

48. **Joint FAO/WHO Meeting on Pesticide Residues (JMPR), Rome, Italy. 12-23 September 2022:** The meeting will evaluate the remaining compounds from 2020 and 2021 agendas.

49. **Joint FAO/WHO nutrient requirements for children aged 0-4 years of age, October 2021:** The group will review the results of the updated systematic reviews and derive requirements and upper limits of intake for calcium, vitamin D and zinc.

PART II: FINANCIAL AND BUDGETARY MATTERS

50. The budget requirements presented here are based on the requests for scientific advice from a number of Codex subsidiary bodies. This section provides a summary of cost for the provision of scientific advice to Codex in 2020-2021 by FAO and WHO based on budgeted expenditures. The final information on 2020-2021 expenditure will become available in early 2022.

WHO budget

51. In WHO, the majority of the funds for the activity and staff costs related to the provision of scientific advice in food safety and nutrition is provided through specified voluntary contributions from Member States and other donors while part of the staff costs is provided through assessed and unspecified voluntary contributions. Both food safety and nutrition scientific advice work is implemented by the Department of Nutrition and Food Safety in the Division of UHC/Healthier Populations.

52. For the biennium 2020-21, the planned activity and staff costs for the work on scientific advice are estimated at USD 6.8 million including USD 2,726,000 in food safety (staff costs: USD 1,377,000 and activity costs: USD 1,349,000) and USD 4,085,250 in nutrition (staff costs: USD 2,295,250 and activity costs: USD 1,790,000) (including relevant and related scientific advice and guideline development work in nutrition).

53. By July 2021, the European Union, Japan, USA, Irish Aid, Swiss Agency for Development and Cooperation, Bill & Melinda Gates Foundation, Eleanor Crook Foundation and Vital Strategies have provided voluntary contributions to support the scientific advice work on food safety and nutrition. The EU has now also committed funds for the food safety programme and other Members are strongly encouraged to follow this example.

54. The scientific advice activity of WHO heavily depends on specified contributions received from a small number of Member States which is gratefully acknowledged, in particular the long-standing support from the United States of America to food safety and Japan to nutrition.

FAO budget

55. In FAO, funds to support the activities and staff costs related to the provision of scientific advice to Codex are budgeted in FAO's regular Programme of Work and Budget and through extra-budgetary resources. Food Safety Scientific Advice to Codex is supported by a number of units and divisions within FAO including the Divisions of Food Systems and Food Safety, Plant Production and Protection, Fisheries, and Animal Production and Health. Scientific advice on nutrition, when requested, is provided by the Division of Food and Nutrition.

56. For the biennium 2020-21, USD 6.4 million is budgeted for activity and staff costs related to scientific advice to Codex, including USD 5,824,900 in food safety (staff costs: USD 2,342,000 and activity costs: USD 3,483,000) and USD 575,000 in nutrition (staff costs: USD 533,000 and activity costs: USD: 42,000). We note that the amounts budgeted for the 2020-21 Regular Programme reported here, includes the USD 1 million increase in PWB for 2020-21 (CL 163/3¹⁴ para 30 and CL 164/3¹⁵ para 59) for scientific advice and standard setting. This sum represents a two percent increase compared to funds allocated in 2018-2019 (CX/CAC 19/42/14 paragraphs 2.7 and 2.8).

57. In the 2020-21 biennium, approximately 80 percent of the budget, amounting to USD 5.117 million, represent allocations from FAO's Regular Programme budget. The remaining 20 percent is funded from extra-budgetary contributions from Canada and the USA. The extra-budgetary resources committed at the time of this report for the 2020-21 biennium are equivalent to approximately 138% of the extra-budgetary resources spent on Scientific Advice in the 2018-2019 biennium. Additional extra-budgetary resources are anticipated in the current biennium.

58. The recognition of key scientific advice meetings and consultations that support the standard setting work of Codex (such as JECFA, JEMRA and JMPR) as Corporate Technical Activities in FAO's Programme of Work and Budget has ensured budgetary security for non-staff activities in the current biennium and is gratefully acknowledged.

Conclusion

59. As indicated above, the way in which the provision of scientific advice is currently funded is different between WHO (heavily dependent on voluntary contributions) and FAO (mainly covered by assessed contributions).

60. Overall the contribution of FAO and WHO to the provision of scientific advice equals to approximately USD 13.2 million per biennium. To ensure the ability of the joint scientific advice programme to be able to deliver at the current rate, it will be of paramount importance to ensure this level of stable and predictable funding continue to be made available to both organizations.

¹⁴ FAO Council 163rd Session: <http://www.fao.org/3/mz825en/mz825en.pdf>

¹⁵ FAO Council 164th Session: <http://www.fao.org/3/nc436en/nc436en.pdf>