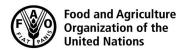
codex alimentarius commission $oldsymbol{\mathsf{E}}$





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Agenda item 8

CX/CAC 21/44/15

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX ALIMENTARIUS COMMISSION

44th Session

MATTERS ARISING FROM FAO AND WHO

(Prepared by FAO and WHO)

1. Introduction

- 1.1 This document highlights evolving policies and related matters of FAO and WHO that could be of interest or relevance to the work of Codex and is structured as follows:
 - Matters arising jointly from FAO and WHO: 3.1 COVID-19, 3.2 Tripartite work on AMR, 3.3 WFSD, 3.4 FAO/WHO's involvement in IAEA work on radionuclides, 3.5 UN Decade of Action on Nutrition 2016-2025, 3.6 SOFI 2021, 3.7 CFS, 3.8 UN FSS 2021, 3.9 Joint FAO/WHO's work on seaweed safety, 3.10 Joint FAO/WHO's work on risks and benefits of fish consumption, 3.11 Joint FAO/WHO Scientific Advice to Codex Alimentarius
 - Matters arising from FAO: 4.1 COVID-19, 4.2 42nd Session of FAO Conference, 4.3 FAO Food Safety Strategy 2022-2031, 4.4 Sustainable funding for the joint FAO/WHO Scientific Advice Programme, 4.5 AMR, 4.6 Development of the Vision and Strategy for FAO's work in Nutrition, 4.7 Joint FAO-IAEA-IOC Technical guidance for the Implementation of Early Warning Systems for Harmful Algal Blooms, 4.8 FAO's work on microplastics, 4.9 FAO's work on marine biotoxins in water from desalinization plants, 4.10 Looking at edible insects from a food safety perspective, 4.11 Literature review on the impact on the Human gut microbiome of substances of interest to food safety, 4.12 Understanding international harmonization of pesticide maximum residue limits with Codex standards; A case study on rice, 4.13 Laboratory methods supporting Codex standards, 4.14 Safety assessment of food derived from recombinant-DNA animals and microorganisms
 - Matters arising from WHO: 5.1 New One Health Unit and OHHLEP, 5.2 WHA resolution and the Update of WHO Global Strategy for Food Safety, 5.3 AMR, 5.4 WHO guideline development on efficacy, safety, and effectiveness of RUTF with reduced milk-protein content, 5.5 Elimination of industrially produced trans-fatty acids, 5.6 Alcohol, 5.7 COVID-19, 5.8 Population sodium/salt intake reduction, 5.9 Burden of foodborne diseases, 5.10 UN FSS 2021, 5.11 WHO report on human health risks resulting from the exposure to microplastic from the environment

2. Recommendations

CCEXEC and CAC are invited to:

- i. note the information given in this document; and
- ii. take necessary actions to best take into consideration the policies of the parent organizations.

3. Matters arising jointly from FAO and WHO:

3.1 **COVID-19**

- 3.1.1. As the global COVID-19 pandemic evolves, FAO and WHO continue their efforts to keep Member States informed about matters relating to COVID-19 and food safety.
- 3.1.2 FAO and WHO have jointly and individually put out numerous policy and guidance documents to aid their members in managing the current global crisis and minimizing the impact of the pandemic. All documents are available here:

- Joint statement by ILO, FAO, IFAD and WHO: <u>Impact of COVID-19 on people's livelihoods, their health and our food systems</u>:

- Joint statement by FAO and WHO: <u>COVID-19 and Food Safety: Guidance for Food Businesses</u>:, now updated in FAO document (see 3.1)
- FAO: FAO's unique portal to all aspects of its work on Novel Coronavirus (COVID-19) is accessible at: http://www.fao.org/2019-ncov/en/
- WHO: WHO's Department of Nutrition and Food Safety (NFS) has set up webpage to consolidate all documents related to COVID-19 and Nutrition and Food Safety: https://www.who.int/teams/nutrition-and-food-safety/covid-19 and a questions and answers (Q&A) on nutrition and food safety related to the COVID-19 pandemic: https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-food-safety-and-nutrition.
- 3.1.3. In addition, challenges imposed by the COVID-19 pandemic to the Codex Trust Fund (CTF) are provided in addendum 4 to this paper.

3.2 Tripartite (FAO/WHO/OIE) work on Antimicrobial Resistance

- 3.2.1. An FAO/WHO/CODEX webinar on FAO and WHO and OIE activities to support monitoring and surveillance of AMR in the food and agriculture sectors was held on 16 March 2021. All presentations and the recording are available for download.¹
- 3.2.2 The following Tripartite documents related to AMR were published:
 - Technical brief on water, sanitation, hygiene and wastewater management to prevent infections and reduce the spread of antimicrobial resistance²
 - Monitoring global progress on antimicrobial resistance: tripartite AMR country self-assessment survey (TrACSS) 2019–2020³
- 3.2.3 The Tripartite published the document *International instruments on the use of antimicrobials across* the human, animal and plant sectors ⁴ in 2020. This document provides an overview and analysis of international instruments that set standards related to the use of antimicrobials across the human, animal and plant sectors, and their release into the environment. The purpose of the document is to identify existing international instruments and standards in order to both guide their implementation and to inform discussions and direction for future international instruments related to antimicrobial use.
- 3.2.4. The 2019 report of the *ad hoc* Inter-Agency Coordination Group (IACG) on AMR⁵ recommended the urgent establishment of three global governance structures to strengthen overall governance, accountability, and cross-sector collaboration in the efforts to tackle AMR. As a first governance structure, the <u>Global Leaders' Group on AMR⁶</u> was established in November 2020. Consisting of heads of government, government ministers, and leaders from private sector and civil society, the group is committed to catalyze political leadership and action to preserve antimicrobial medicines. In their rolling action plan⁷ the Global leaders Group advocate for the successful finalization of the revised *Code of Practice to Minimize and Contain Foodborne AMR* (CX 61-2005) and the draft Guidelines on Integrated Monitoring and Surveillance of Foodborne AMR at TFAMR8 and their adoption at CAC44 as well as support for their subsequent implementation.
- 3.2.5 In response to the IACG report, a Partnership Platform to facilitate multi stakeholder engagement on AMR⁸ is also currently being set up. The platform will include members of the Tripartite Organizations, UN agencies, interested governments, civil society, private sector and academia. An Independent Panel on Evidence for Action against AMR is also being developed.
- 3.2.6. In 2019, the Tripartite launched the <u>AMR Multi-Partner Trust Fund</u> (AMR MPTF)⁹ which supports low-and middle-income countries to scale up efforts to counter the threat of AMR. The AMR MPTF has a five-year scope, through 2024, and is currently funded by the Netherlands, Sweden, Germany and the Fleming Fund

¹ http://www.fao.org/fao-who-codexalimentarius/news-and-events/news-details/en/c/1381093/

² http://www.fao.org/3/ca9120en/CA9120EN.pdf

³ http://www.fao.org/3/cb3690en/cb3690en.pdf

⁴ http://www.fao.org/documents/card/en/c/cb1747en/

⁵ https://www.who.int/antimicrobial-resistance/interagency-coordination-group/IACG final report EN.pdf

⁶ https://www.who.int/groups/one-health-global-leaders-group-on-antimicrobial-resistance

⁷ https://cdn.who.int/media/docs/default-source/antimicrobial-resistance/glg-action-plan-july-

²⁰²¹_final.pdf?sfvrsn=daa1bd02_5&download=true

http://www.fao.org/antimicrobial-resistance/news-and-events/news/news-details/en/c/1417587/

⁹ http://www.fao.org/3/ca5493en/ca5493en.pdf

(the United Kingdom). As of August 2021, nine country-level projects and four global projects have been approved. The latest annual report (2020) can be found here.

3.2.7. The Tripartite is currently also working on a handbook on antimicrobial use which will be based on WHO's AWaRe (Access, Watch, Reserve) categorization classifying antimicrobials into three groups based on the potential to induce and propagate AMR.

3.3 World Food Safety Day

3.3.1. On December 2018, the UN General Assembly adopted a Resolution proclaiming a World Food Safety Day (WFSD) on 7 June and designated FAO and WHO, the parent organizations of the Codex Alimentarius Commission, to jointly facilitate the observance. In 2021, the organizations invited the global community to come together to draw attention and inspire action to help prevent, detect and manage foodborne risks. Under the theme, 'Safe food now for a healthy tomorrow', the campaign focused on how the production and consumption of safe food have immediate and long-term benefits for people, the planet and the economy. International organizations, governments, businesses, NGOs, students, academics and individuals organized events and activities around the world. The pandemic meant that many events were virtual for a second time, which had the advantage of attracting greater participation from all parts of the globe. The Directors-General and Chief Scientists of FAO and WHO celebrated World Food Safety Day and emphasized the fundamental role of science in ensuring the safety of our food in a webinar¹⁰ hosted by FAO, WHO and the Codex Secretariat on Monday 7 June, 2021. A report summarizing the activities of 2021 was published on 7 September 2021 and available on the WFSD website¹¹.

3.4 FAO/WHO's involvement in IAEA work on radionuclides

- 3.4.1. FAO/WHO and IAEA continue to work together on a joint project with a Steering Group of international experts to develop "Guidance on the Control of Radionuclides in Food and Drinking Water in Non-Emergency Situations". The project is being carried out in cooperation with relevant international organizations and national authorities. It aims to develop a harmonized approach for the assessment and management of the radiation dose, from both naturally occurring and human-made radionuclides, in food. This includes guidance material, to be used by the relevant national authorities, that is consistent with the approach for radionuclides in drinking-water (contained in the WHO Guidelines for Drinking-water Quality). The FAO, IAEA and WHO team will produce a report for publication in the IAEA Safety Guide series to record the results of the project, plus a document for publication in the IAEA TECDOC series to suggest how this information may be used to address radiation safety standards and to support the future development of guidance.
- 3.4.2 This work has supported discussions in the Codex Committee on Contaminants in Foods (CCCF). At CCCF13, an electronic working group (EWG) was tasked to produce a discussion paper. In doing so, the EWG concluded that naturally occurring radionuclides are found in many different foods and tend to give radiation doses higher than those provided by artificially produced radionuclides in situations not affected by a nuclear emergency, but no specific safety problem for food, feed or drinking water due to the presence of naturally occurring radionuclides had been identified. Furthermore, no international trade issues had been identified due to the presence of naturally occurring radionuclides in food, feed and drinking water. The CCCF14 agreed that that no further work is required by the committee at this time. It welcomed the offer of IAEA to collaborate with FAO and WHO and produce an informative document for the food safety regulators community and requested the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture to keep it informed of developments in this area.

3.5 UN Decade of Action on Nutrition 2016-2025

3.5.1. The UN Decade of Action on Nutrition, proclaimed by the UN General Assembly in 2016, ¹² aims to accelerate implementation of the ICN2 commitments, achieve the global nutrition and diet-related non-communicable disease (NCD) targets by 2025, and contribute to the realisation of the Sustainable Development Goals by 2030. As part of the mid-term review of the Nutrition Decade, the joint FAO/WHO Secretariat of the Nutrition Decade convened, in 2020, informal consultations with Members and non-state actors to seek their views on progress made, barriers encountered and gaps identified for the first half of the Nutrition Decade, from 2016 to 2020, as well as on focus areas for priority action for the second half of the Nutrition Decade, from 2021 to 2025¹³. In 2021, UN Nutrition facilitated an online consultation using the Global Forum on Food Security and Nutrition platform to inform an update of the Decade's Work Programme with 185

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¹⁰ http://www.fao.org/fao-who-codexalimentarius/news-and-events/news-details/en/c/1410537/

¹¹ http://www.fao.org/fao-who-codexalimentarius/world-food-safety-day/wfsd-homepage/en/

¹² https://undocs.org/A/RES/70/259

¹³ www.un.org/nutrition/about/

persons from 64 Member States responding. Responses will be considered in revising the Decade's Work Programme until 2025.

3.6 The State of Food Security and Nutrition in the World 2021: Transforming food systems for food security, improved nutrition and affordable healthy diets for all (SOFI 2021)¹⁴

3.6.1. FAO, IFAD, UNICEF, WFP and WHO partnered to produce the joint report on The State of Food Security and Nutrition in the World 2021. The annual report provides latest trends and analysis on the global food security and nutrition situation. This year's report presents a first global assessment of food insecurity and malnutrition for 2020. It demonstrates that hunger and malnutrition in all its forms remain a challenge. Projections show that the food security and nutritional status of the most vulnerable population groups is likely to deteriorate further due to the health and socioeconomic impacts of the COVID-19 pandemic. The report also highlights what needs to be done to transform food systems for food security, improved nutrition, and affordable healthy diets for all. The complex challenges to food security and nutrition call for greater synergy and coherence in policy formulation and implementation across sectors, supported by more strategic investments from both the public and private sectors. An in-depth look at how to move from silo solutions to integrated food systems solutions is presented.

3.7 CFS: CFS Voluntary Guidelines on food systems for nutrition

- 3.7.1 The Committee on World Food Security (CFS) is an international and intergovernmental platform for all stakeholders to work together to ensure food security and good nutrition for all. The Committee reports to the UN General Assembly through the Economic and Social Council (ECOSOC) and to FAO Conference. During its 47th plenary session in February 2021, CFS endorsed the CFS Voluntary Guidelines on Food Systems and Nutrition (VGFSyN).¹⁵
- 3.7.2 The objective of the VGFSyN is to contribute to achieving sustainable food systems and improved nutrition, recalling that transformation of food systems should be encouraged in a coherent manner, as appropriate and in accordance with and dependent on national contexts and capacities, in accordance with the three dimensions of sustainable development. The aim is also to present a set of recommendations that helps ensure that healthy diets are accessible, available, affordable, safe, and of adequate quality and quantity, conforming with beliefs, culture and traditions, dietary habits, and preferences of individuals, in accordance with national and international laws and obligations. The VGFSyN are intended to support the implementation of the UN Decade of Action on Nutrition (2016-2025) ¹⁶ with the objective of increasing the visibility, coordination and effectiveness of nutrition actions at all levels, as key aspects toward the achievement of the 2030 Agenda for Sustainable Development. Much of the evidence base comes from the report prepared by the CFS High Level Panel of Experts¹⁷, various UN normative and technical documents, and peer-reviewed scientific literature. FAO and WHO will encourage the use of the VGFSyN by its Members in conjunction with other specialized science and evidence-based standards, normative guidelines and recommendations that provide further explanation and detail for action.
- 3.7.3 Furthermore, FAO has committed to and is in the process of developing an evidence platform aiming to provide easy access to the specialized science and evidence-based standards, normative guidelines and recommendations from FAO, WHO¹⁸ and other normative agencies including those developed by Codex, for each of the 105 recommendations of the VGFSyN.
- 3.7.4 WHO, as active member of the CFS Advisory Group, supported CFS work on the COVID-19 pandemic by supporting the CFS virtual event on 'Resilient food supply chains and workers' health during COVID-19¹⁹ and its background paper²⁰, where the recommendations on food workers safety during COVID-19 jointly prepared by FAO/WHO were presented, and their use through the development of localized versions and illustrated manuals encouraged.

3.8 UN Food Systems Summit 2021

FAO and WHO will update the Codex Alimentarius Commission about the Food Systems Summit through a separate submission that will be made available after the event has taken place.

3.9 Joint FAO/WHO's work on seaweed safety

3.9.1 The world production of marine macroalgae, or seaweed, has more than tripled, up from 10.6 million tonnes in 2000 to 32.4 million tonnes in 2018. Increased cultivation and utilization of seaweed are expected to

¹⁴ http://www.fao.org/publications/sofi/2021/en/

¹⁵ www.fao.org/cfs/workingspace/workstreams/nutrition-workstream/en/

¹⁶ https://www.un.org/nutrition/sites/www.un.org.nutrition/files/general/pdf/work programme nutrition decade.pdf

¹⁷ www.fao.org/3/i7846e/i7846e.pdf

https://www.who.int/teams/nutrition-and-food-safety/cfs-voluntary-guidelines-on-food-systems-and-nutrition

¹⁹ http://www.fao.org/fileadmin/templates/cfs/Docs1920/COVID-19/COVID-19 2-Chair Summary 28 July 2020.pdf

²⁰ http://www.fao.org/fileadmin/templates/cfs/Docs1920/COVID-19/CFS_COVID-19_Discussion_Paper_FINAL2.pdf

be important pillars of sustainable food security and a robust blue economy in the near future. Many factors can affect the presence of hazards in marine macroalgae and seaweed, including seaweed type, physiology, season, production waters, harvesting methods and processing. Several hazards, among them heavy metals and marine biotoxins have been reported to be (potentially) associated with seaweed. However, legislation and guidance documents on seaweed production and utilization are generally still lacking. In this regard, FAO is developing a background document that identifies food safety hazards (chemicals, pathogens and toxins) linked to the consumption of seaweed and aquatic plants. This will set up the basis for undertaking further work in this area. FAO and WHO consider that there might be value in developing relevant Codex guidance on this subject and is presenting this issue for consideration by the Committee in the context of the proposal made in Addendum 1 to this paper.

3.10 Joint FAO/WHO's work on risks and benefits of fish consumption

3.10.1 Since 2010 when the last joint FAO/WHO expert consultation was held to assess the risks and benefits of fish consumption, new evidence has become available. FAO and WHO are therefore planning to update the Report of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption. This will be done through an expert consultation that will draw a number of conclusions regarding the health benefits and health risks associated with fish consumption and recommend a series of steps that Member States should take to better evaluate and manage the risks and benefits of fish consumption and more effectively communicate these risks and benefits to their citizens. The output of the Expert Consultation will set a framework for assessing the net health benefits or risks of fish consumption that will provide guidance to national food safety authorities and the Codex Alimentarius Commission in their work on managing risks, taking into account the existing data on the benefits of eating fish.

3.11 Joint FAO/WHO Scientific Advice to Codex Alimentarius

3.11.1 For more details regarding the work of the joint FAO/WHO scientific advice work to Codex Alimentarius, including the work of JECFA (Joint FAO/WHO Expert Committee on Food Additives), JEMRA (Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment), JMPR (Joint FAO/WHO Expert Meeting on Pesticide Residues), JEMNU (Joint FAO/WHO Expert Meeting on Nutrition) as well as the work of ad-hoc expert committee, the Committee is invited to consider the information provided separately in CAC/44 INF/2.

4. Matters arising from FAO

4.1 **COVID-19**

- 4.1.1 FAO has issued a new guidance document²¹ to highlight additional measures that food businesses and the authorities regulating the sector can take to protect workers from person-to-person spread of COVID-19. The updated guidelines are to help ensure that the integrity of the food chain is maintained and adequate and safe food supplies are available for consumers. While COVID-19 may pose an occupational safety risk for workers in any type of business or industry where individuals work in close proximity to one another, SARS-CoV-2 itself is not considered a direct food safety hazard. Updated with new evidence, this FAO guidance updates the FAO/WHO interim guidance, COVID-19 and food safety: guidance for food businesses: Interim guidance (dated 7 April 2020) to suitably protect food workers, while not to restrict the food supply chains with ineffective measures. The document covers general principles of worker protection and advice for activities in primary production, food processing, transport as well as at retail level, including shops, restaurants and other food outlets.
- 4.1.2 FAO continues to work on COVID-19 response and recovery and delegates are invited to review all resources from FAO's central platform: http://www.fao.org/2019-ncov/en/

4.2. Issues Arising from 42nd Session of FAO Conference²²

- 4.2.1 The Conference reiterated the important role of scientific and evidence-based normative work of FAO and welcomed the increased visibility of the Organization's normative work, and its support to the standard setting work of the Codex Alimentarius and the International Plant Protection Convention (IPPC) in the Strategic Framework.
- 4.2.2 The Conference considered the Medium Term Plan (MTP) 2022-25 and the Programme of Work and Budget (PWB) 2022-23. Regarding the substance of the proposals in the MTP/PWB, the Conference appreciated the important role of scientific and evidence-based normative and standard-setting work of FAO and welcomed the maintenance of the increased level of funding from 2020-21 for the International Plant Protection Convention (IPPC), the Joint FAO/World Health Organization (WHO) food safety scientific advice programme and the Joint Centre between FAO and the International Atomic Energy Agency (IAEA);

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²¹ https://doi.org/10.4060/cb6030en

²² The full report is available here: http://www.fao.org/3/ng170en/ng170en.pdf

4.2.3 The Conference endorsed the conclusions and the recommendations contained in the Report of the 27th Session of the Committee on Agriculture (COAG). (Note this includes COAG requesting FAO to develop a new food safety strategy).

- 4.2.4 The Conference welcomed the Strategic Framework 2022-31 and its strategic narrative of supporting the transformation, that should be encouraged in a coherent manner, as appropriate, in accordance with, and dependent on national contexts and capacities, to achieve more efficient, inclusive, resilient and sustainable agri-food systems for better production, better nutrition, a better environment, and a better life, leaving no one behind, to support the achievement of the 2030 Agenda and FAO's three Global Goals of Members. It was recognized that the four betters identified in the Strategic Framework should be seen and addressed through a food systems approach, with a balance of the social, environmental and economic dimensions of sustainable development and within the framework of FAO's mandate. Note the executive summary of FAO's Strategic Framework reads²³:
 - As called for in the Basic Texts, since 2010 all of FAO's work is guided by a Strategic Framework prepared for a period of ten to fifteen years, reviewed every four years. The Strategic Framework 2022-2031 has been developed in the context of major global and regional challenges in the areas of FAO's mandate, including the COVID-19 pandemic.
 - A world facing escalating threats demands that we act without delay to safeguard livelihoods, future-proof our planet and lock in sustainable outcomes. The 2030 Agenda is there to guide us, but the historic consensus surrounding its adoption must be matched by political determination to deliver it. With many of the goals in the 2030 Agenda off-track, the need to engage all actors at all levels becomes all the more pressing. Today's challenges require cooperation, not only across borders but across the whole of society.
 - FAO's Strategic Framework seeks to support the 2030 Agenda through the transformation to more
 efficient, inclusive, resilient and sustainable, agri-food systems for better production, better nutrition, a
 better environment, and a better life, leaving no one behind.
 - The four betters represent an organising principle for how FAO intends to contribute directly to SDG 1 (No poverty), SDG 2 (Zero hunger), and SDG 10 (Reduced inequalities) as well as to supporting achievement of the broader SDG agenda, which is crucial for attaining FAO's overall vision. The betters reflect the interconnected economic, social and environmental dimensions of agri-food systems. As such, they also encourage a strategic and systems-oriented approach within all FAO's interventions.
 - Twenty Programme Priority Areas will guide FAO on filling critical gaps and putting in place the conditions needed to drive the changes that will ultimately contribute to the achievement of the selected SDG targets. It is of note that one of the Programme Priority Areas specifically targets food safety and us jointly developed by the Codex Alimentarius Secretariat and the Food Systems and Food Safety Division, with broad input throughout the organization. By fully embracing the SDGs, FAO moves away from bespoke targets and indicators and adopts a common language.
 - FAO will also apply four cross-cutting/cross-sectional "accelerators": (i) technology, (ii) innovation, (iii) data, and (iv) complements (governance, human capital, and institutions) in all its programmatic interventions to accelerate impact while minimizing trade-offs.
 - The document also highlights the importance of a shift in FAO's working paradigm to ensure transformational change. FAO's reinvigorated, fit-for-purpose business model aims to ensure an inclusive and agile Organization that is transparent, open, innovative, responsible, effective and impactful and that serves its Members to achieve the four betters. The improved programmatic approach will be supported by deepening and expanding partnerships, ensuring optimal leverage of FAO's normative strengths, seeking innovative financing mechanisms and sources, working under a unified vision (One FAO), embracing efficient and innovative approaches, and being prepared to operate in a world of increasing risk and uncertainty.
 - The Strategic Framework was developed through an inclusive and transparent process involving
 extensive internal and external consultations, Governing Body meetings and informal consultations. It
 was also guided by FAO's strategic foresight exercise, which aims to increase preparedness and
 effectiveness around achieving the Agenda 2030 and to share knowledge on challenges, threats and
 opportunities toward the transformation to more efficient, inclusive, resilient and sustainable agri-food
 systems.
- 4.2.5 The Forty-second Session of the FAO Conference endorsed the Voluntary Code of Conduct for Food Loss and Waste Reduction.²⁴ The Code of Conduct presents a set of guiding principles and standards for responsible practices that Governments and other stakeholders can voluntarily apply to effectively reduce food

²³ Excerpt from: http://www.fao.org/3/ng170en/ng170en.pdf

²⁴ The Voluntary Code of Conduct for Food Loss and Waste Reduction is available here: http://www.fao.org/3/nf393en/nf393en.pdf

loss and waste while promoting sustainable and inclusive agricultural and food systems, hence aiding the achievement of sustainable development. The document also presents the actions and measures that countries, national and subnational authorities, food supply chain actors, the private sector, producer organizations, civil society organizations, academic and research institutions, and other stakeholders should take or put in place in order to contribute to food loss and waste reduction.

4.3. Development of a new FAO Food Safety Strategy 2022-2031

To support its new Strategic Framework 2022-2031, FAO has been tasked in October and December 2020 by its Governing Bodies (Committee on Agriculture and Council, respectively) to develop a new Food Safety Strategy, which will provide an umbrella for its action at global, regional and national levels. In doing so, as per governing body's instructions, it should also serve as an international guidance, policy and advocacy instrument for decision-makers to encourage increased investments and integration of food safety into the development of sustainable food systems, food security policies and agriculture development strategies. In the development of this strategy, due recognition is given to inter-agency collaboration in supporting the membership to develop capacities of national food control systems.

An update of the process for the development of the new FAO Food Safety Strategy 2022-2031 is provided in Addendum 2 to this paper.

4.4 Sustainable funding for the joint FAO/WHO Scientific Advice Programme

The 42nd FAO Conference welcomed the maintenance of the increased level of funding from 2020-21 for the International Plant Protection Convention (IPPC), the Joint FAO/World Health Organization (WHO) food safety scientific advice programme and the Joint Centre between FAO and the International Atomic Energy Agency (IAEA).

4.5 Antimicrobial resistance

- 4.5.1 An "Evaluation of FAO's role and work on antimicrobial resistance (AMR)" was conducted. 25
- 4.5.2 FAO published the following reports
 - Handbook: Responsible use of antibiotics in livestock production for animal health workers in Viet Nam²⁶
 - Improving communications for antimicrobial resistance (AMR) in Africa: How should we move forward?²⁷
 - Antimicrobial Resistance in Food²⁸
 - Understanding antimicrobial resistance in aquaculture²⁹
 - Tackling antimicrobial use and resistance in dairy cattle³⁰
 - Animal nutrition strategies and options to reduce the use of antimicrobials in animal production³¹,
 - How to use antibiotics effectively and responsibly in dairy production for the sake of human and animal health³²
 - How to use antibiotics effectively and responsibly in pig production for the sake of human and animal health³³
 - How to use antibiotics effectively and responsibly in poultry production for the sake of human and animal health³⁴
- 4.5.3 A consultant meeting was convened by Joint FAO/IAEA Centre in June 2021 to develop a proposal for a coordinated research project, "Isotopic Techniques to Assess the Fate of Antimicrobials and Implications for Antimicrobial Resistance in Agricultural Systems". The project is expected to commence in late 2021 with a call for research contract proposals.
- 4.5.4 The FAO <u>Development Law Service</u> (LEGN) has developed a FAO Methodology to analyze AMR-relevant legislation in the food and agriculture sectors³⁵, including veterinary legislation, food safety, AMR in

²⁵ http://www.fao.<u>org/3/cb3680en/cb3680en.pdf</u>

http://www.fao.org/3/cb0593en/CB0593EN.pdf

http://www.fao.org/3/cb0863en/cb0863en.pdf

²⁸ http://www.fao.org/3/ca8275en/CA8275EN.pdf

²⁹ http://www.fao.org/3/cb2601en/cb2601en.pdf

³⁰ http://www.fao.org/3/cb2201en/CB2201EN.pdf

³¹ http://www.fao.org/3/cb5524en/cb5524en.pdf

³² http://www.fao.org/3/cb4156en/cb4156en.pdf

http://www.fao.org/3/cb4158en/cb4158en.pdf

http://www.fao.org/3/cb4157en/cb4157en.pdf

³⁵ http://www.fao.org/fao-who-codexalimentarius/news-and-events/news-details/en/c/1312576/

crops, environment, water and waste. With the financial support of the MPTF, FAO, OIE and WHO are working collaboratively to further develop this methodology and to upgrade it into a One Health AMR Legal Assessment tool including a chapter on human health. The Methodology has been applied in 25 countries of Africa³⁶, Asia³⁷, Central Asia³⁸ and Latin America. OIE provided input that was incorporated into the refining of the methodology and has collaborated with FAO in piloting a joint mission to the Philippines to conduct the first VLSP (Veterinary Legislation Support Programme).

- 4.5.5. A Regional Workshop_on Legislation and AMU/AMR was conducted in Bangkok in March 2018.³⁹ The workshop brought together a community of regulators and experts from the region as well as WHO, OIE, and ASEAN. At the request of the participants, a second workshop was organized in Bangkok in July 2019. Other regional workshops took place on 11-12 December 2018 in South Africa, including participants from SADC countries, as well as in Ouagadougou, Burkina Faso, on 11 March 2019 and Abuja, Nigeria, on 26-27 June 2019, for francophone and anglophone countries in West Africa. More recently, a workshop on AMR legislation for all countries in Africa was developed in June 2021. In Latin America, a regional workshop served for the five beneficiaries of a Norad funded regional AMR project (four countries and a regional organization) to share their experiences. Support is planned for similar workshops in other regions and sub-regions, with one aim being to consider where and how regional harmonization of legislation can support improved management of AMR.
- 4.5.6 FAO legal experts are working to identify AMR-relevant legislations and policies within and across countries and building an AMR dataset of FAOLEX (a comprehensive database of national legislation and policy in all areas under FAO's mandate). The dataset facilitates access and understanding of the different legal areas relevant for AMR and includes country profiles identifying the AMR-relevant legislation at the national and regional levels. Based on the above experience, experts from LEGN are developing a legislative study on AMR-related legislation, including best practices and options to strengthen regulatory frameworks on AMR.
- 4.5.7 FAO has published an AMR Policy Review and Development Framework for Asia and the Pacific⁴⁰. The regional guide is intended for governments to review, update, and develop policies to address AMR and AMU in animal production. In addition, the document, "Slowing down superbugs Legislation and antimicrobial resistance"⁴¹ was also published in 2021.
- 4.5.8 Different modalities of stakeholder assessment studies have been completed in 10 countries across different stakeholders, mainly involving farmers and veterinarians, as well las extension workers distributing antimicrobials. A report, "Towards a bottom-up understanding of antimicrobial use and resistance on the farm: A knowledge, attitudes, and practices survey across livestock systems in five African countries," 42 has been published.
- 4.5.9 FAO has developed a stepwise approach tool to address AMR based on the FAO Action Plan called the "Progressive Management Pathway" (PMP) to help Member States with developing and operationalizing multi-sector 'One-Health' National Action Plan (NAP) to combat AMR. To achieve an optimal and sustainable use of antimicrobials, PMP expresses stages and develops in-country competencies to improve progressively better actions for improving awareness, developing monitoring and surveillance capacity, strengthening governance, promoting good practices and the prudent use of antimicrobials. Since that time, PMP has been conducted in several Member countries (Belgium, Ghana, Kenya, Kyrgyzstan, the Lao People's Democratic Republic, Morocco, Saint Kitts & Nevis, Senegal, Sierra Leone, Tajikistan, Tunisia).

4.6 Development of the Vision and Strategy for FAO's work in Nutrition

- 4.6.1 After a thorough two-year consultative and iterative process, the Vision and Strategy for FAO's Work in Nutrition (the Nutrition Strategy)⁴³ was endorsed at the 166th Session of the FAO Council in April 2021. The Nutrition Strategy articulates FAO's vision for nutrition and provides a framework to guide and prioritize FAO's action to enable healthy diets and positively impact nutrition outcomes over the next five years.
- 4.6.2 The Nutrition Strategy sets out a framework for FAO's future action, which includes enhancing access to nutritious foods while reducing food loss and waste, The Vision and Strategy for FAO's Work in Nutrition (FAO's Nutrition Strategy) highlights FAO's role in enabling healthy diets, to advance efforts towards reaching global nutrition targets and the SDGs. FAO's Nutrition Strategy also aligns with the Organization's Strategic

³⁶ Kenya, Ghana, Ethiopia, the United Republic of Tanzania, Zambia, Zimbabwe, South Sudan and Mozambique

³⁷Lao, Cambodia, Philippines, Viet Nam, Bangladesh

³⁸ Azerbaijan, Armenia, Belarus, Kyrgyzstan, Kazakhstan, Tajikistan, Ukraine

³⁹ http://www.fao.org/legal/development-law/magazine-1-2018/en/#fourth

⁴⁰ http://www.fao.org/3/CA1486EN/ca1486en.pdf

⁴¹ http://www.fao.org/3/cb4128en/cb4128en.pdf

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0220274

⁴³ http://www.fao.org/3/ne853en/ne853en.pdf

Framework to leverage all areas of technical expertise towards achieving the four aspirations of Better Production, Better Nutrition, a Better Environment and a Better Life. It aims to support countries in enabling healthy diets and boosting the capacity of all actors along the agri-food system to continue producing and delivering affordable, adequate, safe, diverse and culturally appropriate diets. Grounded in a food systems approach and its guiding principles, the strategy highlights the Organization's role in enabling healthy diets, to advance efforts towards achieving targets across the SDGs, especially those of SDG 1, SDG 2, SDG 3, SDG10, SDG 12, SDG 14, and SDG 17.

4.7 Development of a Joint FAO-IAEA-IOC Technical Guidance for the Implementation of Early Warning Systems for Harmful Algal Blooms

- 4.7.1 Harmful algal blooms (HABs) have significant impacts on food safety and security, through contamination, or mass mortalities of aquatic organisms. Indeed if not properly controlled, aquatic products contaminated with HAB biotoxins are responsible of potentially deadly foodborne diseases and when rapidly growing, HABs consequences include reduced dissolved oxygen in the ocean, dead zones and mass mortalities of aquatic organisms. Improving HABs forecasting could be an opportunity to develop early warning systems for HAB events such as food contamination, mass mortalities or foodborne diseases.
- 4.7.2 Surveillance systems have been developed to monitor HABs in many countries; however, the lead-time or the type of data (i.e. identification at species level, determination of toxicity) may not be sufficient to take effective action for food safety management measures or others such as transfer of aquaculture products to other areas. Having adapted forecast or early warning systems could help mitigate the impact of HABs and reduce the occurrence of HAB events. In this regard, FAO is taking the lead in the development of a Joint FAO-IAEA-IOC Technical Guidance for the Implementation of Early Warning Systems for HABs. The document will guide competent authorities and relevant institutions involved in consumer protection or environmental monitoring to implement early warning systems for HABs present in their areas (marine and brackish waters), specifically for those affecting food safety or food security (benthic HABs, fish killing HABs, pelagic toxic HABs and cyanobacteria HABs).

4.8 FAO's work on microplastics and food safety

- 4.8.1 The Global Oceans Action Summit for Food Security and Blue Growth⁴⁴ requested that the FAO, the International Maritime Organization (IMO) and the United Nations Environment Programme (UNEP) work together with the Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) to improve the knowledge base on microplastics in the marine environment and provide policy advice on this topic. As a result, UNEP approached GESAMP, FAO and other partners with a proposal to contribute to the global assessment on sources, fate and impacts of microplastics on the marine environment and resources with funding provided by the Government of Norway. FAO was requested to contribute specifically on fisheries and aquaculture.
- 4.8.2 FAO worked closely with key partners and academia, which resulted in a report called "Microplastics in fisheries and aquaculture".⁴⁵ The document describes the status of knowledge on the occurrence of microplastics in the aquatic environment and the implications for aquatic organisms and food safety. It contains a set of recommendations and best practices to reduce the possible impact of microplastics on fish populations and stocks, as well as on food safety issues arising from seafood consumption. However, fisheries and aquaculture products are not the only contributor to the dietary exposure of microplastics and the Subcommittee on Fish Trade (COFI-FT) in its seventeenth session requested FAO to work jointly with WHO to carry out an exposure assessment including other relevant food commodities.
- 4.8.3 In this regard, FAO is developing a background document that compiles information on the occurrence of microplastics in all commodities, microplastics contamination along food value chains, and plastic migration from food contact materials and packaging, as well as a review of the existing literature on the toxicity of the most common plastic monomers, polymers, and additives (plasticisers, flame retardants, pigments and dyes, stabilizers, etc.). This process will set up the basis to evaluate if a risk assessment exercise is viable and the information can be used for the provision of risk management options.

4.9 FAO's work on marine biotoxins in water from desalinization plants

4.9.1 The majority of drinking water is supplied by ground or surface water from freshwater source. Desalination technologies may also be used to obtain drinking water and irrigation from non-conventional water resources such as brackish water, estuarine water or seawater. These technologies have been used for decades to provide drinking water in arid region, and in certain regions, they are the primary if not only source

⁴⁴ http://www.globaloceansactionsummit.com/

⁴⁵ http://www.fao.org/3/a-i7677e.pdf

of drinking water.⁴⁶ However to overcome increasing drought conditions, the use of desalination is now expanding to semi-arid as an alternate solution. Desalination is also critical in small island States facing a shortage of fresh water.⁴⁷

- 4.9.2 Five percent of the world's population, of whom half are in the Near East and North Africa are supplied with desalinated water. There are today around 16 000 desalination plants, producing about 100 million m³/day of drinking water and since 2018, more than 400 new desalination projects have been contracted worldwide. While some food safety hazards associated with water from desalinization plants are already well understood and handled, the risk of exposure to biotoxins associated to marine harmful algal blooms (HABs) via desalinated drinking water consumption has not yet been evaluated.
- 4.9.3 The 13th Session of the Intergovernmental Oceanographic Commission (IOC) Harmful Algal Bloom Programme (IPHAB) held at United Nations Educational, Scientific and Cultural Organization (UNESCO) Headquarters in 2017 expressed its interest to cooperate with FAO and WHO on a risk assessment of marine toxins in drinking water from desalination plants. FAO, jointly with IOC-UNESCO are developing a background document that will set up the basis to evaluate if a risk assessment exercise is viable and the information can be used for the provision of risk management options.

4.10 New FAO publication "Looking at edible insects from a food safety perspective" 49

- 4.10.1 Edible insects can diversify diets, improve livelihoods, contribute to food and nutrition security and have a lower ecological footprint as compared to other sources of protein. These potential benefits combined with a heightened interest in exploring alternative sources of food that are both nutritious and environmentally sustainable are spurring commercial production of insects as food and animal feed.
- 4.10.2 While acknowledging the different opportunities that the sector might bring, this new FAO publication analyses the food safety implications associated with edible insects. Some key potential food safety hazards for edible insects are considered in this publication biological (bacteria, virus, fungi, parasites), chemical (mycotoxins, pesticides, heavy metals, antimicrobials), and physical. The potential for allergenic risks associated with edible insects is also discussed.
- 4.10.3 Safety risks of eating insects highly depend on the insect species, the environment they are reared in or collected from, what they eat, and the production and processing methods used. A thorough assessment of food safety hazards will help to establish appropriate hygiene and manufacturing practices, which remain a challenges for the sector.
- 4.10.4 Filling knowledge gaps, developing appropriate regulatory frameworks and encouraging close collaboration among stakeholders will facilitate establishing a multidisciplinary pathway for the sector to promote food safety.

4.11 Literature review on the impact on the Human gut microbiome of substances of interest to food safety

4.11.1 As part of an organization-wide review of the impact of food systems on diet-related non communicable diseases, a literature review has been initiated on the impact on the human gut microbiome of substances of interest to food safety. Evidence of impact on human health, if any, will also be documented. As a first step, a methodology for systematic literature research and review has been established as well as a priority list of substances by categories (e.g. food additives, veterinary drugs residues, pesticides residues, micro plastics etc.). The review is ongoing and while references and findings are compiled, a list of research and knowledge gaps is also being built to inform future potential discussions on challenges in research and how these can be addressed. Literature reviews focusing on the impact of pesticides residues, microplastics and veterinary drug on the human gut microbiome are being submitted to peer review and will be published as soon as ready. New work is about to start on the impact of food additives. A literature review on the interaction of the human gut microbiome on nutrition and health is also being prepared.

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⁴⁶ WHO. 2011. "Safe Drinking-Water from Desalination." World Health Organization https://www.who.int/publications/i/item/WHO-HSE-WSH-11.03

⁴⁷ Jones, Edward, Manzoor Qadir, Michelle T H Van Vliet, Vladimir Smakhtin, Seong-Mu Kang, and M Qadir. 2019. "The State of Desalination and Brine Production: A Global Outlook." Science of the Total Environment 657: 1343–56. https://doi.org/10.1016/j.scitotenv.2018.12.076

⁴⁸ FAO. 2020. The State of Food and Agriculture. Rome. https://doi.org/10.4060/cb1447en

⁴⁹ https://doi.org/10.4060/cb4094en

4.12 Understanding international harmonization of pesticide maximum residue limits with Codex standards: A case study on rice50

4.12.1 The FAO study on which we previously reported has been was published last year and it has been was presented during a webinar⁵¹ held at the margins of the World Trade Organization (WTO) SPS Committee meeting on 5 November 2020.

Laboratory methods supporting Codex standards

- 4.13.1 The Joint FAO/IAEA Centre provides support to FAO/WHO's work in the areas of food authenticity and the control of residues and contaminants in food through applied research and development at its Agriculture and Biotechnology Laboratories in Seibersdorf and coordinated research involving institutes from Member Countries. There are currently two coordinated research projects focusing on food authenticity; "Field Deployable Analytical Methods to Assess the Authenticity, Safety and Quality of Food" (D52040, 2017-2022), which has 15 participating research institutes in 15 countries, and "The Implementation of Nuclear Techniques for Authentication of Foods with High Value Labelling Claims (INTACT Food, D52042, 2019-2024)", with 18 participating institutes in 17 countries. The outputs of these projects, including analytical methods, procedures and databases, will be of relevance mainly to the Codex Committees on Methods of Analysis and Sampling (CCMAS) and on Food Import and Export Inspection and Certification Systems (CCFICS).
- 4.13.2 A coordinated research project "Development and Strengthening of Radio-Analytical and Complementary Techniques to Control Residues of Veterinary Drugs and Related Chemicals in Aquaculture Products" (D52039, 2015-2020/1) involving 15 research institutions in 15 countries concluded in 2021. In total 36 methods were developed/validated; 36 standard operating procedures prepared, and 19 papers or scientific reports produced. This project has contributed to improved detection/analytical technology which is transferable and supports the testing and monitoring of residues/contaminants in aquaculture products and production sites. In eight countries, methods have been applied to national residue monitoring programmes both for products consumed locally, including imports, as well as exports.
- 4.13.3 Under a related research project, "Integrated Radiometric and Complementary Techniques for Mixed Contaminants and Residues in Food" (D52041, 2017-2022) involving 17 countries, 5 multi-class analytical methods for at least 40 residues/contaminants in 4 different food commodities have been developed/validated and used in 4 countries. Furthermore, a multi-residue method for quantification and confirmation of antimicrobial residues and mycotoxins in animal waste was developed, building on earlier work done on determination of chlortetracycline residues, antimicrobial activity and presence of resistance genes in droppings of experimentally treated broiler chickens. This is critical to global efforts on AMR. Work related to AMR is ongoing.
- 4.13.4 The coordinated research project "Depletion of Veterinary Pharmaceuticals and Radiometric Analysis of their Residues in Animal Matrices" (D52043) commenced in 2020 and will run until 2026. Stemming from deliberations of the 23rd and 24th CCRVDF sessions, particularly on the database on countries' needs for MRLs, this project aims to generate data and knowledge to support the establishment of MRLs for certain veterinary drugs in food and to enable developing countries to play a greater role in the process. The project involves 16 research/regulatory institutions from Bangladesh, Brazil, Burkina Faso, Canada, China, Chile, Iran (Islamic Republic of), Korea (Republic of), Morocco, Pakistan, Sudan, Uganda, Uruguay and USA. Collaborations and partnerships are sought, especially for the synthesis or provision of radiolabelled veterinary compounds, access to animal facilities and good laboratory practice (GLP)-certified laboratories, as well as provision of specialized training and/or benchmarking opportunities for the participants. The project's 1st research coordination meeting, postponed from November 2020 due to the COVID-19 pandemic, took place as a virtual meeting from 17-21 May 2021.

Safety assessment of food derived from recombinant-DNA animals and microorganisms 4.14

- 4.14.1. FAO closely collaborates with the Organisation for Economic Co-operation and Development (OECD) and the Convention of Biological Diversity (CBD) to ensure the synergy of three different databases namely: FAO GM Foods Platform; OECD BioTrack Product Database; and the Biosafety Clearing-House (BCH) of the Cartagena Protocol on Biosafety. The three organizations met at the 11th meeting of the Informal Advisory Committee on the Biosafety Clearing-House (BCH-IAC) held online on 1-4 December 2020.
- 4.14.2. Among the recommendations made at the meeting (Report CBD/CP/BCH-IAC/11/3, Annex I), the BCH-IAC recommended that the CBD Secretariat "continue discussion with OECD with the aim of assessing the possibility for OECD to develop permanent unique identifiers for living modified animals in the near future;" and "continue collaborating on exploring possibilities for facilitating information-sharing between the BCH, FAO

51 Watch the webinar at https://www.youtube.com/watch?v=nDqDOGYecVw

⁵⁰ https://doi.org/10.4060/cb0463en

and OECD databases and other relevant databases in the longer term." In response to these recommendations and considering the fact that the OECD Unique Identifier (UI) system developed for plants has been successfully applied in all the databases that FAO, OECD and CBD separately maintain, three organizations consider that it is most efficient for OECD to take the lead to develop the UI systems for living modified animals and microorganisms. FAO and CBD confirmed to closely collaborate with OECD on this initiative.

4.14.3. In relation to application of the OECD UI systems to FAO activities, the FAO GM Foods Platform (http://www.fao.org/gm-platform) employs the OECD UI systems as the key identifier system. However, the current focus of the FAO GM Foods Platform is safety assessment of foods derived from recombinant-DNA (r-DNA) plants authorized in accordance with the Codex "Guideline for the conduct of food safety assessment of foods derived from recombinant-DNA plants (CAC/GL 45-2003, annex III adopted in 2008)." Therefore it is important to have a global discussion on whether the FAO GM Foods Platform need to include the scope of foods derived from r-DNA animals/microorganisms. Since the Codex *ad hoc* inter-governmental task force on food derived from biotechnology (TFFBT) has been dissolved in 2007, FAO wishes to have the topic discussed at the current or future CAC or CCEXEC.

5. Matters arising from WHO

5.1 New One Health Unit and the One Health High Level Expert Panel (OHHLEP).

- 5.1.1 WHO established the One Health Unit in the Division of Healthier Populations (UHC/HEP) to implement and scale up actions on the WHO One Health initiative.
- 5.1.2. In May 2021, the One Health High-Level Expert Panel (OHHLEP)⁵² was launched with 26 selected key international experts. The OHHLEP will initially focus on providing: 1) policy relevant scientific assessment on the emergence of health crises arising from the human-animal-ecosystem interface; and 2) guidance on the development of a long-term strategic approach to reducing the risk of zoonotic pandemics, with an associated monitoring and early warning framework, and synergies needed to institutionalize and implement the One Health approach, including in areas that drive pandemic risk.
- 5.1.3 The OHHLEP has an advisory role to the Partners and is expected to provide advice to the Partners to support their provision of evidence-based scientific and policy advice to address the challenges raised by One Health. The OHHLEP's advice will contribute to enhancing strategic orientations and coordination, and to providing high political visibility on the subject of One Health. It will be based on the analysis of scientific evidence on the links between human, animal and ecosystem health, and contribute to foresight on emerging threats to health. It will improve a common and better understanding of the impacts of food systems (including agriculture, livestock farming and trade, wildlife hunting and trade, aquaculture, animal products processing, handling, distribution and consumer practices) as well as ecological and environmental factors that may be contributing to zoonotic disease emergence/re-emergence and spillover events. Further details about panel composition⁵³, Terms of Reference⁵⁴, Meetings and Working Groups are available on WHO website⁵⁵.

5.2 World Health Assembly resolution and The Update of WHO Global Strategy for Food Safety

- 5.2.1. Member States agreed a new resolution (WHA73.5) that aims to strengthen global efforts on food safety. The resolution urges Member States to apply a "One Health" approach that promotes the sustainability and availability of safe, sufficient and healthy food for all populations. Recognizing food safety threats, including foodborne AMR and climate change, the resolution also calls upon Member States to invest in national food safety systems and innovations, and to share timely data and evidence on foodborne disease outbreaks and hazards to the International Network of Food Safety Authorities (INFOSAN). The Secretariat is requested to update the Global Strategy for Food Safety to address current and emerging challenges and incorporate new technologies and innovative approaches for strengthening food safety systems. It also calls on the WHO Director-General to strengthen the Organization's leadership in the Codex Alimentarius Commission and INFOSAN, and produce updated global foodborne disease estimates by 2025.
- 5.2.2 With the endorsement of the resolution, "Strengthening Efforts on Food Safety" by the World Health Assembly, WHO is mandated by Member States to update the WHO Global Strategy for Food Safety ("the strategy"), in coordination with FAO and in consultation with Member States and OIE, eventually report back to WHA75 in 2022. Under the vision, "All people, everywhere, consume safe and healthy food to reduce the burden of foodborne diseases", this strategy is aiming to serve as a blueprint to guide Member States in their efforts to prioritize, plan, implement, regularly monitor and evaluate actions towards the reduction of the

⁵² https://www.who.int/groups/one-health-high-level-expert-panel

⁵³ https://www.who.int/groups/one-health-high-level-expert-panel/members

⁵⁴ https://cdn.who.int/media/docs/default-source/food-safety/call-for-experts/call-for-experts-onehealth-tor.pdf?sfvrsn=6e157c0f 38

⁵⁵ https://www.who.int/groups/one-health-high-level-expert-panel

incidence of foodborne diseases by continuously strengthening food safety systems and promoting global cooperation.

- 5.2.3 WHO established through an open call a new technical advisory group on food safety: safer food for better health (https://www.who.int/groups/technical-advisory-group-on-food-safety-safer-food-for-better-health). In total, 24 renowned food safety experts representing WHO's six regions were selected and appointed by the Director-General to provide technical advice on the update of the strategy. Two virtual meetings of the technical advisory group were held in February and April 2021, to discuss the overall structure and content of the revised strategy and offer guidance. Besides the food safety experts and WHO staff, focal points from FAO, OIE and the Secretariat of the Joint FAO/WHO Food Standards Programme also attended and provided their inputs at these two meetings. The content of the draft strategy builds on previous global and regional food safety strategies, as well as the meeting outcomes of the two high-level international food safety conferences convened in 2019. All the technical contents also align with Codex standards and related texts.
- 5.2.4 On 13 May 2021, WHO launched a public web-based consultation (https://www.who.int/news-room/articles-detail/public-consultation-on-the-draft-who-global-strategy-for-food-safety) on the updated strategy to collect feedback from all interested stakeholders, including Member States and governmental institutions, United Nations entities and other intergovernmental organizations, academic institutions, non-governmental organizations, private sector entities, and individuals working in public health and food safety. All comments received may be published on WHO's website and will be considered in the revision of the strategy before its submission to the Executive Board at its 150th session.
- 5.2.5 The current draft strategy not only focuses on the most critical infrastructure of national food safety systems, but also advocates all Member States eventually shall build a forward-looking, evidence-based, people-centred, and cost-effective food safety system by applying the five strategic priorities as following: 1) strengthening national food controls; 2) identifying and responding to food safety challenges resulting from global changes and transformations in food systems; 3) increasing the use of food chain information, scientific evidence, and risk assessment in making risk management decisions; 4) strengthening stakeholder engagement and risk communication; and 5) promoting food safety as an essential component in domestic and international food trade. Additionally, the strategy proposes three global food safety targets. By 2030, WHO will assist Member States to achieve 1) a 40% reduction of foodborne diarrhoeal disease incidence per 100 000 population; 2) a score of 3.5 or above (with 5 being the full mark) in terms of the global average capacity score for national surveillance system of foodborne disease and food contamination under the joint external evaluation⁵⁶; and 3) a score 4 or 5 for multisectoral collaboration on food safety events under State Party self-assessment annual reporting⁵⁷.
- 5.2.6 Before its submission to the WHA75 in 2022, the draft strategy will be further discussed at different technical meetings, informal consultations and other intergovernmental meetings in regions. WHO will also actively engage with all stakeholders to ensure the strategy reflects the experience, needs and aspirations of the international community. Further detail is provided in an addendum 3 to this paper.

5.3 Antimicrobial resistance

- 5.3.1. The WHO, FAO and OIE Tripartite Joint Secretariat (TJS) has been established to lead and coordinate the global response to AMR in close collaboration with the UN system and other organizations. The TJS consolidates cooperation between WHO, FAO and OIE, drawing on their core mandates and comparative advantages to address needs of the global response across the One Health spectrum. The TJS is hosted by WHO and contains dedicated staff in FAO and OIE.
- 5.3.2. The establishment of a One Health Global Leaders Group on AMR was recommended by the IACG. Web-based consultations and face-to-face discussions were held in October and November 2019 with Member States, civil society organizations and the private sector to solicit feedback on the draft Terms of Reference. Based on the feedback received a common position was agreed by the Tripartite Directors-General on the way forward in collaboration with the UN Secretary-General's office. Terms of reference of the Independent Panel on Evidence for Action Against AMR are being developed by the Tripartite in line with the recommendations of the IACG.
- 5.3.3. The AMR Multi-Partner Trust Fund (AMR MPTF) has raised 14.7 m USD of catalytic funding to support national action. Nine countries will be supported in the first wave of project proposals currently under development. The AMR MPTF has been recognized by the UN Secretary-General as the mechanism to secure

⁵⁶ Joint external evaluation tool: International Health Regulations (2005), second edition. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO.

⁽https://apps.who.int/iris/bitstream/handle/10665/259961/9789241550222-eng.pdf?sequence=1)

⁵⁷ International Health Regulations (2005) State Party Self-Assessment Annual Reporting Tool. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO (https://apps.who.int/iris/handle/10665/272432)

consistent and coordinated development financing to support One Health National Action Plans and Tripartite Workplans on AMR.

- 5.3.4. The UN Inter-Agency and Expert Group on the SDG Indicators (IAEG-SDGs) held its tenth meeting from 21-24 October 2019, in Addis Ababa, Ethiopia. Among the new indicators approved was an AMR-specific indicator for SDG target 3.d. aimed at reducing the percentage of bloodstream infections due to selected antimicrobial-resistant organisms.
- 5.3.5. WHO developed and published in March 2021⁵⁸ the Extended-spectrum beta-lactamase (ESBL) *Escherichia coli* (Ec) Tricycle protocol as an initiative to support countries with the implementation of an Integrated Multisectoral Surveillance System on AMR with a One Health approach. The ESBL Ec Tricycle protocol is based in one indicator the ESBL producing *E. coli* in three main sectors, human, food animals and environment. The protocol is being implemented in in four WHO Regions, the African (Ghana and Madagascar), Eastern Mediterranean (Pakistan and Jordan), South East Asian (Indonesia, Nepal and India) and Western Pacific Regions (Malaysia). In 2021, the protocol will be implemented in Zambia, Zimbabwe, Senegal, Nigeria, Burkina Faso, Cameroon, Morocco, Iran (Islamic Republic of), Sudan and Bhutan.
- 5.3.6 WHO is establishing an Advisory Group for the Critically Important Antimicrobial list (WHO CIA List). This advisory group is expected to be established in August 2021 and will develop the 7th Revision of the WHO CIA List to be published in 2022.
- 5.3.7 WHO together with FAO and OIE collaborate to develop a One Health Priority Research Agenda on AMR. The agenda will direct investment and scientific interest to support countries in AMR mitigation across sectors. The process will include three systematic reviews on the interface among sectors and an open consultation for Member States to consolidate the input and finalize the research agenda and will be published in 2022.

5.4 WHO guideline development on efficacy, safety, and effectiveness of ready-to-use therapeutic foods (RUTF) with reduced milk-protein content

WHO completed the process to review the efficacy, effectiveness, and safety of the new RUTF formulations (containing alternative sources of protein (non-dairy) or less than 50% of proteins coming from milk or other dairy products) for treating infants and children aged 6 months or older with severe acute malnutrition who have appetite and no medical complications. The WHO normative process also includes retrieval, assessment and summary of evidence on values and preferences (i.e. cultural, religious), inter/intrahousehold sharing, acceptability, adherence, equity, feasibility, accessibility, sustainability and costeffectiveness in different settings. For this purpose, WHO convened the first meeting of the WHO guideline development group - RUTF on 7 November 2019. The main objectives of this meeting were to: i) introduce members of the guideline development group to the WHO guideline development process, including Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology; ii) discuss PICO questions and prioritization of the outcomes; iii) agree on the timeframe for the guideline process. The second meeting of the WHO guideline development group was held virtually on 21 - 24 July 2020, with the objective to review and discuss the results of the systematic reviews and formulate recommendations for the efficacy, safety, and effectiveness of ready-to-use therapeutic foods (RUTF) with reduced or no milk-protein content. The following recommendation was agreed upon based on the available evidence to date: Standard RUTF (with at least 50% of protein coming from dairy products) is recommended for outpatient treatment of children with severe acute malnutrition. Use of RUTF formulations with less than 50% of protein from dairy products for outpatient treatment of children with severe acute malnutrition is encouraged within research and evaluation settings. The guideline has been published and can be found at the following link: https://www.who.int/publications/i/item/9789240022270. WHO is planning a multi-stakeholder consultation later in 2021 to discuss evidence generation and RUTF re-formulations especially regarding cost reductions and improving access.

5.5 Elimination of industrially produced trans-fatty acids

5.5.1 In May 2018, WHO called for the global elimination of industrially produced of *trans*-fatty acids (TFA) by 2023, highlighting as a priority target of the WHO's 13th General Programme of Work (GPW13) which guides the work of WHO during 2019 – 2025⁵⁹, and released the REPLACE action framework to serve as a roadmap for countries to implement the prompt, complete and sustained policies for elimination of industrially produced TFA from the food supply. In May 2019, WHO released the first progress report⁶⁰ together with six

⁵⁸ https://www.who.int/publications/i/item/who-integrated-global-surveillance-on-esbl-producing-e.-coli-using-a-one-health-approach

⁵⁹ The 74th World Health Assembly held in May 2021 agreed to extend the end date of the 13th General Programme of Work, which was originally for 2019–2023, to 2025. (https://apps.who.int/gb/ebwha/pdf files/WHA74/A74 R3-en.pdf)

⁶⁰ https://apps.who.int/iris/bitstream/handle/10665/331300/9789241516440-eng.pdf

REPLACE modules⁶¹ which provide technical background information and propose practical steps to support governments to achieve the elimination of industrially produced TFA from their national food supply. To achieve successful elimination, governments should pass either of the two best-practice policy measures which are outlined in the L and E modules: 1) Mandatory limit of 2 grams of TFA per 100 grams of total fats and oils in all foods; and 2) Mandatory ban on the production or use of partially hydrogenated oils (PHO) as an ingredient in all foods.

- 5.5.2 On 9 September 2020, WHO held a high-level launch event to release the second progress report, "Countdown to 2023: WHO report on global trans fat elimination 2020⁶²". The progress report described the global, regional and national situations and progress over the past year in countries; and discussed challenges and opportunities for future action. Some key messages of the report highlighted the importance of developing and implementing best-practice policy measures, strengthening national regulatory capacities including laboratory capacities to measure TFA content in food and advocating for regional or sub-regional regulations to expand the benefits of TFA elimination policies.
- 5.5.3 The third progress report is currently being prepared to continue monitoring and reporting country actions and achievements which have been made to date towards achieving the 2023 TFA elimination target. Accelerated efforts are being made by Member States over the past year and as part of WHO's support in increasing country impacts, WHO has been undertaking a series of capacity-building workshops to strengthen countries' regulatory capacities for implementing and enforcing policy measures. In addition, to further support the implementation, enforcement and monitoring of best-practice TFA policies, WHO has also developed video tutorials on the WHO global laboratory protocol ⁶³ for assessing TFA to support countries' efforts in strengthening their laboratory capacities.

5.6 Alcohol

- 5.6.1. The WHO Executive Board in its 146th session in Geneva in February 2020 requested, in its decision EB146(14), the WHO Director-General, inter alia, "to develop an action plan (2022-2030) to effectively implement the Global strategy to reduce the harmful use of alcohol as a public health priority, in consultation with Member States and relevant stakeholders, for consideration by the 75th World Health Assembly through the 150th session of the WHO Executive Board in 2022", and "to develop a technical report on the harmful use of alcohol related to cross-border alcohol marketing, advertising and promotional activities, including targeting youth and adolescents, before the 150th session of the WHO Executive Board, which could contribute to the development of the action plan". A description of the process for developing the action plan and the first draft of the global alcohol action plan 2022-2030 are available on WHO's web page⁶⁴. The first draft, inter alia, includes proposed actions for Member States, the WHO Secretariat and economic operators in alcohol production and trade to ensure appropriate consumer protection measures through the development and implementation of labelling requirements for alcoholic beverages to inform consumers about the content of the product, including essential information on ingredients, caloric value and the health risks associated with their consumption. In addition, the WHO Executive Board in its 146(14) decision requested the Director-General of WHO to review the global strategy to reduce the harmful use of alcohol and report to the Executive Board at its 166th session in 2030 for further action.
- 5.6.2 Following the publication of the Global Status Report on Alcohol and Health in 2018⁶⁵, the WHO Secretariat implemented the Global survey on progress attained with SDG 2030 health target 3.5 with a substantial alcohol policy section that included the questions about the labelling of alcoholic beverages with a focus on practices of displaying consumer information and health warnings and legal requirements for that. In addition, WHO EURO undertook in-depth analysis of the situation with alcohol beverage labelling in the European region that highlights the need for specific labelling policies to be developed as a part of a larger policy package.⁶⁶ The issue of alcohol beverage labelling and provision of health-related consumer information is on the agenda of annual dialogues of WHO Secretariat with producers, distributers and marketers of alcoholic beverages.

 $\underline{result=true\&query=partially+hydrogenated+oils\&scope=\&rpp=10\&sort_by=score\&order=descented+oils\&scope=\&rpp=10\&sort_by=score\&order=de$

⁶¹ https://www.who.int/nutrition/topics/replace-transfat

⁶² https://apps.who.int/iris/bitstream/handle/10665/334170/9789240010178-eng.pdf

https://www.who.int/publications/i/item/9789240018044?search-

⁶⁴ https://www.who.int/news-room/detail/28-03-2020-who-to-accelerate-action-to-reduce-the-harmful-use-of-alcohol

⁶⁵ https://www.who.int/substance_abuse/publications/global_alcohol_report/en/

⁶⁶ https://www.euro.who.int/en/health-topics/disease-prevention/alcohol-use/news/news/2020/06/alcohol-labelling-policies-most-countries-lagging-behind-in-promoting-healthier-choices

5.7 **COVID-19**

5.7.1 A Healthy@Home Healthy Diet⁶⁷ webpage has been published including food safety tips and a video on the "5 keys to safer food". A Healthy Diet information brief "Healthy diets to maintain nutritional well-being during the COVID-19 pandemic" is soon to be published bringing together main content and messages on healthy diets based on existing WHO guidelines and other WHO documents.

- 5.7.2 WHO is assessing health service disruption due to COVID-19 including immunization, NCDs, mental health and essential health services (EHS) and these pulse surveys are happening on a quarterly basis. The second round of the national pulse survey on Sexual, reproductive, maternal, newborn, child and adolescent health (SRMNCAH) on continuity of essential health services during the COVID-19 pandemic (January-March 2021) has been published⁶⁸. It contains information on the management of moderate and severe malnutrition as well as nutrition linked health services like antenatal care, postnatal care for women and newborns, WHO has published a country and regional dashboard for tracking continuity of essential health services during the COVID-19 pandemic⁶⁹. A nutrition questionnaire module is under development for the third round of the national pulse survey.
- 5.7.3 Q&As for pregnancy and childbirth ⁷⁰, breastfeeding ⁷¹, food safety for consumers ⁷², food safety authorities ⁷³, and food businesses ⁷⁴ have been developed. A frequently asked questions on COVID-19 vaccines and breastfeeding based on WHO SAGE interim recommendations is currently underway partnering with IFE Core Group, UNICEF and USAID.

WHO has published the following documents on Nutrition and Food Safety related to COVID-19

- Reducing public health risks associated with the sale of live wild animals of mammalian species in traditional food markets⁷⁵
- COVID-19 and Food Safety: Guidance for competent authorities responsible for national food safety control systems⁷⁶
- COVID-19 and Food Safety: Guidance for Food Businesses⁷⁷
- Breastfeeding and COVID-19⁷⁸
- <u>Maintaining essential health services: operational guidance for the COVID-19 context interim</u> guidance⁷⁹
- Community-based health care, including outreach and campaigns, in the context of the COVID-19 pandemic⁸⁰

5.8 Population sodium/salt intake reduction

5.8.1 Following the adoption of the UN Political Declaration on non-communicable diseases in 2011, in 2013, the World Health Assembly endorsed the Global action plan for the prevention and control of non-communicable diseases 2013-2020, together with nine global NCD targets which include a 30% relative reduction in mean population intake of sodium by 2025 with a goal of <2000mg/day. In 2017, four sodium reduction interventions were included in the updated Appendix 3 of The Global action plan which was published as the "best buys" and other recommended interventions for the prevention and control of NCDs. These four best buy interventions included: 1) Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals, 2) Reduce salt intake through the establishment of a supportive environment in public institutions such as hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided, 3) Reduce salt intake through the implementation of front-of-pack labelling.

⁶⁷ https://www.who.int/campaigns/connecting-the-world-to-combat-coronavirus/healthyathome/healthyathome---healthy-diet

⁶⁸ https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS-continuity-survey-2021.1

⁶⁹ https://www.who.int/teams/integrated-health-services/monitoring-health-services/national-pulse-survey-on-continuity-of-essential-health-services-during-the-covid-19-pandemic/dashboard

⁷⁰ https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-pregnancy-and-childbirth

⁷¹ https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-breastfeeding

https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-food-safety-for-consumers

⁷³ https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-food-safety-authorities

⁷⁴ https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-food-businesses

⁷⁵ https://www.who.int/publications/i/item/WHO-2019-nCoV-Food-safety-traditional-markets-2021.1

⁷⁶ https://www.who.int/publications/i/item/WHO-2019-nCoV-Food_Safety_authorities-2020.1

⁷⁷ https://www.who.int/publications/i/item/covid-19-and-food-safety-guidance-for-food-businesses

⁷⁸ https://www.who.int/publications/i/item/WHO-2019-nCoV-Sci_Brief-Breastfeeding-2020.1

⁷⁹ https://www.who.int/publications/i/item/WHO-2019-nCoV-essential-health-services-2020.1

⁸⁰ https://www.who.int/publications/i/item/WHO-2019-nCoV-Comm_health_care-2020.1

5.8.2 In 2016, WHO published the SHAKE Technical Package for Salt Reduction⁸¹, which was designed to assist Member States with the development, implementation and monitoring of salt reduction strategies to enable them to achieve a reduction in population salt intake. In 2021, WHO published the Action Framework for developing and implementing public food procurement and service policies to promote healthy diets⁸² which includes the reduction of salt/sodium intakes. The Action Framework provides an overview of how to develop (or strengthen), implement, assess compliance with, and evaluate, the effectiveness of a public food procurement and service policy.

- 5.8.3 In May 2021, WHO launched the Global Sodium Benchmarks⁸³ for different food categories as part of WHO's efforts in reducing the sodium intakes in populations. The global benchmarks were developed to call for accelerated action from Member States in scaling up their efforts to reduce their populations' sodium intake. They are designed to be complementary to existing and ongoing national and regional efforts and initiatives, and are intended to serve as a reference for such initiatives, where needed. The global benchmarks are also intended to serve as a basis for dialogue with the food and beverage industry to improve the food environment at the global level, following on from the constructive dialogue on reduction of industrially produced trans-fatty acids. In this context, a high-level dialogue meeting was held in June 2021 between the Director-General of WHO and IFBA CEOs, where IFBA member companies were requested to implement the WHO Global Sodium Benchmarks.
- 5.8.4 On June 4th, during the Geneva Health Week Food Systems Dialogues, WHO launched the Sodium Country Scorecard, which depicts standardized information on sodium reduction policies and actions on an interactive platform in GINA (https://extranet.who.int/nutrition/gina/en/scorecard/sodium). This single platform for sharing standardized information on sodium reduction policies and action will enable monitoring of global progress in implementing legislative and other measures to reduce sodium intake and increased accountability towards political commitments. Building on the scorecard, WHO plans to release a Global Sodium Report in 2022 that will describe the current global, regional and national situations and progress in countries; and discuss challenges and opportunities for future action.

5.9. Burden of foodborne diseases

- 5.9.1 WHO reestablished in May 2021 its advisory group, "Foodborne Disease Burden Epidemiology Reference Group (FERG)"⁸⁴ with 26 new members to serve for 3 years from 2021 until 2024 with a specific terms of reference.⁸⁵ The first expert meeting was organized in July 2021, and discussed a three-year strategic framework on three main activities, including (1) estimating the global burden of foodborne diseases, (2) supporting the national estimation of foodborne disease burden, and (3) developing a methodology to monitor progress against the new global food safety strategy with appropriate indicators and targets.
- 5.9.2 WHO published in June 2021 a new handbook that helps Member States assess causes, magnitude and distribution of foodborne diseases. Ref The handbook aims to provide detailed guidance on assessing the burden of foodborne diseases, and aims to promote national studies in order to better allocate resources efficiently to prevention, intervention and control measures. English, French and Spanish versions are already available, and the Russian version is underway for its publication later in 2021. Executive summary is available in all 6 UN languages.
- 5.9.3 A webinar on the Burden of foodborne diseases was conducted⁸⁷ on 29 June 2021 and showcased the current knowledge on the topic, methodology for estimation at the national level, and risk management perspectives at region and country level.
- 5.9.4 A webinar entitled, 'A SDG indicator for food safety' was conducted on 9 June 2021. 88 It reflected challenges and benefits for food safety associated with the development of a potential SDG indicator, and discussed the work of various food safety stakeholders in a global shared accountability in food safety.

5.10 UN Food Systems Summit 2021 (UNFSS)

5.10.1 WHO is the UN anchor agency of Action Track 2 and works with its members as well as across Action Tracks to ensure that food systems deliver healthy and safe diets and improve people's health and well-being.

⁸¹ https://apps.who.int/iris/bitstream/handle/10665/250135/9789241511346-eng.pdf

⁸² https://www.who.int/publications/i/item/9789240018341

⁸³ https://www.who.int/publications/i/item/9789240025097

⁸⁴ https://www.who.int/groups/foodborne-disease-burden-epidemiology-reference-group-(ferg)

⁸⁵ https://cdn.who.int/media/docs/default-source/food-safety/call-for-experts/tor-for-reference-ferg-

³¹aug2020.pdf?sfvrsn=b0a3d1f_8

https://www.who.int/publications-detail-redirect/9789240012264

⁸⁷ https://www.who.int/news-room/events/detail/2021/06/29/default-calendar/webinar-burden-of-foodborne-diseases-how-can-we-estimate-it-and-why-do-we-need-it

⁸⁸ https://www.who.int/news-room/events/detail/2021/06/09/default-calendar/webinar-a-sdg-indicator-for-food-safety

WHO offers its guidance and guidelines, implementation tools and databases to inform the food systems transformation. WHO encourage stakeholders to use a health lens when formulating game changing solutions and assessing impact. WHO is developing a new narrative on food systems impact on health and has published the summary of the document⁸⁹, highlighting the five impact pathways (including a pathway on unsafe and adulterated foods, and a pathway on zoonotic pathogens and AMR).

- 5.10.2 WHO is leading a solution cluster on One Health and AMR⁹⁰ and is engaging in Action Track 1 on food safety in different food safety related solution clusters including in cluster 1.3.1 on "Develop low- and middle-income country capacity to track foodborne disease and improve food safety performance" to develop a global food safety index.
- 5.10.3 For the Pre-Summit, which took place in Rome (26-28 July 2021), the UNICEF and WHO Principals published a joint statement⁹² advocating to put children at the heart of food systems transformation with an accompanying video. For the Action Track 2 session⁹³ at the Pre-Summit, the WHO Deputy Director-General delivered the keynote speech. In that session, the Minister of Health of Ethiopia, Dr Lia Tadesse, highlighted the importance of food safety and the fight against AMR.

5.11 WHO report on human health risks resulting from the exposure to microplastic from the environment

5.11.1 WHO has been working on a project to evaluate the human health risks associated with exposure to microplastics from the environment. A report is under preparation and will supplement a previous WHO assessment of the health risks from exposure to microplastics from drinking-water ('Microplastics in drinking-water' https://apps.who.int/iris/handle/10665/326499). The new assessment aims to provide a better understanding regarding the exposure, effects, and risks of microplastics in relation to human health and to provide guidance and recommendations to inform future research. The paper is expected to be published in late 2021 or early 2022.

⁸⁹ https://www.who.int/publications/i/item/9789240031814

⁹⁰ https://foodsystems.community/one-health/

⁹¹ https://foodsystems.community/food-safety-knowledge-and-risk-assessment-2/

⁹² https://www.who.int/publications/i/item/9789240031814

⁹³ https://vimeo.com/user145891411/download/582499862/08f1e83e18