



COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Sixteenth Session

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UPDATE ON ACTIVITIES RELATED TO FOOD QUALITY, SAFETY AND MARKET ACCESS

Executive Summary

The paper reviews the activities on food quality and safety in the fisheries and aquaculture sector carried out by FAO since the fifteenth session of the COFI Sub-Committee on Fish Trade (COFI:FT/XV) with respect to FAO's work in providing scientific advice to Codex Alimentarius and in supporting member countries to implement the Codex standards.

Suggested action by the Sub-Committee

- Comment on FAO's work on scientific support to Codex Alimentarius in the standard setting process and on technical assistance to member countries for capacity building to improve food safety and market access in the fisheries and aquaculture sectors;
- Provide guidance on future work for FAO with regard to joint FAO/World Health Organization (WHO) provision of scientific advice to Codex Alimentarius; development of guidelines for implementing Codex Standards and Codes of Practice; and technical assistance to member countries for capacity building to improve food safety and market access in the fisheries and aquaculture sectors;
- Recommend future areas of work for ensuring food safety in the fisheries and aquaculture sectors in a changing environment.



INTRODUCTION

1. COFI:FT/XV underlined the importance of FAO's work in capacity-building for developing countries and urged FAO to continue providing them with technical support to facilitate market access and to strengthen government food control systems.
2. COFI:FT/XV also called for technical assistance in support of small-scale fishery communities with regard to food safety and suggested that the Secretariat should explore the use of simplified procedures that still ensure compliance and recognize the importance of regional and local markets in protecting consumer health.
3. COFI:FT/XV expressed strong support for FAO to continue to work in close cooperation with WHO and the various Codex Committees dealing with fish-related issues and that this work should receive adequate funding to ensure that high quality scientific advice is provided to the Codex standard setting process.
4. COFI:FT/XV welcomed the growing collaboration with other international organizations and emphasized the coordination role of FAO in improving dialogue between importing and exporting countries in order to ensure compliance with food safety requirements that support international trade.
5. COFI:FT/XV noted that private standards could become potential trade barriers and called upon FAO to continue cooperating with Codex within the framework of the World Trade Organization Sanitary and Phytosanitary Agreement and to ensure distinction between mandatory and voluntary standards.
6. The objectives of this paper are to: i) report on recent developments in FAO in fish safety and quality; ii) describe FAO activities in this field; and iii) seek the guidance of the Sub-Committee on how to strengthen FAO's work in this area.

RECENT DEVELOPMENTS IN FISH SAFETY AND QUALITY IN CODEX

7. The 34th session of the Codex Committee on Fish and Fishery Products (CCFFP) finalized all items in the multi-step procedure for the development of standards with the only matter identified for new work being the development of guidance and sampling plans for histamine. Since that session, no new requests for further work had been submitted. As the volume of outstanding work for CCFFP did not justify convening regular physical sessions of CCFFP, this Committee was adjourned sine die.
8. It was decided by Codex that the remaining work, such as the new work on histamine and the continuation of the work on methylmercury, would be referred to the appropriate committees - the Codex Committee on Food Hygiene (CCFH) for histamine work and an electronic working group for methylmercury. Other emerging food safety issues will also be discussed under other relevant committees. This is the case of the new work on ciguatera fish poisoning that is now being discussed under the Codex Committee on Contaminants in Food (CCCF), which also discusses other food-based toxins.

FAO ACTIVITIES

9. The FAO Fisheries and Aquaculture Department (FI) has continued its scientific and technical normative work since the last COFI:FT meeting.
10. Foresight exercise: Many factors inside and outside food systems can directly and/or indirectly drive the emergence of important issues in food safety and quality. Early identification of these issues is essential in order to be able to respond and address them in a proactive and effective manner. FI, in cooperation with the Food Safety and Quality Unit of the Agriculture and Consumer Protection Department (AGFF), has taken a proactive step in the identification of critical and emerging issues that affect the fisheries and aquaculture sectors (amongst other sectors), in carrying out a foresight exercise,

involving a survey questionnaire, that will help in the prioritization of future areas of work within FI and in FAO. This is the first phase towards establishing a more comprehensive foresight system that will include a wider set of stakeholders across the public and private sectors to provide a stronger basis for understanding critical and emerging issues. The early results of this exercise identified as a priority marine biotoxins, given the impact of climate change, microplastics in aquatic organisms, given the current situation on marine pollution, and antimicrobial resistance (AMR) and antimicrobial use (AMU), given the threat they pose on the effective prevention and treatment of an increasing range of infections caused by bacteria, parasites, viruses and fungi.

11. Antimicrobial resistance: FAO is working closely with the World Organisation for Animal Health (OIE) and WHO in a tripartite response to the global threat of AMR. FI is an active member of the FAO Inter-Departmental Working Group on AMR that contributes to FAO/OIE/WHO initiatives addressing and coordinating global activities addressing AMR at the animal-human-ecosystems interface.

12. FAO Guidelines for risk-based fish inspection: Work is ongoing to revise the relevant chapters to include antimicrobial resistance as a potential hazard in fish products coming from aquaculture and update the text to include the provisions in Codex guidelines for performing risk analysis of foodborne antimicrobial resistance (Codex Guideline CAC/GL 77-2011).

13. Ciguatera fish poisoning: FAO provided advice to the 11th session of the Codex Committee on Contaminants in Foods (CCCF) on the subject of ciguatera fish poisoning, emphasizing the importance of establishing risk management options for member countries, especially those where this poisoning causes significant mortalities. The Committee endorsed the development of risk management guidelines and the establishment of maximum limits (MLs) for the Caribbean and Pacific ciguatoxins. To facilitate this work, FAO and WHO will, funding permitting, provide scientific advice to carry out a risk assessment of ciguatoxins, on which the maximum limits would be based, and will review existing analytical methods for ciguatoxin detection and quantification, with a view to recommend those useful for routine analysis and surveillance. Related to this work on ciguatera, FI participated for the first time, at the session of the United Nations Educational, Scientific and Cultural Organization-Intergovernmental Oceanographic Commission-Panel on Harmful Algal Blooms (UNESCO-IOC-IPHAB) held in Paris in May 2017 to report on the FAO activities and to discuss with international partners the progress agreed under the UNESCO-IOC/International Atomic Energy Agency (IAEA)/FAO/WHO joint strategy on ciguatera developed at the interagency meeting organized by FAO in December 2015.

14. Histamine work at Codex: FAO provided advice to the 48th session of the CCFH, under which some of the issues previously examined under the CCFFP are now discussed. This is the case of the work on histamine control and sampling plans for histamine. In response to the recommendations from the CCFH, FAO commissioned a study to review the global incidence of histamine (or histamine-like) poisoning attributed to salmon species to allow the CCFH to decide on inclusion, or otherwise, of the species in a table of those fish linked to histamine poisoning.

15. Ad hoc advice to Codex: Advice was provided to the Codex electronic working group (EWG) on methylmercury in fish, where the maximum limits are under discussion. Before CCCF11¹, FAO sent recommendations based on the conclusions of the FAO/WHO expert consultation to the EWG. CCCF11 agreed on further work to prepare proposals on MLs and associated sampling plans for circulation for comments and consideration by CCCF. The EWG will continue this work. The Codex Secretariat will request further data on total mercury and methylmercury in fish through a Codex Circular Letter.

16. Polycyclic aromatic hydrocarbons (PAHs): FAO has supported several member countries in setting policy targets and the private sector in aligning smoking practices with specific Codex Guidelines

¹ www.fao.org/fao-who-codexalimentarius/meetings-reports/detail/en/?meeting=CCCF&session=11

on the levels of PAHs in hot-smoked fish. This work on smoked fishery products arose from the need to meet European Union regulations on the levels of PAHs. The target beneficiaries were small-scale producers of smoked fish in West Africa and hence the new smoking technology that was introduced was designed such that it can be implemented by the small-scale fishery and aquaculture sectors and have a positive impact on food safety through the reduction in PAH levels. Risk managers and risk assessors from Western Africa were trained to use the compiled data on dietary intake and content of PAHs to create a consistent food safety risk analysis framework.

17. Risk assessments in *Vibrio* spp.: Work has continued in providing support jointly with WHO for risk assessment of *Vibrio* spp. in seafood with the objective of supporting countries to implement the international standards of Codex on control of *Vibrio* spp. in seafood. This included risk assessments of *Vibrio parahaemolyticus* in raw oysters and bloody clams and *Vibrio vulnificus* in raw oysters. The more recent guidance developed by FAO/WHO are related to the selection and application of methodology and the next steps for the global risk assessment programme on *Vibrio* spp.

18. Nitrogen factors: A new table of nitrogen factors for certain fishery products has been developed that includes the data that were part of CODEX STAN 166-1989 and other statistical information from available data from peer reviewed publications. The nitrogen factor is the average nitrogen content of seafood tissues on a fat-free basis that can be used for the calculation of seafood content in various products. Information on published nitrogen factors for fish under Good Manufacturing Practices, and interim factors awaiting confirmation and methodology for determining nitrogen factors, have been made available to users through FAO's website as requested by CCFFP.²

19. Sanitation programmes for bivalve molluscs: A draft document on Technical Guidance for the Development of Bivalve Molluscan Sanitation Programs (the Guidance), in line with the Codex Code of Practice for Fish and Fishery Products, has been developed and finalized. The Guidance is mainly intended for primary production of molluscs for consumption as live or raw bivalves. In this context, they apply to Section 7.2 of the Code of Practice and also to assessment and monitoring of areas used for relaying (Section 7.4). Areas used for conditioning and wet storage (Section 7.6.2) in the natural environment may also be subject to assessment and monitoring and the same principles will apply. In the Guidance, consideration has been primarily given to general requirements and microbiological hazards. For chemical hazards, toxin phytoplankton and biotoxins, reference has been provided to relevant Codex standards and other FAO publications. In order to validate the utility of the draft Guidance, the document is being piloted in Angola, Madagascar, Mozambique and Namibia. The pilot trials are contributing to the applicability of the concepts defined in the Guidance to developing countries that have differing levels of implementation of bivalve sanitation programmes. After the pilot trials, the Guidance will be revised and consolidated and made available to users through FAO's website.

20. Marine biotoxins: A technical paper on Toxicity Equivalency Factors for Marine Biotoxins Associated with Bivalve Molluscs³ was discussed and finalized by an expert group during the Joint FAO/WHO Expert Meeting held in Rome on 22–24 February 2016. This work was requested by the CCFFP to FAO/WHO in order to present the status of the science of marine biotoxins associated with bivalve molluscs, their toxin analogues and their biological activity. A scientific paper has also been published on Derivation of toxicity equivalency factors for marine biotoxins associated with bivalve molluscs.⁴

21. Marine microplastics: FAO is working closely with key partners, such as the United Nations Environment Programme (UNEP) and The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), as well as academia, in a global response to the threat to marine ecosystems due to plastic contamination that contributes to the occurrence of microplastics and

² www.fao.org/3/a-bq792e.pdf

³ www.fao.org/3/a-i5970e.pdf

⁴ www.sciencedirect.com/science/article/pii/S0924224416303697

nanoplastics in seafood. In December 2016, FAO organized a Workshop on Microplastics to revise a draft report prepared by technical experts. The report on Microplastics in fisheries and aquaculture describes the status of knowledge on the occurrence of microplastics in the aquatic environment and the implications for aquatic organisms and food safety. The experts elaborated 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.

22. FAO continues its work on dissemination of information on regulatory requirements for trade facilitation and has relaunched the section on Fish Trade Regulations on the FAO GLOBEFISH website⁵. This provides data and analysis on border rejections and alerts from major importing countries and regions, a summary of the relevant food safety related regulations in those countries and regions, amongst other market and trade-related information.

CAPACITY BUILDING

23. FAO has continued its capacity building activities to member countries through support in the implementation of Codex Guidelines and Codes of Practice and Standards to assist them to meet major market requirements and comply with Sanitary and Phytosanitary (SPS) and traceability requirements. This has included support to Gambia, Ghana, Nigeria and Sierra Leone to carry out food safety risk assessment for certain fishery products and to take consistent risk management decisions.

24. Support for the implementation of food safety standards and food control systems in the fishery sector to meet international requirements has been provided to, or is ongoing in, Bangladesh, Eritrea, the Philippines, Thailand and Ukraine through organizing training programmes and/or workshops to disseminate market access requirements related to food safety and quality, traceability and labelling.

25. FAO has also supported the organization of international courses and conferences. A five day intensive “Advanced course on safety assessment of seafood products” was held in April 2017 in Bilbao, Spain, in collaboration with the Mediterranean Agronomic Institute of Zaragoza, an institute within the International Center for Advanced Mediterranean Agronomic Studies (CIHEAM). A number of member countries from both the Mediterranean area and further afield were sponsored to attend the workshop. The biannual World Seafood Congress will take place on 10–13 September 2017 in Reykjavik, Iceland, and will bring together regulators from major importing countries, fisheries and aquaculture certifying bodies, representatives of the fish processing industry, and fish inspection and certification services from various countries. Again, a number of member countries are being supported to attend this Congress. FAO has had a long-standing involvement with this Congress, starting back in 1969.

⁵ www.fao.org/in-action/globefish/en