

codex alimentarius commission

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FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
HEALTH
ORGANIZATION



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

First Session

Beijing, China, 16 - 20 April 2007

INFORMATION ON MATTERS OF INTEREST ARISING FROM FAO, WHO AND OTHER INTERNATIONAL INTERGOVERNMENTAL ORGANIZATIONS

Submission from FAO and WHO

Information on follow up of request from the Codex Alimentarius Commission concerning scientific advice on the health risks and health benefits associated with the consumption of fish and other seafood

1. FAO and WHO have considered the request made by the Codex Alimentarius Commission at its 29th Session, to organize an FAO/WHO Expert Consultation on the health risks and health benefits associated with the consumption of fish and other seafood. The planning of the work has now started and internal FAO and WHO working groups have been established. The request is challenging as principles and methodology for the assessment of nutritional and health benefits and risks of consumption of such an essential and broad category of food items have yet to be developed. Therefore, it has been decided to take a step-wise approach and solicit the expertise of persons who have been working in this field. As a first step, the FAO/WHO secretariat has decided to invite a small group of experts, to seek their advice on the approach to be used to respond to CCFAC request and define possible next steps and scope of the work that needs to be carried out, considering the terms of reference prepared by the CCFAC (ALINORM 06/29/12) at its 38th session. The small group of experts has already been identified and a meeting will likely be held in Rome in May-June 2007. The chairs of the CCCF and CCFEP will be invited to participate at this meeting.

Assessment of the health risks associated with the consumption of fish and other seafood

2. The contaminants of fish and other seafood which are the focus of this request are methylmercury, dioxins and dioxin-like PCBs, since fish and other seafood are the main source of exposure to these contaminants. These contaminants have been subject to risk assessment by various expert bodies, among those JECFA, and the human health risks have been well characterized, including the populations which are at higher risk. The level of contamination of methylmercury, dioxin and dioxin-like PCBs in different fish species has been extensively studied. Bioaccumulation occurs along the food-chain. However, as there is no agreed definition of groups of fish, e.g. oily fish, predatory fish, it would be necessary to establish such definitions before a pattern of contamination could be assessed for such groups.

Assessment of the health benefits of fish and other seafood consumption

3. Fish and other seafood are important sources of food and contain important amounts of a number of nutrients, particularly protein, vitamin D, vitamin B12, iodine, selenium and the long chain n-3 fatty acids (n-3 PUFA), α -linolenic acid (18:3n-3), eicosapentaenoic acid (20:5n-3, EPA) and docosahexaenoic acid (22:6n-3, DHA). A number of studies have investigated the possible correlations between fish consumption and the occurrence of different types of cancer and cardiovascular diseases. Other studies have looked at the role of DHA and iodine in the development of the brain and the neural system, particularly in the growing foetus. The knowledge of health benefits is still limited for other components such as proteins, nucleotides, phospholipids, taurine and coenzyme Q₁₀, all found in significant amounts in fish. The Expert meeting(s), if it will be the preferred option to develop the advice, would consider relevant and up to date knowledge of components found in fish and seafood which have been found beneficial to health. Both the potential to reduce the risk of diet-related chronic diseases and the potential to contribute to the general health and nutritional well-being of populations through securing a diet providing the essential nutritional needs would be considered.

Comparison of the health risks and health benefits of fish and other seafood consumption

4. Information from the studies on health risks and health benefits could be used by an Expert meeting(s) to give recommendations regarding intake of fish and other seafood. For some nutrients and other components, the assessment of risks and benefits will represent a continuum, from inadequate to excess intake. A number of studies have been carried out looking at the benefits and risks of fish and other seafood consumption, without specifically studying one particular component (e.g. n-3 fatty acids). These studies would, however, provide a basis for the considerations of the benefits and risks of consuming fish and other seafood. Recommendations given should be simple and understandable, and should take all population groups into consideration. If needed, children, pregnant/lactating women and other vulnerable groups should be specifically considered. The comparison part of the work is the most challenging one, as it also includes the element of the methodology to be developed in order to quantitatively assess the health risks and health benefits of eating fish and other seafood.