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COMMITTEE ON FISHERIES

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SECOND INTERNATIONAL CONFERENCE ON NUTRITION FOLLOW-UP: THE CONTRIBUTION OF FISHERIES AND AQUACULTURE TO IMPROVED NUTRITION

Executive Summary

In November 2014, by adopting the Rome Declaration and the Framework for Action at the ICN2, world leaders renewed their commitments to establish and implement policies aimed at eradicating malnutrition and transforming the food systems to make nutritious diets available to all. Fisheries and aquaculture can play a critical role in global food security and nutrition. Aquaculture production is steadily growing and is already providing most of the fish consumed by humans. Fish provides a source of bioavailable fish proteins, vitamins and minerals, as well as essential health promoting fatty acids. FAO has embarked on a number of activities to support countries to improve their fisheries and aquaculture sectors and to develop local fish production, create employment, and linking fishery products to markets. Fisheries and aquaculture provide a unique window of opportunity for ICN2 follow-up towards achieving healthy diets.

Suggested action by the Committee

The Committee is invited to:

- Endorse the key areas of work identified for follow up to ICN2 in the fisheries and aquaculture sector;

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Other documents can be consulted at <http://www.fao.org/cofi/en/>*



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- Advise on how best to prioritize fish consumption in nutrition strategies to maximally reap the nutrition and health-promoting benefits; and
- Advise on approaches to improve data collection on the nutrient composition of fish and fishery products.

I. Background TO THE SECOND INTERNATIONAL CONFERENCE ON NUTRITION (ICN2)

1. The Second International Conference on Nutrition (ICN2), co-hosted by FAO and the World Health Organization (WHO), was successfully held from 19 to 21 November 2014 at FAO Headquarters in Rome. A high-level political event, ICN2 was the first global intergovernmental forum devoted to addressing the world's nutrition problems in the 21st century.
2. ICN2 was convened to: (i) review progress made since the 1992 International Conference on Nutrition, respond to new challenges and opportunities, and identify policy options for improving nutrition; (ii) bring food, agriculture, health and other sectors together and align their sectoral policies to improve nutrition in a sustainable manner; (iii) propose adaptable policy options and institutional frameworks that can adequately address major nutrition challenges in the foreseeable future; (iv) encourage greater political and policy coherence, alignment, coordination and cooperation among food, agriculture, health and other sectors; (v) mobilize the political will and resources to improve nutrition; and (vi) identify priorities for international cooperation on nutrition in the near and medium terms.
3. A total of 2200 participants, including 164 Members of FAO and WHO, intergovernmental organizations, as well as civil society and private sector organizations attended the Conference. High level participants included 85 Ministers and special guests.
4. The Conference adopted the Rome Declaration on Nutrition (<http://www.fao.org/3/a-m1542e.pdf>) and its companion Framework for Action (<http://www.fao.org/3/a-mm215e.pdf>). World leaders thereby renewed their commitment to establish and implement policies aimed at eradicating malnutrition and transforming food systems to make nutritious diets available to all.
5. On 1 April 2016, the UN General Assembly adopted Resolution 70/259 proclaiming the United Nations Decade of Action on Nutrition (2016-2025). The Resolution mandates FAO and WHO to co-lead the implementation of the Decade in collaboration with relevant institutions, mechanisms, platforms, partners and stakeholders. The Resolution also calls for active support to the Decade by governments, international and regional organizations, civil society, the private sector and academia, including through voluntary contributions.

II. Relevance of ICN2 outcome documents to the Committee on Fisheries

6. By adopting the Rome Declaration on Nutrition and the Framework for Action, world leaders renewed their commitment to establish and implement policies aimed at eradicating all forces of malnutrition and transforming food systems to make nutritious diets available to all.
7. The current global nutrition situation is characterized by a high prevalence of undernourishment (795 million affected,¹ FAO 2015) and widespread micronutrient deficiencies (vitamin and mineral). About two billion people - nearly 30 percent of the world's population - suffer from one or more forms of micronutrient deficiencies. Over 500 million women of reproductive age are affected by anemia with iron deficiency being a cause of about 50 percent of all cases of anemia. Deficiencies of vitamin A and iodine affect 250 million and 200 million children respectively. The human and economic costs of this is enormous.

¹ *The State of Food Insecurity in the World 2015* (www.fao.org/3/a4ef2d16-70a7-460a-a9ac-2a65a533269a/i46463.pdf)

8. Fish and fish products can contribute to meeting nutritional requirements, especially by providing good quality proteins, micronutrients and essential fatty acids and subsequently contributing to healthy diets for all.

Framework for Action²

9. The Framework for Action (FfA) provides a set of voluntary policy options and strategies in the form of 60 recommended actions, to guide the implementation of the wide-ranging commitments enshrined in the Rome Declaration on Nutrition.

10. The recommendations in the FfA call for a variety of actions. The most relevant recommendations for the Committee on Fisheries broadly grouped in five clusters are as follows:

- a) Creating an enabling environment for effective action (recommendations 1-6)
- b) Increasing actions for sustainable food systems promoting healthy diets (recommendations 8-11, 15-16)
- c) Enhancing social protection, nutrition education and information to build capacities (recommendations 19-22, 24)

III. CONTRIBUTION OF FISHERIES AND AQUACULTURE PRODUCTS TO NUTRITION

Nutritional composition of fish

11. Fish is a rich source of bioavailable protein. Fish protein provides a good combination of amino acids that are essential for human health - in particular lysine and methionine - and compares favourably with that provided by meat, milk and eggs. Although the amount of protein in fish varies a little from species to species and, on occasions, within a species, the protein content for meat and for fish is roughly comparable.

12. Fish is a unique source of iodine and long-chain polyunsaturated fatty acids (LC-PUFA) such as DHA (Docosahexaenoic acid) and EPA (eicosapentanoic acid). These LC-PUFA are found in large quantities in many low-cost, small pelagic fish such as sardines and anchovies, in particular. Fish species that are consumed whole (with bones, head and viscera), as is the case of many small indigenous fish, are also an important source of essential micronutrients - including vitamins A, B and D and minerals - calcium, phosphorus, iodine, zinc, iron and selenium.

Nutritional importance of fish in diets

13. Increasing consumption of fish and its addition to the diets of low income populations (including pregnant and breastfeeding mothers and young children), offers an important means for improving food security and particularly nutrition.

14. Fish consumption offers a number of unique nutritional benefits especially for children and mothers of childbearing age. There is an increasing focus on fish as a source of DHA and iodine, both of which are almost exclusively found in seafood and are essential for the early development of the brain and neural system of infants. DHA is the most abundant fatty acid in the brain and is important for healthy visual and mental development.

15. Fish consumption also contributes to combating micronutrient deficiencies, particularly in situations where the consumption of small indigenous fish is high and where the entire fish, including

² www.fao.org/3/a-mm215e.pdf

the head, bones and viscera are consumed. The LC-PUFAs (DHA and EPA) in fish play an important role in improving cardiovascular health a rapidly emerging issue for many developing countries.

16. Fish can be good sources of vitamins A and D. Vitamin D helps with the absorption of calcium and both are needed to promote bone health, while vitamin A contributes to good eye sight and protects against infections. There is no doubt that foods from aquatic environments can play a significant role in providing the micronutrients and the macronutrients (bioavailable proteins and quality oils) needed for achieving healthy diets for all.

17. The health benefits and health risks associated with specific chemical contaminants (methylmercury and dioxins) in fish species as compared to the health benefits of fish consumption and nutrient intake, were evaluated by a Joint WHO/FAO Expert Consultation in 2010 and a set of recommendations were developed to maximise benefits and minimize risks from eating fish as outlined in the following box.

Recommendations of the Joint FAO/WHO Expert Consultation on the Risks and Benefits of Fish Consumption (2010)

To minimize risks in target populations, Member States should:

- acknowledge fish as an important food source of energy, protein and a range of essential nutrients and fish consumption as part of the cultural traditions of many peoples;
- emphasize the benefits of fish consumption on reducing coronary heart disease mortality (and the risks of mortality from coronary heart disease associated with not eating fish) for the general adult population;
- emphasize the net neurodevelopmental benefits to offspring of fish consumption by women of childbearing age, particularly pregnant women and nursing mothers, and the neuro-developmental risks of not consuming fish to offspring of such women;
- develop, maintain and improve existing databases on specific nutrients and contaminants, particularly methylmercury and dioxins, in fish consumed in their region;
- develop and evaluate risk management and communication strategies that both minimize risks and maximize benefits from eating fish.

Source: <http://www.fao.org/docrep/014/ba0136e/ba0136e00.pdf>

Trends in fish consumption

18. Capture fisheries and aquaculture currently provide 3.0 billion people globally with almost 20 percent of their average per-capita intake of animal protein and a further 1.3 billion people with about 15 percent of their per capita intake. This share can however, exceed 50 per cent in some countries. Among rural populations in the Pacific Island countries, between 50 and 90 percent of consumed protein comes from fish. Dependence on fish is usually higher in coastal than in inland areas. In West African coastal countries, such as the Gambia, Ghana and Sierra Leone, the proportion of fish in total dietary protein exceeds 60 per cent, while in Asian countries such as Bangladesh, Cambodia, Indonesia and Sri Lanka, total dietary protein from fish ranges between 50 and 60 percent.

19. Across the globe, the demand for fish and fishery products is rising, driven largely by population growth, urbanization, increasing incomes and rising living standards. Eating fish is part of the cultural traditions of many peoples. In some populations, fish is a major source of food and essential nutrients. Small indigenous fish species continue to be an integral part of rural diets in many developing countries across the globe.

IV. ICN2 follow-up action in the Fisheries and Aquaculture SECTOR

20. Building on FAO's comparative advantage in fisheries and aquaculture, the areas of work presented below provide a unique window of opportunity for follow-up to targeted ICN2 outcomes.
21. Through engagement with the private sector, improvements can be made in the fisheries and aquaculture sector towards increasing nutritional impacts in areas such as: (1) the reduction of post-harvest losses, (2) increasing the utilization of fish wastes/by-products/co-products/rest raw material and (3) improving the quality and safety of fish products (FfA Recommendation 4). Furthermore, engagement with the private sector can catalyse development and improvement of local fish production, employment creation, social responsibility, and linking fishery products to new markets, thereby contributing to improvements in nutrition.
22. Promoting the inclusion of fish products in school meals and other government institutions to improve nutrition of children and the wider community (FfA Recommendation 16 and 23). Fisheries and aquaculture play a key role in increasing the availability of low cost, nutritious, local fish products for consumption. Promoting fish consumption through nutrition education on the advantages of consuming fish as part of a healthy diet, especially for students, teachers, school officials and parents (FfA Recommendations 19, 20 and 24) is also an important area to be addressed. Encouraging experience sharing between countries and across regions on good practices for the integration of fish and fish products into school meals, in the realm of South-South Cooperation, can further facilitate discussion and dialogue on the contribution of fish in promoting healthy diets (FfA Recommendation 6).
23. Promoting the production and consumption of small indigenous fish species (FfA Recommendation 10). The contribution of small indigenous fish as rich sources of key micronutrients for local populations can have a significant impact on meeting the nutrient requirements of local populations.
24. Promoting simple, low cost preservation technologies with the objective of increasing revenue for smallholders, especially women, and reducing losses (FfA Recommendations 9 and 11). FAO has successfully introduced the drying of fish on raised racks, resulting in quality improvement, reduction of losses and increased incomes for women involved in fish drying.
25. Through product development, new and innovative food products that incorporate the heads, backbones and viscera of larger fish as ingredients, can be produced for human consumption, thereby reducing wastage of these nutrient rich parts (FfA Recommendations 42). Pilot studies into the production of a micronutrient rich and edible product from fish backbones and evaluation of its acceptance in local meals by children, revealed the product to be highly appreciated by that target group.
26. Disseminate and make use of recommendations of the Expert Consultation on Risk and Benefits of Fish Consumption to provide advice on benefit (and risks) of fish consumption (FfA Recommendation 15). FAO is well positioned to assist member countries in developing control mechanisms to ensure that fish products entering the market are safe for consumption (FfA Recommendations 53 and 54).
27. Generate, publish and use data on nutrient composition of fish products (FfA Recommendations 5, 21, 42). In general, data on traditional and non-traditional fish species is lacking, and there is a paucity of information on the nutritional composition of specific parts of fish that are traditionally not consumed.