

Fish as Food

The international democratic process has come a long way in realizing the role of fish in the right to food and nutrition—and yet, a map of the road ahead needs to be laid out

Even though the last century has seen great socioeconomic advances and improvement in human well-being worldwide, much work remains to be done to realize the ultimate goal of the Food and Agriculture Organization of the United Nations (FAO) to contribute to a “world free from hunger and malnutrition, where food and agriculture contribute to improving the living standards of all, especially the poorest and marginalized in an economically, socially and environmentally sustainable manner”.

The 2030 Agenda for Sustainable Development, through its ‘sustainable development goals’ (SDGs), has reinforced FAO’s mission and calls on the world to eliminate hunger and malnutrition. The 17 SDGs and their targets are all interrelated and hence it is important to look at them holistically. They cover a wide range of issues from food security and nutrition to the sustainable use of natural resources. For instance, SDG 2 is ‘zero hunger’; its target recalls the importance of the progressive realization of the human right to adequate food. The SDG 14 of ‘life below water’ recognizes the importance of access to fisheries and related resources and support for small-scale fishers, specifically through target 14b regarding “access for small-scale artisanal fishers to marine resources and markets”. The SDGs are grounded in the norms of human rights and seek to “realize human rights for all”

The human right to food is fulfilled when people alone, or in a community, have access to adequate food or means for its procurement. The ability of people to feed themselves from natural resources is an important element of this right. Naturally, fish and aquatic resources have a direct impact on the right to adequate food, not only for people who depend on aquatic

resources for food and livelihoods but also to satisfy the nutritional needs of vulnerable populations near and far from fisheries resources.

Inclusion of fish in the diet contributes to good physical and cognitive development and aids the fight against multiple burdens like malnutrition, undernutrition, micronutrient deficiencies, overnutrition and related health issues such as non-communicable diseases. Fish is a rich source of nutrients, including omega-3 fatty acids such as eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA); vitamins B12, D and A; minerals such as calcium, iron, zinc and iodine; it is also an important, and often more accessible, source of animal protein. Fish is one of the only natural sources of iodine,

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which helps regulate thyroid function and reduces risk of diseases like goitre. Fish is recognized by the High-Level Panel of Experts (HLPE) as a unique source of heart-healthy long chain polyunsaturated fatty acids (LC-PUFAs) associated with cognitive development, prevention of cardiovascular diseases and the reduction in cholesterol levels.

Affordable nutrition

These important nutrients are often more available and accessible to nutritionally vulnerable populations through consumption of small pelagic species such as anchovy or sardine, which are often more affordable, traditionally consumed whole–

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CARSTEN TEN BRINK



The family sorts fish in Nigeria. Fish can be processed into desirable and affordable nutrient-dense fish products, which can contribute greatly to recommended nutrient intakes (RNIs) for nutritionally vulnerable groups.

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with bones, viscera and eyes—and can provide more micronutrients in comparison to fillet only and boost the absorption of minerals such as iron and zinc from plant-source foods. Provided they are preserved properly, nutrients in fish and fish products can reach communities situated near and far from water bodies. In addition, fish can be processed into desirable and affordable nutrient-dense fish products, which can contribute greatly to recommended nutrient intakes (RNIs) for nutritionally vulnerable groups such as pregnant and lactating women and infants and young children, even when consumed in small quantities.

The 2020 State of World Fisheries and Aquaculture (SOFIA) report of FAO estimates that in 2018, global fish production reached 179 mn tonnes. More than 87 per cent of this – 156 mn tonnes – was used for human consumption; this gives an annual average of 20.5 kg per capita. Global food fish consumption has increased at an average annual rate of 3.1 per cent from 1961 to 2017, a rate almost twice that of the annual world population growth rate of 1.6 per cent for the same period. It is higher than that of all

other animal protein sources. In several communities in developing countries, fish is the main or only source of animal protein and micronutrients, accounting for as much as 70 per cent of dietary animal protein in some coastal and island countries.

However, it is important that aquatic resources are sustainably exploited and managed to provide food security and nutrition and poverty alleviation, now and in the future. To aid this, the FAO supported the development of relevant instruments such as the Voluntary Guidelines to Support the Progressive Realisation of the Right to Adequate Food in the Context of National Food Security (called the Right to Food Guidelines) and the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (called the SSF Guidelines) in support of small-scale fisheries and their communities, to ensure that their right to food is protected, respected and fulfilled, and that they are empowered with the adequate tools to meet the livelihood and nutritional needs of small-scale fisherfolk—as well as the nutritional needs of the

other communities—while at the same time protecting the sustainability of resources.

The human right to food is recognized in article 11 of the International Covenant on Economic, Social and Cultural Rights, under which countries have a legal obligation to guarantee economic and physical access to adequate quantity and quality of food for everyone. States must comply with the obligations to respect, protect and fulfil this right for all people, including marginalized fishing communities. It also entails that participation, accountability and access to effective remedies are ensured at all levels and stages in the implementation of the progressive realization of the right to food.

The UN Expert Mechanism on the Right to Food has documented that fish is an important part of the right to food and ensuring food security, nutrition and livelihoods. The former UN Special Rapporteur, Oliver De Schutter, described, in his 2012 report, the “explicit link between the right to food and the rights of those who produce it to fair access to resources such as fish and water”. In addition, he envisaged two notions of the right to food: “adequate food” and “freedom from hunger”, highlighting the importance of fish as a source of protein and of micronutrients, especially for impoverished people.

De Schutter’s report brought much research to the forefront on the importance of fish consumption not only in the fight against hunger, but also in tackling hidden hunger or micronutrient deficiencies, especially through consumption of smaller fish accessible to those living in poverty; these are rich in vitamins and minerals, particularly when consumed whole. In addition, the seasonality of fish in rural communities is often different from crops, which means that fish can provide diversified livelihoods and reduce vulnerabilities to seasonal food shortages.

The recognition of fish as food in the international human-rights context by the special procedures of the UN Human Rights Council marked a significant advance in acknowledging and raising awareness of the importance of fish for the subsistence of the poorest rural fishing communities. At the same

time, it supports the work carried out by FAO, the Committee on World Food Security (CFS) and COFI in this regard and in the promotion of inclusive and participatory mechanisms for states to adopt legal and policy frameworks and national food strategies, where the voices of the poor and marginalized are heard and with clear mechanisms and process for their protection and compliance.

In 2014, the CFS requested the HLPE to conduct a study on the role of sustainable fisheries, including small-scale fisheries, and aquaculture for food security and nutrition. The HLPE report states that fish was only marginally included in food-security debates, and, despite much recognition of the nutritional importance of fish, it is not mentioned frequently in the food-security and food-systems discourse. The food-security debate previously focused on the availability and access of staple foods and has primarily focused on terrestrial food systems, while the nutritional value of fish and other aquatic foods was either not addressed or has been kept separate; the ‘green’ and the ‘blue’ are often separated. Similarly, prior to the 2014

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HLPE report, FAO’s work on fish and fisheries was conducted mainly from a resource-management perspective and not from a food-security and nutrition perspective.

SSF Guidelines

The same year of the 2014 HLPE report, the SSF Guidelines were endorsed by COFI. They support the visibility, recognition and enhancement of the role of small-scale fisheries to food security and nutrition, contributing towards the eradication of hunger and poverty, ultimately helping in the realization of the right to food and other human rights.

The HLPE report and the SSF Guidelines are milestones

in recognizing fish as a critical source of food. The HLPE made recommendations to Member States and to FAO to integrate fish into national food-security and nutritional policies and programmes. These recommendations also highlighted the importance of small-scale production and the integration of fish in nutrition policies, linking it through public-procurement programmes for small-scale producers.

Building on the HLPE report recommendations and on the SSF Guidelines, FAO has undertaken research activities, developed technical papers, led programmes at national levels in collaboration with national governments, and has informed policy work to draw attention to the nutritional importance of fish. It is worthwhile to sample some examples of the work that FAO has carried out and is currently supporting in these contexts.

There is growing evidence that the inclusion of fish during the first 1,000 days of life—from conception to the child's second birthday—has positive growth outcomes in terms of cognitive and physical development, both in linear growth as well as in situations of acute malnutrition. This

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period is especially important for good maternal nutrition during pregnancy and lactation, and good infant-feeding practices, starting with the introduction of complementary foods after the first six months of the child's life.

The synergistic implementation of both the SSF Guidelines and the Right to Food Guidelines can advance and support the promotion of the nutritional importance of fish during the first 1,000 days of life. For instance, the SSF Guidelines have a primary objective “to enhance the contribution of fisheries to food security and nutrition and support the realization to the right to adequate food”, while the Right to Food Guidelines

provide states that –while taking into account, dietary and eating habits of different cultures—methods should be established to promote food safety and positive nutritional intake, with special emphasis on the nutritional needs of boys and girls, infants and pregnant women.

Fish has much to contribute to optimal nutrition through food-based approaches targeting the first 1,000 days, due to its unique nutrient profile. A recent study has indicated an increase in fatty acid composition of breast milk when mothers consumed fish, linked to positive cognitive development outcomes such as higher intelligence quotient (IQ) scores later in life. Beyond exclusive breastfeeding, the WHO/UNICEF Global Strategy for Infant and Young Child Feeding recommends that low-cost home-based complementary foods prepared with locally available ingredients are introduced to children at six months of age. Recent studies, particularly in Bangladesh and Cambodia, have demonstrated high acceptability of age-appropriate fish-based products for children 6-23 months of age, with evidence of these products providing many of the necessary micronutrients.

School meals are increasingly seen as a unique opportunity to improve food and nutrition for children in several countries suffering from malnutrition. The FAO, together with local partners and national governments, supported three countries—Angola, Honduras and Peru—in incorporating fish into national school feeding programmes. Activities included inclusion of fish in national school feeding policies and strategies and proposals for the public procurement scheme to include the products of small-scale fisheries, offering fisherfolk a regular market and contributing to the community's socioeconomic development.

Pilot activities

The project carried out pilot activities to evaluate culturally acceptable and age-appropriate fish products developed for school children that were incorporated into school feeding programmes, with results demonstrating high acceptability of meals containing fish, among school children. Despite initial successes in acceptability, there are

many barriers to overcome before fish becomes a natural part of school meals in many countries, including the high cost of fish products, perishability, beliefs that children do not like fish, and a lack of political will.

The Right to Food Guidelines encourage states to involve all stakeholders in “the design, implementation, management, monitoring and evaluation programmes to increase the production and consumption of healthy and nutritious foods, especially those that are rich in micronutrients” and adds that states should monitor the “food security situation of vulnerable groups, especially women, children and the elderly, and their nutritional status, including the prevalence of micronutrient deficiencies”. The SSF Guidelines, meanwhile, call on states and other actors to establish coherent policies where food security and nutrition are favoured, promoting the consumption of fish and fishery products within consumer education programmes in order to increase awareness of the nutritional benefits of eating fish.

A study was carried out to analyze fish consumption in the Brazilian Amazon by the Commission for Small-Scale and Artisanal Fisheries and Aquaculture of Latin America and the Caribbean (COPPEAALC, previously Commission of Inland Fisheries in Latin America). The importance of fish consumption in the Amazon region was highlighted throughout this study, revealing fish as the main source of animal protein and that fish consumption was much greater than what is reported by official statistics, which do not consider catches for domestic consumption. However, in other indigenous communities located in the highlands or in areas far from the river basins, low rates of fish consumption were found with clear consequences for levels of malnutrition and other health issues. In the years leading up to the study, it was noted that fish consumption was declining due to the availability of industrialized or processed food products in the diets of Amazon communities, leading to a loss of cultural values and dietary traditions.

Another great concern was the high concentration of mercury – beyond the safe limits for human consumption –

in local fish. This is linked to mining operations near the communities. It has been widely documented how illegal mining and the low standards of operation of some mining concessions are causing systematic violations of human rights in the communities nearby the operations, including the right to food and the right to health, as in the case of the indigenous communities in the Brazilian Amazon region. Therefore, a joint effort by the government, nutritionists and environmentalists is needed to establish sustainable and safe measures for mines that are the source of the mercury.

In relation to indigenous peoples, both the Right to Food Guidelines and the SSF Guidelines have the human-rights principle of non-discrimination as one of the overarching principles for implementation. In addition, the Right to Food Guidelines provide that states should give special attention to

The recognition of the nutritional importance of fish in programmes and strategies is necessary endeavour for achieving the SDGs by 2030.

indigenous peoples and should take steps to ensure that vulnerable groups have access to opportunities and economic resources.

Fish consumption

As noted in the case study for communities in the Amazon, official statistics for fish consumption are often under-accounted; this is due to poor recognition of the importance of small-scale fisheries to food security and nutrition. The ‘Illuminating Hidden Harvests’ study, a partnership between researchers, policymakers and practitioners from FAO, WorldFish, Duke University and national and local partners, has conducted case studies in over 50 countries globally besides undertaking a number of thematic studies to assess the social, environmental, economic and governance contributions of small-scale fisheries, including their contribution to food and nutrition.

Specific analyses include the nutritional quality and food safety of fish across value chains as well as the role of fish from small-scale fisheries for the health and nutrition of women and young children. The results from these studies are expected to be published at the end of this year.

The above examples highlight the important role that fish and small-scale fisheries play in food security, nutrition and livelihoods, particularly for vulnerable groups throughout human life—from the first 1000 days to school age and into adulthood. These examples also highlight the importance of linking participatory research, policy and practice for evidence-based decision making and programming. This is a conclusion from the FAO International Symposium on Fisheries Sustainability to drive sustainable development outcomes in ensuring food security, nutrition and livelihoods. To strengthen these linkages, FAO has partnered with prominent universities researching the role of fish—particularly small pelagic fish—for nutrition and food security to raise awareness and highlight the latest research in this field.

Recognizing the potential for fish and fish products to ameliorate nutrition issues in small-scale fishing

Despite the progress made by the various programmes and projects, much remains to be done within the international human-rights context in the work of FAO, CFS and their partners.

communities as well as surrounding communities, the importance of the post-harvest sector in ensuring safe fish products to consumers, and the role of women in the fisheries post-harvest sector, the FAO has started a new project named “Empowering Women in Small-Scale Fisheries for Sustainable Food Systems”, funded by the Norwegian Agency for Development Cooperation (NORAD). It is set to run between 2020-2024 in five Sub-Saharan African countries: Ghana, Malawi, Sierra Leone, Uganda and Tanzania. In the future it will be expanded to include Asian countries. The project will work in the framework of the SSF Guidelines

and the Norwegian Government’s Action Plan on Sustainable Food Systems to empower women and women’s organizations, improve post-harvest fish handling, processing, preservation, and storage and value addition, with the aim to increase consumption of safe, nutrient-dense fish and fish products, particularly for children.

Human-rights context

Despite the progress made by the various programmes and projects, much remains to be done within the international human-rights context in the work of FAO, CFS and their partners. Those at the national and community levels also need to do their bit to contribute to the progressive realization of the right to food for millions around the globe and to build sustainable and equitable food systems. The recognition of the nutritional importance of fish in programmes and strategies and the promotion and protection of small-scale producers is an important and necessary endeavour for the realization of the right to food, and achieving the SDGs by 2030. 📌

For more

<http://www.fao.org/3/a-y7937e.pdf>
The Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security

<https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-2-zero-hunger.html>

SDG 2: Zero hunger

<http://www.fao.org/3/ca9229en/ca9229en.pdf>

The 2020 State of World Fisheries and Aquaculture (SOFIA)

http://www.fao.org/fileadmin/user_upload/hlpe/2020_Global_Narrative/HLPE_15_2020_Global_Narrative_2030.pdf

Food Security and Nutrition: Building a Global Narrative Towards 2030

https://www.researchgate.net/publication/230469691_GOVERNING_AS_GOVERNANCE_-_Edited_by_Jan_Kooiman

Review: Governing as Governance