
The Role of Sustainable Fisheries and Aquaculture for Food Security and Nutrition

HLPE Report

E-consultation to set the track of the study

From 11 March to 1 April 2013

<http://www.fao.org/fsnforum/cfs-hlpe/fisheries-and-aquaculture>

– Topic –

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Global Forum on Food Security and Nutrition
(FSN Forum) for the High Level Panel of Experts (HLPE)



Global Forum
on Food Security
and Nutrition

Duly recognising the significant role played by fisheries and aquaculture in food security and nutrition, the Committee on World Food Security (CFS) in its thirty-ninth Session (October 2012) requested the High Level Panel of Experts (HLPE), to undertake a study on the Role of sustainable fisheries and aquaculture for food security and nutrition to be presented to the Plenary in 2014. *“In this study, CFS requires the HLPE to consider the environmental, social and economic aspects of fisheries including artisanal fisheries, as well as a review of aquaculture development. The report of this study has to be policy oriented, practical and operational”.*

As part of its report elaboration process, the HLPE is now launching an e-consultation to seek views, public feedback and comments, on the pertinence and relative importance of some key questions that the report proposes to address, in line with the request from the CFS, and that could form the building blocks of the report. The feedback received will be used by the HLPE Steering Committee to finalize the terms of reference of the Study and HLPE Project Team that will be appointed to prepare the study and policy recommendations.

In parallel, the HLPE is calling for experts interested in participating in the Project Team for this report. Information on this call is available on the [HLPE website](#). The HLPE Steering Committee will appoint the Project Team after review of candidatures.

The valuable contribution made by fisheries and aquaculture in meeting the world food and nutritional demands need to be comprehended and their sustainable management is vital for food security and nutrition. According to the FAO report (2012) fisheries and aquaculture contributed around 16% of animal protein intake and support to the livelihood of 10-12% of the world population. Employment in the fisheries and aquaculture primary sector has continued to grow faster than employment in agriculture, so that by 2010 it represented 4.2% of the 1.3 billion people economically active in the broad agricultural sectors worldwide, compared with 2.7% in 1990.

Aquaculture is the fastest growing form of food production in the world with tremendous annual growth rates of 8.8% per year, having expanded by almost 12 times in the last three decades (1980–2010), now providing more than 40% of the fish consumed worldwide, allowing to keep pace with the growing demand while capture fisheries are stagnating (FAO, 2012). However, the rapid development of aquaculture has come with associated environmental costs such as habitat degradation, disease and pollution. The inland capture fisheries sectors are threatened by habitat degradation, pollution, invasive species, landscape fragmentation, disruption of river flows by dams and overexploitation of upstream water resources. Most of the stocks of the top ten species, which account in total for about 30 percent of world marine capture fisheries production are fully exploited and, therefore, have no potential for increases in production.

The growing global population (already over 7 billion people) and changing consumption patterns are expanding the gap between the supply and demand of aquatic food and impact of these imbalances are felt disproportionately and increasingly in the most poor and vulnerable sections of the population. It is a great challenge to address the hunger and nutritional requirement in such a way that keeps humanity's footprint within a sustainable level. ***Every country in the Globe faces this challenge: will the actions taken in the next few years go fast enough and far enough to address threats and issues in aquatic resources which is one of the significant contributors to food security?***

In order to address this challenge with the consideration of the CFS request, HLPE proposes to review, with a food security and nutrition lens, a range of issues, which are key determinants to the role of sustainable fisheries and aquaculture for food security and nutrition. The key issues to be discussed in this HLPE paper include:

1. How can the implementation of the FAO “Code of Conduct “for Responsible Fisheries and Aquaculture” be further improved globally for sustainable aquatic resource management?

The importance of responsible fisheries was particularly discussed at the Rio+20 conference, called for sustainability in fisheries and aquaculture and recognition of its importance for food security, and on the establishment of the global partnership. Rio Declaration had “also stressed the crucial role of healthy aquatic ecosystems, sustainable fisheries, and sustainable aquaculture for food security and nutrition, and in providing for the livelihoods of millions of people. In addition to the “Code of Conduct”, the important roles of FAO in setting voluntary guidelines such as on eco-labelling, of the FAO and CFS on the voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security, and the ongoing work on tractability need to be valued.

2. How will nations maintain the integrity of the resource base (the source of food) in the face of these pressures, and the livelihoods dependent on them?

Ecosystem-based management (EBM) is an integrated, science-based approach to the management of natural resources that aims to sustain the health, resilience and diversity of ecosystems while allowing for sustainable use by humans of the goods and services they provide. **It is an integrated aquatic resource management with multiple objectives to meet economic, social and biological goals which are vital for sustainable development with equity and fairness.** Both aquaculture development and fisheries depend on the appropriation of various environmental goods and services from aquatic ecosystems. In aquatic and agro-ecosystems, ecologically sustainable water management often involves multiple use of water for the whole range of ecosystem services. There are increasing concerns about a growing takeover of coastal and marine spaces, and of inland water resources and ecosystems, for commercial activities (tourism, energy, oil, thermal, nuclear...), and their pollution and degradation. It is essential for national and international administrations to develop national and regional plans and strategies, based on ecosystem approach for sustainability by taking into account the role of fisheries in coastal and inland communities as well as aquaculture. ***What policies are necessary to support an ecosystem approach in order to minimize waste generation, enhance efficiency in resource utilization, reduce environmental impact and contribute optimally to food security?***

3. What are the key socioeconomic issues which affect the sustainability and development of fisheries and aquaculture?

Problems in fisheries have been largely treated as a biological issue rather than economic and political matters. As a concept, a stabilised aquatic resource system aims to ensure that resource exploitation contributes to sustainability, inclusive social development and economic growth, while seeking to counter the notion that sustainability and growth are mutually exclusive. In order to bring sustainability in fisheries and aquaculture resources require recognition of their wider societal roles within a comprehensive governance framework. **What mechanisms are needed to facilitate adopting a socially and environmentally inclusive approach to fisheries and aquaculture with fair and responsible tenure systems to turn resource users into resource stewards?**

4. To what extent can contributions be made to policy development and have considerable impact on securing small-scale fisheries /artisanal fisheries in their fundamental rights and creating benefits, especially in terms of food security and poverty reduction?

Small-scale fisheries/artisanal fisheries employ more than 90 percent of the world's capture fishers, and their importance to food security, poverty alleviation and poverty prevention is becoming increasingly appreciated. Small-scale artisanal fisheries provide most of the protein and jobs for adjacent communities and these are the fisheries that face the greatest threats. Coastal fisheries are generally overfished in most parts of the world, and they face the most significant threats in terms of coastal habitat destruction and pollution that stem from human activities on land. It is against this backdrop that artisanal fisheries face increasing competition from industrialized fleets. **Fisheries subsidies often lead to large fishing fleets and overfishing.** Many artisanal fisheries are cross-border, and sometimes this causes conflicts. Tools should be put in place to better manage these trans-boundary fisheries and prevent/manage conflicts. The FAO Committee on Fisheries (COFI) has promoted efforts to improve the profile of, and understand the challenges and opportunities facing, small-scale fishing communities in inland and marine waters.

5. How can the gender specific needs and rights of women be protected through enforceable rights over land, water resources, credit and other related matters?

Women play a major role and take-up significant employment in many sectors of fisheries and aquaculture. Apart from the primary production sector, fisheries and aquaculture provide numerous jobs in ancillary activities such as processing, packaging, marketing and distribution, manufacturing of fish-processing equipment, net and gear making, ice production and supply, boat construction and maintenance, research and administration. All of this employment, together with dependants, is estimated to support the livelihoods of 660–820 million people (FAO 2012) and a significant portion of these employments is being taken-up by women. **Women suffer from several handicaps such as in title to land, and access to credit, inputs, insurance, technology and market.**

6. What continuous improvements in institutional capacities (both national and regional) is critical for the success of management and governance of sustainable fisheries and aquaculture?

Institutions involved in the management of fisheries often need to be developed and strengthened in their functional capacity, so that these establishments enable to perform effectively and promote successful fisheries management and introduce any social and technological interventions to target community beneficiaries. Strong collaboration among stakeholders underpins the effective

introduction of social and technological interventions to improve the socioeconomic conditions of the people and promote the efficient management and sustainable development of resources. Strong collaboration may only be achieved if the stakeholders have the capacities to perform their share in communal initiatives. Therefore, institutional capacity-building in fisheries is to cope with change and the new challenges which it brings should be an essential part of any fisheries management system.

7. How sustainable aquaculture can be promoted for food security and nutrition, as well as livelihoods, into the longer term?

Rapid development of aquaculture created a vulnerable situation in terms of adverse impacts of disease and environmental conditions. Disease outbreaks in recent years have affected farmed Atlantic salmon in Chile, oysters in Europe, and **marine shrimp farming** in several countries in Asia, South America and Africa, resulting in partial or sometimes total loss of production. In 2010, aquaculture in China suffered production losses of 1.7 million tonnes caused by natural disasters, diseases and pollution. Disease outbreaks virtually wiped out marine shrimp farming production in Mozambique in 2011 (FAO 2012). ***It is essential to review the development of aquaculture and discuss the policy options for the sustainable development of this important sector in order to ensure its maximum contribution to food security and nutrition.*** Integration of proper technologies and management such as adoption of appropriate regulatory measures, fish health management, and managing external costs in the environment by setting guidelines, pricing mechanisms and fund schemes, will lead to a more profitable, responsible and environment-friendly aquaculture and at the same time protect wild fisheries. In fish culture, particularly carnivorous species, fish itself is used as feed or key feed ingredient. Aquaculture also faces some common property resource issues through access to suitable space and the sharing of water. ***How do we facilitate the development of integrated policies and management measures, which are effective and acceptable to both national and regional administrators?***

8. What policies are necessary for fair and improved trading?

Fish and fishery products are among the most traded food commodities worldwide and provide a significant share of revenue for many countries. Among the factors that might influence the sustainability and growth of fishery trade are the evolution of production, transportation costs, taxes/tariffs and the prices of fishery products and alternative commodities, including meat and feeds. The United States of America and Japan are the major importers of fish and fishery products and are highly dependent on imports for over 50% of their fishery consumption. China, the world's largest fish producer and exporter, has significantly increased its fishery imports, partly a result of outsourcing, as Chinese processors import raw material from all major regions, including South and North America and Europe, for re-processing and export. ***Considering the factors that are affecting the fisheries trade, it is essential to analyse fish trade issues with a food and nutrition lens and provide policy options for fair and improved trading.***

9. What would promote fish value chain development that supports food security and nutrition?

Improved postharvest handling will deliver the most immediate gains in supply and value. Fishery industries in the developing countries depend heavily on the artisanal sector for production and supply of raw materials and on small- to medium-scale fishing operations. While high value species are mostly processed for export, most of the medium and low value species, which form the bulk of

the landings, are marketed fresh or are processed for the domestic market. ***It is valuable to identify key issues relating to post-harvest as relevant to food security and nutrition, and point out blocking factors relating to the matter and describe specific enabling actions that can be taken by the different actors, both at the national and at the regional level. Experiences of good policies and practices can be reflected.***

10. What other policies and relevant technology options are available for waste minimisation, better resource accountability and management?

Wastage in fisheries is a major concern. By-catch, now estimated by FAO at about 7.3 million tonnes, should be better used than at present when much of it is discarded. Trawl fisheries for shrimp and demersal finfish account for over 50 percent of total estimated discards. Small-scale fisheries generally have lower discard rates than industrial fisheries. Considerable waste in the postharvest section was also recorded.

Policy options need to consider transparency in aquatic resource management. Most international fisheries management operates outside the public eye, which inhibits accountability for management decisions. Opening fisheries management to public scrutiny is the key to improving public accountability and ultimately fisheries management in general. ***Providing policy regulation options for efficient and accurate reporting systems would contribute to effective management. Illegal fishing is another issue needs tackling.***

Insurance in the fisheries sector is limited due to the high degree of risk involved in this sector. There is a need to review current status, see how important it is for food security and nutrition, and make recommendations for improvement.

Investment in Fisheries Research and Development has not often received deserving consideration as other agricultural sectors. Appropriate levels of investments in R&D with due priority consideration would enable the development of innovative technologies which assist in sustainable management and growth of the sector, bringing resilience to cope with climate change and minimising waste of precious resources.

Fisheries and Aquaculture, vital sources of food and nutrition are complex resources to manage. Therefore, formulating policy and regulatory frameworks relevant to national and regional levels for sustainable management and development of aquatic resources with the contemplation of socio economic objectives is likely to require intense debate, negotiations and compromise. The HLPE proposes to look at what can be done at different levels, multilateral, regional or national level, for enhancing the contribution of fisheries and aquaculture to food security and nutrition in a sustainable and equitable manner.