



COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

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FISH TRADE AND BUILDING RESILIENCE ALONG THE VALUE CHAIN

Executive Summary

This paper reviews how resilience can be strengthened throughout the fisheries and aquaculture value chain, and how food and nutrition security can be achieved in emergency situations. Recommendations are made on improving human nutrition and food security for making the sector more robust, and on providing appropriate support in disaster prevention, mitigation and preparedness in fisheries and aquaculture programmes, with a focus on the value chain.

Suggested action by the Sub-Committee

- Guide the Secretariat in its work on increasing the resilience of fisheries and aquaculture livelihoods before and after a disaster along the value chain;
- Provide guidance on the role of fisheries and aquaculture in supporting food and nutrition security in emergency situations; and
- Provide experience at the national, regional and international level on the efforts on improving resilience in the fisheries and aquaculture value-chain.



BUILDING RESILIENCE ALONG THE VALUE CHAIN

1. Developing countries are particularly vulnerable to disasters, conflicts and impacts of climate change and, as a population group, fishers, fish farmers and their communities are often in the front line. This is because of their location, the characteristics of their livelihood activities, lack of preparedness and poor infrastructure, and their overall high levels of exposure to natural hazards, livelihood shocks and climate change impacts.¹ As an example, in 2013, almost 100 million people were victims of extreme climate events in the world with the cyclone Haiyan in the Philippines, figuring amongst the world's most serious disaster that year.²

2. Increasing the resilience of livelihoods to natural and man-made disasters is a critical component in FAO's efforts to help the world's most vulnerable people achieve food security and the freedom from hunger – a basic human right. At FAO, resilience to disasters is the ability to prevent disasters and crises or to anticipate, absorb, accommodate or recover and adapt from shocks impacting nutrition, agriculture, food security and safety and specific related public health risks in a timely, efficient and sustainable manner. Resilient livelihoods have the ability to withstand threats and/or to adapt to new pathways in times of crises. FAO's resilience strategy is based on four pillars:

- Enable the environment – institutional strengthening and governance of risk and crisis in agricultural sectors;
- Watch to safeguard – information and early warning systems on food and nutrition security and transboundary threats;
- Apply risk and vulnerability reduction measures – protection, prevention, mitigation and building livelihoods with technologies, approaches and practices across all agricultural sectors; and
- Prepare and respond – preparedness for and response to crises in agriculture, livestock, fisheries and forestry.

3. Damage or destruction of fishing and aquaculture infrastructures and facilities, resulting from a disaster, removes a significant link in the value chain and impedes supply of fish to the market. It is therefore important to understand the process involved in transferring fish from the point of production, whether by capture or aquaculture, up to the point of consumption, before and after a disaster. In particular, this is necessary in order to increase the stability of local markets, promote long-term recovery and prevent adverse effects of humanitarian actions on markets.

4. A disaster is “a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.”³ Disaster impacts on the fisheries and aquaculture sector may result in loss of life, damage to or loss of fishing assets and equipment, loss of production and subsequent disruption of livelihoods as incomes are reduced or disappear. Potential impacts on the post-harvest sector and trade also include the loss or damage to fish processing equipment and the physical destruction and/or damage to infrastructures, such as ice plants, storage facilities, roads, distribution networks, among others, with subsequent reduction in the contribution of fish to the food supply and nutrition.

5. Prevention and mitigation activities, before and after disasters, are vital to reduce the underlying factors of risk. The promotion of responsible and sustainable fisheries and aquaculture should be given

¹ FAO. 2012. *The State of the World Fisheries and Aquaculture 2012*. Rome. 209 pp.

² Guha-Sapir D., Hoyois, P. & Below, R. *Annual Disaster Statistical Review 2013: The Numbers and Trends*. Brussels, CRED.

³ UNISDR. 2009. UNISDR terminology on disaster risk reduction. Geneva (available at www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf).

high priority as part of disaster prevention and in addressing the vulnerabilities of fishing and fish farming communities.

6. Emergency assistance inevitably tends to focus primarily on search and rescue operations, evacuation and distribution of food and water. The foods distributed include fortified blended foods, cereals, pulse, oil, sugar and salt. However, it is increasingly well-recognized that in addition to energy, attention should be paid to the supply of micronutrients, in particular to vulnerable groups, such as pregnant and lactating women, young children, the sick and the elderly. Fish as a micro-nutrient dense food providing nutrients such as iron, zinc, iodine, calcium, selenium and vitamin A, could play an important role in increasing dietary diversity, and in rehabilitating the diet of malnourished children.⁴

7. Different actions can be taken to ensure food security and nutrition. At national level, governments can take active measures to include fish and fish products in food aid rations. Dried and smoked fish can be sourced at country level or regionally, and be an integral part of a food ration of rice and vegetable oil, to improve dietary diversity and add essential nutrients to the diet. Discarded heads and the bones, which actually contain high levels of nutrients, and particularly micronutrients, could be processed into a dry powder to provide a low cost nutritional supplement of micronutrients. The product can be produced and stored before an eventual disaster occur, stimulating local industry and providing a food based approach to needed micronutrients. In communities in which processing of fish (drying, fermenting, smoking, salting, making fish sauce and fish paste) is practised, increased and improved storage of processed fish can be done in peak production season, at household level. This can serve as a reserve of animal-source food in the event of an emergency.⁵ Ensuring appropriate packaging of processed fish products could also contribute to preserving nutritional quality and improve shelf life in an emergency context. All the above require raising awareness on the value of fish and appropriate capabilities and resources.

8. Even though food might be available, it might not be accessible when an emergency situation occurs. Ensuring a robust logistical system that could work even in extreme situations is essential. Foods, including fish products must reach the most needed even if most essential infrastructure has been damaged. Products must be packed to resist rough handling and transport. Establishing storage facilities for fish products in remote and vulnerable areas should be encouraged.

9. Once the immediate humanitarian assistance has been assured, the first intervention is to conduct a post-disaster damage and needs assessment. The post-harvest and trade component of the assessment must be integrated with all other aspects of the fisheries and aquaculture sector and coordinated closely through the responsible ministry involving all key stakeholders and communities. Even modest interventions in the post-harvest sector have proved to be very successful to restart distribution, generate cash and provide food in the aftermath of the emergency. Particularly, in the case of capture fisheries, once productive assets (such as fishing vessels and gear) have been restored, appropriate support to post-harvest fisheries sector can provide additional fish products to the market and stimulate downstream opportunities in marketing.

10. Where dried fish is a culturally acceptable food product, training in simple preservation methods, such as solar drying of small pelagic fish, is a simple and low cost way of preserving fish during and after an emergency. Smoking of bigger sized fish is a traditional preservation method in many societies and could play a bigger role as a provider of micronutrients. Rehabilitation of larger-scale infrastructure, such as landing and market facilities, will require more investment and a longer term development focus.

⁴ Cattermoul, B.; Brown, D. & Poulain, F. (eds). 2013. *Fisheries and aquaculture emergency response guidance: review recommendations for best practice*. FAO Workshop, 15–16 March 2012, Rome. FAO Fisheries and Aquaculture Proceedings No. 30. Rome, FAO. 449 pp.

⁵ Idem.

11. Disasters also provide opportunities to “build back better”, as seen in the responses to the tsunami in the Andaman Sea in 2004, and the Haiti earthquake in 2010. The concentration of responders and their concern for coordinated action create conditions for rebuilding efforts, resulting in situations that, in some aspects, could be an improvement. These efforts include creating more resilient communities through capacity building, infrastructure support and investment strategies. In particular, there is an opportunity to realign the new fleet structure and capacity with the carrying capacity of the resource. In the fisheries sector, initiatives in response to the tsunami disaster in Indonesia restored traditional coastal fisheries management regimes which guided the rebuilding of the coastal fishing fleet to ensure sustainable use of coastal resources, while creating new employment opportunities, better access to regional markets and benefitting youth.

12. Enhancing preparedness to respond to emergencies that affect fisheries and aquaculture is an important part of FAO’s work. At the request of its partners in a series of consultation meetings relating to the development of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the context of food security and poverty eradication (VG SSF), FAO has developed specific guidance to respond to emergencies that affect the fisheries and aquaculture sector.^{6,7} This guidance draws on best practices and experiences in responding to disasters that have affected fisheries and aquaculture across the whole value chain and supports the implementation of the Code of Conduct for Responsible Fisheries and the VG SSF. The guidance can be used to assess, design and monitor response in fisheries and aquaculture to assist people affected by disasters and to “build back better”. A first Training of Trainers (ToT) was held in Fiuggi, Italy, from 23–25 March 2015, as part of a strategy to develop regional and national capacity in fisheries and aquaculture emergency response. Twenty-two participants were trained and are now equipped and available to carry out subsequent training courses in their respective countries and institutions.

NEXT STEPS

13. Availability of fish and fishery products should be included in food supply assessments and the resumption of fish production should be a priority in areas where fish is an important part of the diet and of the livelihood of the affected communities. This is especially relevant for fishing-dependent countries and communities such as Small Island Developing States (SIDs) and coastal and inland communities.

14. Response to emergencies affecting the fisheries and aquaculture sector should be based on a detailed analysis of all activities, including post-harvest activities and trade, and contribute to strengthening fisheries and aquaculture policy and management as well as respond to the community’s needs. Enhancing the quality and accountability of preparedness and response to emergencies affecting the sector is required in line with humanitarian and fisheries and aquaculture standards and principles.

15. Promoting increased consumption of fish and fishery products could be a good approach in reducing levels of malnutrition in many vulnerable areas. In addition to improving incomes, fish trade could contribute to the distribution of healthy and affordable fish products. Low value fish are often processed into products not intended for human consumption, but could, in some cases, be used for preparing healthy and affordable food. Improving fish consumption could also be an excellent food-based approach to combat malnutrition in emergency situations and, in particular, micronutrient deficiencies in developing countries.

16. Coordination with and contributions from all stakeholders (private sector, civil society and government) under the post-2015 development agenda architecture, as well as the achievements of the Sustainable Development Goals, in particular Goal 2, the Sendai Framework for Disaster Risk Reduction 2015–30 and the United Nations Framework Convention on Climate Change (UNFCCC), are

⁶ Brown, D. & Poulain, F. (eds). 2013. *Guidelines for the fisheries and aquaculture sector on damage and needs assessments in emergencies*. Rome, FAO. 114 pp.

⁷ Benjamin Cattermoul, D. Brown & F. Poulain (eds). 2014. *Fisheries and aquaculture emergency response guidance*. Rome, FAO. 167 pp.

essential to tackle the complex challenges facing the fisheries and aquaculture sector in sustainably meeting the nutrition and food security needs of future generations.