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INCREASING THE CONTRIBUTION OF SMALL-SCALE FISHERIES TO POVERTY ALLEVIATION AND FOOD SECURITY – An Introduction to FAO Technical Guidelines No. 10

I. FAO TECHNICAL GUIDELINES No.10

1. The Code of Conduct for Responsible Fisheries (the Code) was adopted unanimously by FAO Member States at the 28th Session of the Conference of FAO on 31 October 1995. The Code, and the accompanying Technical Guidelines, International Plans of Action and the Strategy for Improving Information on Status and Trends in Capture Fisheries are now widely recognized by governments and NGOs as the global standard setting out an agreed approach to promoting sustainable fisheries and aquaculture over the coming decades.

2. During the 25th Session of the Committee on Fisheries (COFI) in 2003, the debate on increasing the contribution of small-scale fisheries to poverty alleviation and food security resulted in a request for FAO to produce Technical Guidelines on the topic.

3. COFI recognized that small-scale fishing communities are faced with an array of serious problems, including overexploitation and depletion of resources, lack of alternative sources of employment, rapid population growth, migration of populations, displacement in coastal areas due to industrial development and tourism, pollution and environmental degradation and conflicts with large commercial fishing operations. It was also noted that small-scale fisheries are critical for food security and poverty alleviation in many countries.

4. Some 90% of the estimated 35 million fishers worldwide are classified as small-scale fishers and many more people, numbering up to 100 million, are considered to be involved in the small-scale post-harvest sector. Most small-scale fishers are in developing countries and many live in communities characterized by widespread poverty and food insecurity.

5. An advance version of the *FAO Technical Guidelines for Responsible Fisheries on increasing the contribution of small-scale fisheries to poverty alleviation and food security* is now available. The Guidelines have been prepared with the support of the Sustainable Fisheries Livelihoods Programme – a partnership between the U.K. Department for International Development, FAO and 25 countries of West Africa – and of FishCode, FAO's umbrella programme for the implementation of the Code.

6. The objective of these Technical Guidelines is to provide a focus on the current and potential role of small-scale fisheries in contributing to poverty alleviation and food security. Small-scale fisheries could provide the poor and food-insecure with greater benefits through more effective fisheries management, and by ensuring that those benefits are equitably distributed. The Guidelines complement existing FAO Technical

Guidelines for Responsible Fisheries, particularly those on *Fisheries Management* (No. 4), *Aquaculture Development* (No. 5), *Inland Fisheries* (No. 6) and *Integration of Fisheries into Coastal Area Management* (No. 3).

7. The first part of these Guidelines discusses the current contribution, role and importance of small-scale fisheries in poverty alleviation and food security. It examines the importance of small-scale fisheries for poverty alleviation at a national, local and household level. It also notes the nutritional qualities of fish and thus, the particular role of fish in nutritional aspects of food security. The fact that about 50% of fish caught for human consumption comes from small-scale fisheries underlines the importance of this sub-sector for the world fish supply. In many countries small-scale fisheries contribute to national food security both directly – where fish is a crucial part of the daily diet, and indirectly – by generating foreign exchange earnings that enable the purchase through trade of a range of food products.

8. The second part of the Guidelines explores ways through which contribution of small-scale fisheries to poverty alleviation and food security could be enhanced. A vision for the future of small-scale fisheries is presented as a goal towards which the sub-sector should develop. Ensuring greater participation by small-scale fishers and their communities in the formulation of policies, the development of related legislation and regulations, and in management decision-making and implementation processes, is key to the realization of this vision. The central role of effective fisheries management, the importance of considering cross-sectoral uses of fisheries and related resources, the special role of women in fish marketing, processing and value addition, the significant scope of trade, the critical role that adequate financing may have in enabling transitions for effective fisheries management and the role of knowledge in making informed decisions are all discussed in these Guidelines.

9. The advance version of the Technical Guidelines (in English) will be made available at the 12th Session of WECAFC. The final version should become available later in 2005.

Suggested action by the Commission

10. The Commission is invited to provide guidance to Members, FAO and other regional and international agencies and organizations, as to strategies that might be promoted to ensure significant improvement in small-scale fisheries development, with particular reference to the sector's contribution to food security and poverty alleviation. The Commission may wish to emphasize the importance of:

- gaining a better understanding of the nature, extent, and causes of vulnerability and poverty in small-scale fisheries and improved information on and indicators for monitoring the contribution of small-scale fisheries to food security and poverty alleviation;
- improved cross-sectoral and inter-agency collaboration and development of effective strategies and policies to address poverty and food security issues, and, where appropriate, inclusion of small-scale fisheries in national poverty reduction strategies and policies;
- better management through the allocation of secure fishing rights backed by appropriate legislation to small-scale fishers in coastal and inland zones and their effective protection from industrial fishing activity or activities that degrade aquatic resources and habitats;
- implementation of the Code of Conduct for Responsible Fisheries, and its accompanying Technical Guidelines on Increasing the Contribution of Small-scale Fisheries to Food security and Poverty Alleviation; and
- the encouragement of the formation of fishermen's organizations at community level and the facilitation of their representation at local, regional and national levels thereby creating a sense of ownership and accountability by the small-scale stakeholders in the decision-making process.

ANNEX 1

GENERAL CHARACTERISTICS OF SMALL-SCALE FISHERIES IN THE WIDER CARIBBEAN[1]

Contribution to human well-being, food security and poverty alleviation

1. The current contribution of small-scale fisheries to human well-being, food security and poverty alleviation is poorly understood. There are a number of reasons for this unfortunate state of affairs. First, the priority of fisheries statistical systems is by tradition to measure catches in quantity and often in great detail by species group or species. The value of the catch, the cost of production, the number of people employed in production and whether the catch has been produced by large-scale or small-scale fisheries are not always systematically collected in fisheries statistical systems. Second, the extent of under-reporting of small-scale fisheries employment and catches is significant, especially of seasonal and occasional small-scale fisheries in inland waters. Third, and perhaps most importantly, the direct and indirect contribution of small-scale fisheries at the local (meso) and household (micro) levels to food security, as a coping strategy to reduce vulnerability, and as safety-net to prevent falling into poverty, are poorly understood, sometimes simply as a result of poor communication of these benefits to policy-makers.

2. Small-scale fisheries are increasingly integrated into global fish trade and in many of them the contribution to revenue and income of export-oriented fisheries such as for shrimps, finfish, lobsters, conch, tuna and aquarium fishes, is significant, and is much higher than suggested by the share of these species in total catch. These export-oriented fisheries are not infrequently the driving forces of modernization of the entire sector and create a multitude of new backward and forward linkages with spillover effects into the wider coastal area. While not necessarily amounting to engines of growth in these areas, small-scale fisheries are, and can be, engines of poverty alleviation.

High Vulnerability

3. Fishing households in general, and poor fishers in small-scale fisheries in particular, are prone to very high levels of vulnerability, which are closely related to their fishing activities and the type of livelihoods associated with this activity. This vulnerability affects them through various sources of risk such as: high occupational risk (from accidents); high exposure to natural disasters (e.g. floods, hurricanes); high exposure to changes in macro-economic factors (e.g. fuel and other input prices, fish prices); increasingly high exposure to conflicts with other users (due to increased competition for resources) such as industrial fishing fleets and other coastal-zone land and sea users (tourism, transportation).

Dynamism of Small-Scale Fisheries

4. Notwithstanding the often precarious and vulnerable conditions of small-scale fishing communities, this sector demonstrates a remarkable dynamism, adaptability and resilience to various adversaries including the increasing competition from industrial fisheries. In many small-scale fisheries technological progress has been of an astonishing speed and magnitude, shifting within a matter of years from unmotorized rowing and sailing craft to high-powered modern boat designs utilising a multiple of the previous quantity of fishing gear. Fish-finders and navigation equipment, including GPS, have become common features in a number of small-scale fisheries. As a consequence, fishing capacity and fishing effort have increased dramatically in many fisheries.

5. Onshore developments have been no less spectacular: there is much more use of ice and of modern fish-carrying equipment; there are many more motorized small-scale fish collectors and distributors, and there

[1] Reference: Willmann, Rolf. 2004. Restoration and Management of Small-scale Fisheries – Meeting the Challenge. FAO Fisheries Department, Rome.

are many more small fish markets with basic handling and preservation facilities. Much more fish produced by small-scale fisheries is now entering export-processing and global trading networks.

Dynamics of Overfishing

6. It is a tragedy that the great entrepreneurial dynamism of small-scale fisheries has not been properly rewarded because of the lack of policy reform and as a result of stagnant institutional arrangements for fisheries management. The efforts of governments to create an enabling environment for the sustainable use of the inland and marine aquatic resources have been in no way commensurate with the inventiveness and ingenuity of the small-scale fishers and the fishing industry. The mismatch between the introduction of effective regulatory frameworks and the growing harvesting capacity of both the large-scale and small-scale fisheries has had dire consequences in terms of reduced stock sizes, often of the most valuable species, ecosystemic shifts in species composition and, not least, large-scale economic waste and social hardship.

On the nature of open access

7. The dynamics of overfishing in small-scale fisheries are often poorly, and sometimes misleadingly, described. While the root cause is rightly attributed to the condition of "open access", this condition is often erroneously explained and understood.[2] Open access is generally associated with the free and unimpeded entry into fisheries by people who take up fishing in the expectation of higher earnings than their current earnings in other occupations, or, more typically, by people who have become displaced elsewhere in the economy[3]. This latter dynamic underlies the concept of fishing as an activity of last resort.

8. Ending open access, in the sense of limiting access to additional labour, is a necessary, but not a sufficient, condition for ending overfishing. The key problem is to end the free flow into the fisheries sector of additional capital investments and the intensification of fishing operations, primarily and predominantly by fishing households with a long tradition in fishing. This points to the need to further elaborate on the concept of "open access" by specifically acknowledging the primacy of ending "open access" for capital. The importance of further elaborating on this is underpinned by the prevalent, relevant and intricate flow of capital investments into fisheries and the role of such investments in the intensification of fishing operations.

9. The dynamics of overfishing have been properly described as "the race to fish". What is not always adequately appreciated are the tremendous incentives and competitive pressures on fishers to upgrade their fishing equipment, increase the horse-power of their engines, carry more fishing gear and move to less selective fishing methods. The rules in this race are unforgiving. A delay in upgrading and keeping apace with one's fellow fishermen may lead to economic ruin. So do excessively high investments with borrowed capital. The extent of indebtedness is staggering in many small-scale fisheries and is no less unsustainable as the current intensity of fishing.

Competition with industrial fisheries

10. A description of the dynamics of overfishing in small-scale fisheries would be incomplete without referring to the concurrent developments that have taken place in industrial fisheries, especially shrimp fisheries. Industrial shrimp fisheries development got a head-start in some countries of the region decades ago when countries adopted policies to actively support technology development and the introduction of industrial fishing vessels. Favourable credit schemes (often more favourable than they appeared to be from their formal credit terms because of widespread defaults on interest and principal payments) targeted predominantly, if not exclusively, investments into larger-scale fishing vessels, especially shrimp trawlers, longliners and gillnetters.

[2] In the international debate, overcapitalization and overfishing are increasingly solely associated with subsidization. While there can be little doubt that fisheries subsidies have often contributed to overinvestment, it would be grossly erroneous to expect that a cessation of subsidization would resolve the key constraint on sustainable fisheries, that is to put in place effective fisheries management through, *inter alia*, the establishment of use rights.

[3] There is evidence of both dynamics at work in some fisheries, for example: the entry of private small-scale fishers into Trinidad and Tobago's marine fisheries after the recent the closure of the sugar industry; the move of banana farmers into fisheries in the Windward Islands due to falling prices for the commodity.

In some instances the objective of such support schemes may have been to allow the upgrading of small-scale fishers to industrial fishers that can exploit a wider range of resources including deepwater stocks. However, in most cases these schemes benefited the entry into the fisheries sector of a new class of investors of varied backgrounds, but rarely from fishing communities. In the very early phases of these developments, catch rates and returns on investment were frequently high, fuelling further expansions in fleet sizes. An example, often referred to, is the development of the shrimp fisheries in the continental shelf of South America (the Guianas). The shrimp fleet size in Guyana is now reduced to less than 90 boats from its peak of about 280 boats in the late seventies.

11. Today, industrial shrimp fisheries in the region are in crisis. This may take decades to resolve. The manifestations of the crisis are overfishing, interference and conflicts with the fishing operations of small-scale fishers, and over-capitalization. One should add that, as with small-scale fisheries, the origin of the crisis lies in the race for fish and the absence of effective institutional and regulatory frameworks for fisheries management.

CREATING AN ENABLING ENVIRONMENT FOR SMALL-SCALE FISHERIES

12. The creation of an enabling environment for small-scale fisheries is dependent on the development of a policy framework involving, *inter alia*, national development and poverty reduction policies; integrated management policies for watersheds, river-basins and coastal areas; sectoral policies for health, education and social security; agriculture and rural development policies; and fishery sector and sub-sector policies for inland fisheries, marine fisheries and aquaculture.

Participating in policy formulation and reform

13. Fisheries agencies, the fishing industry and fishworkers' organizations, have to be aware of, and attempt to favourably influence, policies outside the fisheries sector that impact directly or indirectly on small-scale fisheries. Important examples are, national policies on decentralization of decision-making powers to local levels that can be supportive of co-management and community-based management schemes. Similarly, many countries are elaborating poverty reduction strategy papers (PRSPs), but fisheries and fishing communities rarely feature in them.[4] Further, countries increasingly move towards integrated policies and management programmes for watersheds, river basins and coastal areas.

14. The effective integration of fisheries, in particular small-scale fisheries, into cross-sectoral and national policy frameworks greatly depends on increasing the awareness of policy-makers and the public at large about the benefits and essential contribution of this sector to national and rural well-being. This requires better selected and targeted data and information on the sector and its effective dissemination and communication.

15. A powerful means of ensuring effective participation of small-scale fishers in policy-making processes is by them acquiring influence through their own democratic and representative organizations. These are emerging in a number of countries through fisher associations and cooperatives[5]. This helps in providing more direct influence to professional organizations in decision-making.

16. Integrated policies can avoid or minimize conflicts over the use of scarce resources and can realize complementarity and synergies in the development process. Human resources development and institutional strengthening are widely held to be the primary requirements for achieving better integration at the level of individual farms and communities, in river basin and coastal area management, and at the level of sectoral and macro-economic policies (FAO 1995, Article 6.9).

17. On social, distributional, cultural and environmental grounds, there are good arguments for favouring small-scale fisheries in the access to fishery resources especially, but not exclusively, in inshore areas (FAO

[4] In a recent global review of 281 national policy papers, among which are 50 poverty reduction strategy paper (PRSPs) and/or interim PRSPs, it was found that in only a small number of countries fishing communities are among the target groups and the fisheries sector is accorded an explicit role in poverty reduction and food security (FAO-SFLP, 2004).
[5] E.g. Belize, Guyana, St. Lucia

1995, Article 6.18). Small-scale fisheries generate more income, employment and food for direct human consumption per unit of harvest than do industrial fisheries.[6] Moreover, adverse ecosystem impacts are often lower.

Co-management of small-scale fisheries

18. In spite of considerable research on community-based fisheries management and fisheries co-management, and efforts at practical implementation during recent years, there are no ready templates available on how to do it. While many countries have initiated local-level co-management schemes on a pilot basis, the practical implementation efforts are still relatively few and far between, and the lessons learned from them are indicative rather than prescriptive. Perhaps more important than these pilot projects are the steps taken by an increasing number of countries to introduce legal reforms to decentralize or devolve governance to provincial, district or municipal levels. This is supportive of the principle of subsidiarity[7] but full implementation requires that, with the delegation of powers, financial resources and tax authority also be delegated, and that administrative capacities at lower levels be strengthened through human capacity development.

Applying the ecosystem approach to small-scale fisheries management

19. It should be emphasized that the limitations of single stock "target resource-orientated management" (TROM) have been recognized also in developed countries whose fisheries are sometimes wrongly perceived of being generally of a single-stock-nature. The ecosystem approach to fisheries management (EAF) seeks to overcome these limitations. In general terms, the purpose of EAF

> *"…is to plan, develop and manage fisheries in a manner that addresses the multiple needs and desires of societies, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems."*
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> EAF "…*strives to balance diverse societal objectives, by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries"*. [8]

20. EAF is believed to be not just more appropriate to temperate water fisheries but also more suited and widely applicable to small-scale fisheries in both developed and developing countries. As the overarching goal is to implement sustainable development, the shift to EAF entails the recognition of the wider economic, social and cultural benefits that can be derived from fisheries resources and the ecosystems in which they occur. EAF emphasizes the identification and economic valuation of the various direct and indirect uses of these resources and ecosystems. This is better adapted to the multi-specificity of small-scale fisheries and the multi-sectoral basis of small-scale fishers' livelihoods. Further, small-scale fishers have by tradition an ecosystemic view of the sea and its resources. A multitude of fishing gear is adapted to target different species as and when they become available in different seasons and fishing grounds.

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[6] There are few studies in fisheries which have analyzed the comparative performance of small-scale and large-scale fisheries. One of the first detailed studies concluded that, on account of a series of indicators, including profitability, value added per unit of capital investment, and energy consumption per unit of fish harvested, small-scale fisheries, on average, performed better than industrial fisheries (Kurien and Willmann 1981). As the study was conducted prior to the motorization of small-scale fisheries, these findings would have to be verified for the current conditions.

[7] The subsidiarity principle is intended to ensure that decisions are taken as closely as possible to the citizen and that constant checks are made as to whether action at national level is justified in the light of the possibilities available at lower administrative levels (adapted from http://europa.eu.int/scadplus/leg/en/cig/g4000s.htm). In more generic terms the principle states that problems are best solved in the subsystem where they arise. Subsystems are encouraged to resolve their conflicts themselves without referring them to higher authority. (Wheeler, 1970, p. l33; quoted in http://pespmc1.vub.ac.be/ASC/PRINCI_SUBSI.html).

[8] extracted from the FAO Fisheries Glossary: http://www.fao.org/fi/glossary/default.asp

21. EAF stresses the importance of traditional knowledge in the assessment of resources and ecosystems and has a geographically-oriented management focus. It emphasizes participatory and incentive-based management systems as alternatives to command and control regimes (FAO 1995, Article 6.16 of the Code). Further, EAF recognizes and promotes integrated planning and management and calls for the optimal use of the entire range of environmental goods and services provided by fisheries resources and the ecosystems in which they occur.

Pro-poor small-scale fisheries management

22. Fishing communities are not homogenous and some fishing households are poorer than others. Therefore, some special arrangements may be desirable in support of poor fishers such as establishing preferential access rights to some areas for specific fishing gears (e.g. hook and line, beach seines, traps, etc.) that are predominantly used by them. This can ensure that poor (or occasional fishers) who can not afford expensive, and usually more efficient, fishing gear can still access the resource and rely on it as a poverty prevention activity.

23. Where infrastructure and labour are available, encouraging small-scale, labour-intensive local (decentralized) fish processing is a very powerful way to increase the economic contribution of the small-scale fisheries sector to the local economy. Recent studies have revealed that the net additional income from fish sales -if retained in the local area- can be over 100%. In other words if fish can be produced and processed locally, the net income benefit to the area may be more than twice the value of the fish sales (Delgado et al. 2003)[9]. Significantly, as it is mostly women who are engaged in such fish processing, the entire income tends to benefits the family, and especially the children.[10]

Financing the transition to responsible fisheries

24. In a recent international review (Schrank, Arnason, Hannesson 2003)[11] the budgetary allocations for fisheries management were estimated to range widely from just above one percent of the ex-vessel value of fish harvested to above one third of their ex-vessel value. While the review did not suggest a direct relationship between this share and fisheries management performance, the current budgetary allocations for fisheries management are believed to be too low in many countries, especially in developing countries. Greater expenditures for fisheries management can be a worthwhile investment derives from the fact that the resource rent potentials in fisheries can range up to sixty percent of the ex-vessel value of the catch. The ecosystem and biodiversity benefits from improved fisheries management are not yet captured in these resource rent estimates. Currently, resource rents are largely dissipated in most fisheries - or are negative because of subsidization – and there is an erosion of long term ecosystem and biodiversity benefits.

25. Apart from the general need to increase fisheries management budgets, there is also scope for the re-allocation of budgetary resources from those areas that continue to create incentives for increased fishing capacity and effort. For example, countries continue to provide subsidies for the construction and/or operation of fishing vessels.

26. The fishery sector, once placed on a sustainable footing, and where resource rents are realized, can finance, through cost-recovery and resource taxes, the higher costs entailed in effective fisheries management. Sustainable fisheries will benefit not just fishers directly engaged in fish harvesting, but also fish marketers, processors, distributors, retailers and exporters. At each level greater and more valuable catch volumes, due to better management, will generate additional incomes, employment and foreign exchange revenue. Various

[9] Delgado C, Wada N, Rosegrant M, Meijer S and Ahmed M (2003). Fish to 2020: Supply and demand in changing global markets . Washington DC: International Food Policy Research Institute.

[10] It is well documented that male income-earners spend a significant share of their income on consumer items that do not support the family (ref).

[11] Schrank, William E., Ragnar Arnason, and Rognvaldur Hannesson (eds.). 2003. The Cost of Fisheries Management. Ashgate Publishing Limited. Hants, UK, Burlington, USA.

studies have suggested that the ex-vessel value of fish is just between one half and one fifth of the value of the fish at final consumption.

27. Larger financial resources are also needed for small-scale fisheries management in a broad sense. In many fisheries, the over-arching objective has to be to diversify sources of income and employment of fishing households away from a pure dependency on the harvesting of fish. Emphasis in credit and micro-finance schemes has to be on diversification, rather than on increased specialization as is the case with many fishery credit schemes that target technological upgrading of fishing craft and gear.