I. Introduction

1. Fisheries are a major source of employment, income and food and small-scale fisheries and aquaculture are important for sustainable development of coastal communities in many parts of the world. Fish is the cheapest and the most substantive source of animal protein in many poor countries. In coastal areas with low rainfall, degraded arable land, and drought conditions, fisheries are an important source of livelihood, particularly in Africa and Asia. Fisheries sector, while primarily dependent on male labour in capture fisheries production, also provides employment to a large number of women in shore-based fish and shellfish gathering, in aquaculture production as well as in fish processing and marketing activities. The sector has significant backward and forward linkages contributing to indirect employment.

2. Fish is further an important source of trade, much more than agriculture, for many developing countries. FAO estimates that net export earnings from fish in developing countries are significantly higher than those for agricultural commodities such as rice, coffee and tea. This is particularly true of some of the least developed countries. Fish and fish products exports accounted for 14 per cent, 22 per cent and 25 per cent of the total merchandise exports of Uganda, Madagascar and Senegal respectively in the year 2003. The gross returns on fishing of a particular trip is often based on first-sales price of fish from that trip and trade in fish and fish products plays a significant role in determining the monetary value of shares accruing to capital and labour. The sharing system of remuneration prevalent in fisheries ensures better equity, especially in small-scale fisheries and it is an important factor contributing to sustainable development.

II. Contribution of small-scale fisheries to sustainable development

3. 95 per cent of the world’s fishers’ population are distributed in Asia, Africa and Latin America and 75 per cent of them are in the artisanal and small-scale sub-sector. The largest number of fishers and aquaculture workers (about 87 per cent of the world total) are in Asia. Similarly, the largest share of fishing vessels is concentrated in Asia. The small-scale fisheries sub-sector accounts for nearly 50 per cent of the global capture fisheries production and it contributes significantly to the economic well being particularly of poorer coastal communities in Asia, Africa, Latin America as well as in small island developing States.

4. While the small-scale fisheries sub-sector is the employer of last resort in some countries, especially in drought-affected coastal countries such as Senegal, in some others like China and Viet Nam it is an attractive profession offering better remuneration than other rural economic activities like agriculture and dairying. However, the sector is highly vulnerable, perhaps much more than
others, to natural calamities in several countries as demonstrated by the devastating December 2004 tsunami in the Indian Ocean.

III. Measures to improve the contribution of fisheries to sustainable development

5. Evidently, artisanal and small-scale fisheries and aquaculture make significant contribution to sustainable development, particularly in labour-surplus coastal economies by sustaining coastal communities and indigenous peoples whose livelihoods, quality of life and culture depend on aquatic ecosystems. The following measures could improve the contribution of fisheries, particularly artisanal and small-scale fisheries to sustainable development:

(i) Recognize small-scale fisheries model for the entire EEZ

6. First of all, it is important to recognize and valorize the role of selective artisanal-and small-scale fishing in sustainable utilization of fisheries resources in the entire EEZ. Traditionally, artisanal and small-scale fisheries were confined to the nearshore waters and mainly supplying fish to the domestic market. With the advent of motorization and new navigational aids some of them have expanded the area of fishing operation quite widely to the deep sea, to target tuna and tuna-like species, and other highly migratory fish stocks, mainly to cater to the world market. However, their contribution to the production of highly migratory fish stocks is not reflected in most official statistics.

7. States should be requested to consider “scale subsidiarity” whereby larger fishing units are considered in a fishery only after exhausting the possibility of employing smaller fishing units in the same fishery in the entire range of distribution of relevant fish stocks, with due consideration for the safety of such fishing operations as well as the safety and working conditions of fishers on board.

(ii) Protect the traditional fishing grounds of small-scale fishers

8. Secondly, while opening up the frontiers of the exclusive economic zone to artisanal and small-scale fisheries on the one hand, it is vital to recognize the rights of artisanal and small-scale fishworkers to sustainably utilize and protect their traditional fishing grounds, on the other, as has been highlighted in Agenda 21. The 1995 FAO Code of Conduct for Responsible Fisheries observes that the States should protect the rights of subsistence, small-scale and artisanal fishers and fishworkers to a secure and just livelihood by granting preferential access to traditional fishing grounds and resources in the waters under their national jurisdiction. These fishing grounds are the mainstay of their livelihood and need protection from degradation.

9. It is important to mitigate the impact of all forms of coastal and marine pollution, indiscriminate conversion of coastal wetlands to the detriment of small-scale fishing and responsible aquaculture, damming of rivers that transform the salinity regime of coastal waters, and mangrove and upstream deforestation, to protect the traditional fishing and fish culture grounds of fishing communities. It is important to prevent displacement of artisanal and small-scale fishers from their fishing grounds in the name of oil exploration and exploitation. It is further important to protect their access to fishing grounds without being hampered by tourism resorts and aquaculture farms. While adopting coastal marine protected areas (MPAs) and turtle conservation programmes, it is important to consider inclusive programmes whereby coastal fishing communities could participate in such programmes and whereby their access rights to fishing grounds are adequately protected. Coastal fishing communities should be seen as allies in the conservation of marine coastal biodiversity.
10. A recent Workshop *Sustainable Fisheries and Livelihoods in Latin America* organized by the International Collective in Support of Fishworkers and CeDePesca with the support of FAO, in Santa Clara, Argentina, from the 1 to 4 March 2005, attended by fishworker organizations and NGOs from seven Latin American countries, called “for the establishment of a zone in the coastal waters of Latin American countries for the exclusive use of artisanal fishworkers, coastal communities and indigenous peoples” and to consider prohibiting the use of potentially destructive fishing techniques like trawling in this zone. All countries where there are significant populations of artisanal and small-scale fishers and fishworkers should consider such a protective zone.

(iii) **Introduce management measures for small-scale fisheries**

11. Thirdly, modern fisheries management tools should establish synergy with traditional knowledge systems of fishing communities to develop effective fisheries management regimes to ensure long-term fisheries sustainability, which can contribute to sustainable development of small-scale fishing communities. This also underscores the importance of developing monitoring, control and surveillance (MCS) capacity also to manage small-scale fisheries. In this context, rehabilitation measures for tsunami victims from generous contributions from the international community to the United Nations and its agencies should have a strong management and capacity building component, towards introducing effective fisheries management measures in the Indian Ocean countries.

12. One of the important considerations for effective fisheries management is introduction of limited access regimes to create a community of owner-operators in artisanal and small-scale fisheries whereby property rights are collectively held in appropriate composite units and transferable only to the extent it does not lead to concentration of ownership and atomisation of the community of owner-operators. Such initiatives could start as co-management regimes where the responsible government agency and fishers’ organizations (for example, a cooperative association or a trade union) collaborate to implement stipulated management measures including MCS. They could eventually devolve to become community-based arrangements.

13. It should be ensured that plurality is a recognized norm while proposing limited access regimes, co-management and community-based management measures to ensure that management regimes are sensitive to the diversity of fisheries and fishing cultures. Further, care should be taken to ensure that management tools such as the individual transferable quota system is not considered in labour-surplus, small-scale fishing, since it can lead to concentration of ownership and new social conflicts in many developing countries that may have an adverse impact on sustainable development of coastal fishing communities.

(iv) **Eliminate tariff and non-tariff barriers to fish trade**

14. Fourthly, opening up the frontiers of EEZ to small-scale fisheries and protecting the nearshore waters from pollution and overfishing may not be sufficient to accommodate all those who are seeking employment and livelihood in small-scale fisheries in most labour-surplus economies. The importance of value addition is significant in this context. Elimination of non-tariff and tariff barriers, including tariff quotas, tariff peaks and tariff escalation, could have a significant impact on sustainable development of coastal communities by allowing greater employment, especially of women, in the processing sector. Norms for food safety, and protection of animal life for international trade, rather than being absolute, should allow countries to establish equivalent
standards within established legal frameworks that they can cost-effectively comply with. Here again, it should be recognized that there are several means to an end, and that industrialized countries should not impose their standards on developing countries. However, efforts should be made to ensure that the ultimate goal of trade in fish and fish products is to contribute to better human development of fishing communities.

(v) Recognize the role of subsidies in sustainable development

15. Fifthly, government financial assistance to the fishery sector, for example, to introduce effective management measures, to retrain fishers, to introduce food safety and environmental standards, and to improve safety of fishing operations should be seen as subsidies contributing to sustainable development, and therefore, they should be positively dealt with under the ongoing negotiations on fisheries subsidies at the World Trade Organization. Moreover, in the absence of effective fisheries management, trade in fish and fish products could have disastrous consequences for long-term sustainability of fisheries resources even in small-scale fisheries.

(vi) Introduce benefit-sharing arrangements for small-scale fishing communities

16. Sixthly, an equitable benefit sharing arrangement under the Convention on Biological Diversity for traditional fishing communities could help reduce their fishery-dependent economic vulnerability. There is greater recognition now of the stream of benefits that can flow from the wise use of coastal marine living resources, for example, in coral reef ecosystems, especially with regard to traditional knowledge of coastal communities regarding the therapeutic properties of coastal marine living resources that are of commercial interest to the pharmaceutical and cosmetic industries.

(vii) Facilitate legal movement of fishers across borders

17. Seventhly, for overcrowded small-scale fisheries in developing countries, industrialized nations could contribute to alleviating demographic pressure in fishing grounds by facilitating temporary migration of surplus labour into their fisheries, particularly into fisheries that are earmarked by labour shortage.

18. FAO’s State of World Fisheries and Aquaculture 2004 (SOFIA 2004) observes that employment in fishing has been declining for several years particularly in Japan and European countries. Also, according to SOFIA 2004, fishing is no more an attractive profession for younger generations in industrialized countries. The fishing workforce in most developed economies is also advancing in age. In Japan, for example, about half the population of male fishers were 60 years or older in 2002.

19. It is a well-known fact that there has been considerable illegal recruitment of workers into the fisheries of industrialized and advanced developing countries from poorer countries in recent years. One of the reasons for appalling labour conditions on board some of these fishing vessels for such workers is mainly due to the illegal nature of their work. Legalising such recruitment practices could make a significant contribution to sustainable development in some of the labour-surplus developing fishing economies. This would also help fishing vessels of the industrialized countries to move from high labour productivity, high capital and subsidy-intensive fishing technologies to more labour-intensive and capital-saving fishing technologies.
(viii) Recognize the importance of implementing a coherent management framework

20. Lastly, a challenge in moving towards sustainable fisheries is how to develop, and implement, a coherent management framework for the entire range of fishing operations within the EEZ in a consultative and participatory manner, taking into account the environmental, ecological, social and economic dimensions of fishing, fish resources and fish habitats. A still greater challenge would be how to effectively address threats to fisheries sustainability arising from non-fishery factors, which are indeed a major issue in many countries. In this context, effective inter-agency mechanisms are required for effective fisheries management and habitat protection. Thus, for sustainable fisheries, we need both vertical and horizontal management regimes.

Conclusion

21. In conclusion, small-scale fishing employing selective gear are less threatening to the marine ecosystems than are large-scale fishing, because it often uses low quantities (and greater diversity) of gear that are often passive and selective, and in accordance with the fisheries resources seasonably accessible to its fishing gear. Considering its potential to contribute to long-term sustainability of fisheries resources and better protection of fish habitats, and its substantive contribution to employment, income and food security, it should be recognized by the General Assembly as a vital sector contributing to sustainable development of coastal communities and in meeting the Millennium Development Goals, especially eradication of extreme poverty and hunger and ensuring environmental sustainability. It should, therefore, be proposed by the General Assembly as the ideal fishing model for the entire EEZ within a sustainable and responsible fisheries framework.