COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

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REHABILITATION AND RECONSTRUCTION OF FISHERIES IN TSUNAMI AFFECTED COUNTRIES

EXECUTIVE SUMMARY

This document reports on the assistance that has been provided towards the rehabilitation of fisheries in tsunami affected countries. Attention is also drawn on the impact of the tsunami on fish trade and future assistance needs. The Sub-Committee is invited to review and comment on the FAO programme for assessing damage in the fisheries sector and on efforts to provide for its rehabilitation and reconstruction.

INTRODUCTION

1. On 26 December 2004, a devastating earthquake off the coast of Sumatra triggered several tsunamis that surged with devastating force against many countries around the Indian Ocean, reaching as far the Horn of Africa and causing human tragedies and severe damage to infrastructure. Fishing and coastal communities were particularly exposed and suffered massive losses of people, productive assets and shattered livelihoods.

2. Similarly to the other specialized agencies of the United Nations, FAO responded swiftly to provide relief and rehabilitation assistance in the area of agriculture, fisheries and forestry. FAO’s assistance was further defined during the 26th session of the FAO Committee on Fisheries (Rome, 7-11 March 2005) and the FAO Ministerial Conference on Fisheries (Rome, 12 March 2005), where Members were advised by countries directly affected by the tsunami of the magnitude of the damage, with special emphasis on the damage suffered by the fisheries and aquaculture sector. These Members summarized steps taken by their governments to provide relief in collaboration with international development partners and NGOs. They welcomed the
assistance provided by FAO as they moved into rehabilitation, emphasizing the crucial future role of FAO in providing coordination and technical assistance.

3. Both COFI and the Ministerial Conference highlighted the need for FAO to play a key role in collaboration with others in assisting the governments of affected countries, including through the coordination of fisheries rehabilitation activities and the provision of technical assistance, stressing the importance of placing advisors in affected countries. They endorsed FAO’s medium- to long-term rehabilitation strategy for the fisheries and aquaculture sector in affected countries, recognizing the need for extra-budgetary funding, including for a coordination and technical assistance unit to be based at FAO headquarters and in the Regional Office for Asia and the Pacific.

4. The purpose of this paper is to provide the Sub-Committee with a reflection, now that the acute emergency phase is over, on the still unfulfilled requirements for the rehabilitation and reconstruction of fishing communities and the fishing industry in the tsunami affected countries, with particular reference to the re-vitalization of fish trade. At the same time it is hoped to identify, for potentially interested partners, where specific assistance is needed to ensure rational development of national and international fish trade, which are so important to food security in the region, both through the contribution of fish and fisheries to the food supply and to the economy.

THE EVENT AND IMMEDIATE INTERVENTION

5. Almost 300,000 people perished in the disaster, which impacted Indonesia and Sri Lanka particularly heavily, but also caused loss of life and destruction in many other Indian Ocean countries including: India, Malaysia, Maldives, Myanmar, Seychelles, Somalia, Thailand and Yemen. Table 1 below summarises the physical damage to fisheries but no quantification is possible of the intense human suffering and devastation of infrastructure.

6. In the immediate aftermath of the tsunami, the world responded with exceptional generosity to appeals for assistance to the victims. The result was the largest mobilization of development assistance funds in history, largely earmarked for emergency relief rather than longer-term rehabilitation and reconstruction. Much of the funds flowed, most rapidly and perhaps disproportionally, through national and international non-governmental organizations (NGO’s and INGO’s). The international community and bilateral donors inevitably took longer to mobilize funding as this requires a complex range of approvals, for instance by national parliaments. However, significant emergency relief interventions were immediately forthcoming from neighbouring countries, Japan, the US, the European Union and others. This included medical assistance, food aid, drinking water and heavy equipment to start the clean up.

7. Early medical intervention prevented massive disease outbreaks. Emergency delivery of potable water and food aid prevented starvation. The other major needs for shelter and restoring communication took longer to materialize. As a consequence, there has been some criticism of the emergency relief effort by the beneficiaries. This must be seen in perspective as, although temporary shelter was achieved rapidly, the planning and rebuilding of the massive number of new houses required and the replacement of lost infrastructure takes time. It is also apparent that in most cases the pre-existing housing and infrastructure were inadequate. These developments can be seen as the merging of emergency assistance into longer-term rehabilitation.
<table>
<thead>
<tr>
<th>Country</th>
<th>General impact</th>
<th>Impact on fisheries</th>
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<tbody>
<tr>
<td>Indonesia</td>
<td>227 000 people dead/missing. Over 400 000 displaced</td>
<td>US$4.45 billion. Private sector: 2/3 of total economic loss. US$140 million (exc. lost production). 2/3 of boats/gear destroyed or damaged. ½ of infrastructure destroyed or damaged. 48 000 ha of brackish water aquaculture ponds seriously damaged.</td>
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<td>Maldives</td>
<td>100 people killed and missing. 12 000 displaced. 1/3 of population severely affected (housing-food-water).</td>
<td>US$470 million (nearly 2/3 of GDP). Main activities affected: tourism/fisheries. US$25million. 120 fishing vessels lost, 50 vessels damaged. 337 cottage fish processors and 37 commercial ones lost equipment.</td>
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<td>Sri Lanka</td>
<td>31 000 people killed.</td>
<td>US$1 billion. Main activities affected: housing, tourism, fisheries, transport. US$120 million (exc. damage to housing/assets). Over 20 000 vessels destroyed or damaged. Damage to 200 landing sites, 10 harbours, 37 anchorages and associated infrastructure.</td>
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<tr>
<td>Thailand</td>
<td>5 000 people killed. (half of them foreign tourists).</td>
<td>Main activities affected: tourism and fisheries. Damage to fisheries estimated at US$47 million. Loss of income for 30 000 fishery-dependent households. Damage to 4 500 fishing boats and 4 900 fishing vessels. Damage or destruction of some 400 fishing villages. Damage to more than 6 000 cage farms, 42 shrimp farms, 83 public harbours/piers.</td>
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<tr>
<td>Myanmar</td>
<td>61 people killed several thousand displaced</td>
<td>Main activities affected fisheries (95%) and agriculture. Main economic activity is fishing. 1200 fishermen cum farmers lost productive assets. 99 boats lost including gear and fishing equipment. Small-scale fish drying facilities lost. Damage to fishing villages and landing and distribution facilities.</td>
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<td>India</td>
<td>10,881 people lost 5,792 missing on mainland. Up to 20,000 more in Andaman and Nicobar Islands.</td>
<td>Losses US$ 1.2 billion: Damage US$575 million, productivity loss US$450 million. Fisheries rehabilitation needs estimated at US$285 million. Over 5 000 mechanized boats, 8 000 FRP boats, 25 000 boats of other categories and 35 000 wooden catamarans. In addition, it is estimated that over 2 340 outboard motors were lost. Damage to landing sites. Damage to shrimp culture sector, a considerable FX earner; damage to small-scale processing and distribution network.</td>
</tr>
<tr>
<td>Seychelles</td>
<td>2 killed Subsequent heavy rain caused displacement of many.</td>
<td>Physical damage to infrastructure/bridges/roads US$33 million. US$1.5 million required for rehabilitation. 1 large fishing vessel lost about 80 damaged. Damage to landing facilities in Victoria Port.</td>
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<tr>
<td>Somalia</td>
<td>150 people killed. 50 000 people severely affected (housing-food-water).</td>
<td>Fisheries were most affected as it was the height of the fishing season. 470 boats, 16 engines lost, 24 912 nets, 3 730 traps, 587 diving sets destroyed.</td>
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<tr>
<td>Yemen</td>
<td></td>
<td>US$2.8 million. Loss of income for thousands of fishers. 600 boats, 1 600 nets, 17 000 traps lost/damaged. Damage to infrastructure, beaches, natural harbours and jetties.</td>
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CHANNELING OF FAO ASSISTANCE

8. Immediately after the disaster, FAO started planning for emergency and longer-term relief for agriculture, forestry and fisheries. The nature of the damage, generally restricted to a 5 km coastal belt, meant that the fishing community was particularly exposed by reason of geography and suffered disproportional losses of people and productive assets. The tragic loss of life was compounded for the survivors by the destruction of fishing vessels, fishing gear, landing and processing facilities, critical elements of the market chain (including ice plants, cold stores, fish markets) and almost all of the considerable marine and brackish water aquaculture capacity in the affected countries. In addition, fishery administrations lost many experienced staff members, a fact that seriously constrains recovery.

9. FAO’s role after a natural disaster is to restore local food production and reduce dependency on food aid and subsequently to provide long-term assistance for rehabilitation of afflicted areas. The first FAO initiative was the immediate commitment of US$1.5 million of its own funds for the conduct of needs assessments in Indonesia, Maldives, Sri Lanka and Thailand. This was prior to the receipt of specifically earmarked funding from donors. Within the United Nations system, the Central Emergency Revolving Fund (CERF), the Inter-Agency Consolidated Appeals Process and the UN Flash Appeals are the mechanisms for handling the arrival of donor funds. Using the special fund for emergency and rehabilitation activities (SFERA), FAO was able to rapidly initiate emergency operations within the inter-UN needs assessments related to agriculture, fisheries and forestry.

10. On the basis of the first needs assessments, FAO appealed for US$29 million through the UN Flash Appeal for six countries: Indonesia, Maldives, Myanmar, Seychelles, Somalia and Sri Lanka. At that stage, the extent of damage in Yemen had not yet been determined. In the mid-term review this request was raised to US$109 million for all countries and by end November 2005, some US$ 57 million had been approved for projects. Although India was seriously affected, the Government of India did not request emergency assistance but will rely on funding from the World Bank, the Asian Development Bank and other donors for rehabilitation and reconstruction.

11. The priorities covered by FAO’s appeal included:
   • coordination, needs assessment and technical assistance;
   • replacement of fishing gear, repair and replacement of boats, rehabilitation of small scale processing and the market chain, rehabilitation and restocking of hatcheries and fish farms and the early stages of rehabilitation of fish landing and storage facilities;
   • supply of seeds and tools to restart food production and
   • repair of irrigation and drainage infrastructure, cleaning and reclamation of land.

OVERALL UN STRATEGIC FRAMEWORK

12. The overall UN strategic framework is outlined below:
   • **Immediate** (first 6 months) with emphasis on damage assessments and emergency work in the context of the original UN Tsunami Flash Appeal;
   • **Short-term** (12 months) with emphasis on rehabilitation assistance in the context of the Mid-Term Review of the UN Tsunami Flash Appeal (April 2005);
   • **Medium-term** (12-24 months), through the preparation of strategic frameworks (or sectoral master plans) and specific FAO action plans for rehabilitation;
   • **Long-term** (over 24 months and up to 5 years) through reconstruction programmes and projects that include elements of longer-term planning.
13. Following a mid-term review of the UN Flash Appeal in April 2005, and based on the in-depth assessments by FAO and other agencies, the consolidated UN assistance was extended to the end of 2005. The funds already collected for the immediate and short-term phases have been committed and disbursed. New projects are in preparation and funding is sought for the essential longer-term follow-up. National governments, assisted by the international agencies, including the World Bank, Asian Development Bank and FAO, have been active in preparing strategic policy frameworks. In addition, a “Regional strategic framework for the rehabilitation of fisheries in tsunami-affected countries in Asia” has been developed by the regional Consortium to Restore Shattered Livelihoods in Tsunami Devastated Nations (CONSRN), in which FAO is a key partner.

14. In short the acute emergency is ending, the planning for reconstruction has been done but it now needs to be turned from strategic frameworks into reality by a combination of international funding, technical assistance and national willpower. The UN system and FAO are committed to this all-important next phase under the slogan “Building back better”, which recognizes that in many cases the infrastructure and the technologies employed in fisheries prior to the tsunami were inadequate and in need of development. Of particular concern is the issue of sustainability given the fragility of coastal ecosystems in the countries concerned. Before the tsunami, there were indications that inshore fishery resources were fully- to over-exploited. The avalanche of well-intentioned, but not always well targeted, assistance from NGO’s to replace fishing boats and gear has in some cases resulted in an increase of fishing capacity with too many small, often poorly built and unsafe, boats entering the fishery. As only highly exploited inshore waters are accessible to them, this may create problems in the future, unless better vessels and technologies are introduced to diversify to the relatively unexploited offshore stocks. For these to be successful improved handling practices on board, a better landing and transport infrastructure will be needed.

**ONGOING FAO REHABILITATION ACTIVITIES IN THE FISHERIES SECTOR**

15. Through support to the FAO Emergency and Rehabilitation Division, the Fisheries Department contributes technical assistance to ongoing assistance programmes in fisheries in Indonesia, Maldives, Myanmar, Seychelles, Somalia Thailand and Yemen. Typically these programmes started with participation in assessments and led to channeling of donor funding for repair and replacement of boats and for the purchase of fishing gear. Less emphasis has so far been placed on assistance to the trade sector, except through immediate inputs to rebuilding shattered livelihoods.

16. In Indonesia, at the start of the FAO assessment phase, there was an evident conflict between the need to show rapid results and providing inputs and careful planning and coordination. FAO now has a substantial fisheries assistance programme in the Province of Aceh and Nias Island, funded by a number of donors. This ranges from training boatbuilders to build better, safer boats to provision of fishing gear and assistance to the provincial fisheries department to register and control the quality of new fishing boats. In the post-harvest sector, almost 200 small scale fish drying operations producing for regional trade, have been rehabilitated, 25 mobile fish transporters have been put back into business and temporary auction markets have been established. In addition, a small ice plant is being procured for the island of Similue together with other assistance for transport of fresh fish and drying. Donors are being sought for a wide range of projects that have been prepared for extending the reconstruction of processing and marketing to other centers and for the construction of fish landing centres.

17. In Sri Lanka, after the assessments, efforts have concentrated on the repair and replacement of fishing vessels and the provision of replacement fishing gear in order to get the fishermen back to sea. As for other countries, urgent assistance is needed for the post-harvest sector and project ideas have been generated for reconstruction of wholesale and retail markets, refrigerated and insulated storage and transport as well as the introduction of new technologies, particularly refrigerated seawater storage, to extend fishing to offshore resources.
18. After damage assessment in the Maldives, FAO projects are operational for vessel repair, the establishment of boatbuilding facilities, design and construction of fiber glass fishing vessels (both small and large), replacement of fishing gear and strengthening local community organizations. Additional project proposals have been prepared for the consideration of donors.

19. In Myanmar, a boatbuilding programme for a newly designed fishing vessel has been initiated and fishing gear distributed. There are requests for assistance with small scale fish drying facilities in outlying villages and for help with strengthening the market chain, which are as yet unfunded.

20. Damage in the Seychelles was limited, although significant. FAO assistance to fisheries, valued at US$ 1.5 million, has been completed with the replacement of fishing gear and repair of vessels. Bilateral donors have undertaken the repair of damaged infrastructure.

21. In Somalia there are four ongoing FAO projects for replacement of boats and fishing gear as well as funding for an ice plant and cold store. Several more projects are in the pipeline, especially for post-harvest activities.

22. After an early assessment in Thailand, FAO Technical Cooperation Programme (TCP) funds were mobilized to ameliorate the damage to fisheries amounting to US $47 million. Subsequently, additional funds from Japan became available. Four further projects for medium term assistance have now been approved, which increases the total to about US$2 million. The thrust of the emergency phase activities was the restoration of livelihoods through the provision or rehabilitation of productive assets (boats, engines and fishing gear). The medium-to-long-term phase concentrates on assistance to fishing and farming communities to empower self-help for rehabilitation of tsunami affected fishermen and farmers under the “Building Back Better” concept.

23. An assessment carried out in Yemen in July 2005 by FAO and the Government, revealed more damage than originally thought with 2000 fishing families affected by loss of boats, gear and infrastructure to the value of US$2.2 million. A project has been prepared and donors are being sought.

IMPACT OF THE TSUNAMI ON FISH TRADE AND FUTURE ASSISTANCE NEEDS

24. The abrupt cessation of fish landings and production from aquaculture coupled with destruction of landing facilities, ice plants, storage, processing capacity and the distribution network had a devastating effect on fish trade and on the livelihoods of those who survived the disaster. As recovery commenced, there were also reports of a short-lived reluctance to eat fish. The bulk of the assistance provided to date has been for the replacement of boats and gear, which leaves an emerging missing link between production and the consumer.

25. In the next phase, it is important that issues of improving market facilities and improving the distribution and marketing chain, food safety and quality, be addressed. The requests being received are evidence of the government and the private sector’s needs for the reconstruction of the post harvest sector. At one end of the scale is the provision of fish landing facilities, storage, ice plants, roads etc. These are inherently large infrastructure projects, taking time to materialize and often connected with the provision by government of public infrastructure. Such projects are normally funded by the development banks or larger donors, but need to be formulated by technical agencies such as FAO. At the other end of the scale, there is potential for a major impact on livelihoods from relatively small projects such as: replacement of small-scale fish processing/drying equipment, provision of business training and assistance with grading and marketing to enable producers to get better returns and assistance with local insulated and refrigerated transport. It is recognized that this type of local level development is usually best handled by development assistance directed to the community. The middle ground is represented by projects to strengthen
fish inspection services, align domestic standards, first with those of the region and then with internationally recognized requirements, stimulating regional and export marketing – through guarantees of chain of ownership, improved quality etc. Also, in this category are the construction standards and operations of domestic fish marketing facilities, both for wholesale and retail sales, which need to be urgently addressed. These are projects carried out through local government or institutional structures. There is a crucial role for local government in rehabilitation and reconstruction and generally this means assistance to strengthen national capacity. The nature of the disaster was such that fisheries departments lost the highest proportion of government staff, particularly field staff and extension workers who lived in fishing communities. Training programmes must be designed and adequately funded to ensure the replacement of this experienced personnel.

26. The private sector has an important role to play in the recovery of fish trade, in support of donor assistance and government efforts. The key to economic recovery of fish trade is access to credit and capital. The replacement of productive assets will create jobs, but needs a functioning financial system and often the implementation of formal micro-finance programmes.

27. Many project ideas and concepts for viable projects in fisheries have been developed by FAO staff, consultants and national experts in the countries where FAO is currently working. Germany is funding a US$ 1.3 million on “the Rehabilitation of Livelihoods in the Fisheries Sector Affected by the Tsunami and Earthquake in Indonesia” and Sweden is funding the "Coordination and Technical Support Unit to Tsunami Rehabilitation and Reconstruction in Fisheries and Aquaculture" for US$ 1.6 million. Other project proposals for fisheries reconstruction, including in the post-harvest and marketing sectors are available from the FAO Fisheries Department Tsunami Task Force for review by potentially interested donors.

**CONCLUSIONS**

28. The Sub-Committee is invited to review and comment on the FAO programme for assessment of tsunami damage in the fisheries sector and on efforts to provide for rehabilitation and reconstruction. In particular, in view of the pressing need for funds, members of the donor community with interests in fish trade are encouraged to match the profiles of the projects that have been prepared for the affected countries with their policies and priorities.