

ANNEX XIII – FISHERIES

A. INTRODUCTION

1. The fishery sector in Sri Lanka contributes 2.4 percent of GDP. Sea fishing and fishery-related services provide employment and livelihood for a larger proportion of the rural communities living around the island's coast. The sector employs an estimated 142,500 active fishermen and about another 20,000 people indirectly. For the most part, these people were living in 1,333 fishery villages and used 703 boat landings, including fishery harbors, along the coast. The tsunami had a severe impact on undiversified and already impoverished economies, especially in the conflict-affected North East, where fishing and agriculture were the main economic activities.

2. Prior to the tsunami, there were about 29,700 boats in business. Of the country's boat fleet, around 65 percent (approximately 19,110) has either been fully destroyed or damaged to varying degrees, including 594 multi-day boats, 7,996 motorized day boats and about 10,520 traditional non-motorized boats. Fishing implements such as out board motors, ice storages, fishing gear and nets also have been destroyed. The fisheries sector in the North East was relatively unsophisticated, with few MDBs, storage facilities, fishery harbors and relying mostly on small vessels. Across the country, only a few individuals owned more than 1-2 boats and 2-6 people used to go on fishing in a single boat, depending on the type and size of the vessel, either with or without the boat owner on the basis of some pre-agreed fish catch sharing arrangements among them. Entire fishing communities were dependent on the fishing boat fleets that were in operation prior to the tsunami. The sector is intimately integrated with rural livelihoods and income. For the most part, the MDB fleet is majority absentee-owned employing skippers and crews. However, the fleet has a high level of debt, low quality product, high-levels of by-catch (dolphins and turtles) and poor working conditions and payment terms to the crews. All MDBs and majority of day boat landings are commercial in that fish catch is auctioned at port landings for entry in to distribution chains and markets.

3. The sector produced about 300,000 metric tons of sea fish annually. This output per boat or per fishermen, when compared to outputs of other countries is low. For example, in Norway, 12,000 fishermen produce 2 million tons of fish annually.

B. DAMAGE OVERVIEW

4. This damage assessment was carried out mainly on the basis of the discussions with and the data and information shared by the FAO team of consultants who carried out a preliminary damage assessment of the sector. The FAO team carried out the assessment on the basis of the data and information provided by the Ministry of Fisheries and field visits to all the districts of the South and North East. In addition, the assessment benefited from the field visits of the Bank team members to the affected districts.

5. Sea fishing is the most severely affected subsector. In ten of the fourteen coastal districts, the damage to the industry, fishing boats and implements, fishing communities and livelihoods is enormous. The damage to the industry and the fishing vessels in Colombo, Gampaha, Puttlam and Mannar districts are less than the other districts. The disaster has almost

paralyzed the industry and livelihoods of the dependent communities. It is reported that about 27,000 fishermen and their family members died, with the largest number [approximately about 20,000 – source Liberation Tigers of Tamil Eelam (LTTE)] in the North East. In addition, a large number of fisher communities have been displaced due to the loss of housing and other household assets.

6. Of about the total 29,700 pre-tsunami boat fleet, a large number of boats have either been fully destroyed or damaged. This includes mainly single day motorized boats and traditional non-motorized boats, but also a considerable number of MDBs. It is estimated that a total of about 19,000 boats are destroyed or damaged. Fishing implements – such as out board motors, ice storages, fishing gear and nets – also have been destroyed. Most of the damaged boats have been washed ashore by the powerful sea tides and are lying scattered on the adjoining coastal lands. Owners of these boats will have to incur additional costs to hire heavy mechanical equipment to transport the displaced boats back to the shore and fishery harbors. The total estimated cost of the damage to boats and fishing implements (including beach seines) in terms of replacement and repair costs is LKR 7,974 million.

7. To varying degrees, several of the large fishing harbors and small boat landings in Hambantota (*Kirinda, Tangalle harbors*), Matara (*Kudawella, Puranawella, Mirissa*), Galle (*Galle, Hikkaduwa*), Kalutara (*Beruwala, Panadura*) and Trincomalee (*CodBay*) have been destroyed. There is comparatively less damage to the fishery harbors and boat landings in the other districts. The damage to marine structures and service facilities, and equipment of the harbors (including shore structures, dredgers and heavy mechanical equipment, ice plants, buildings, breakwater boulders, ice plants, boat repair yards, and pumps and distributor systems, etc.) is enormous. Most of these components are beyond repair. All of the severely damaged fishery harbors and small boat landings may require extensive dredging and removing debris and sand from the basins. The total estimated cost of the damage to infrastructure of the fishery harbors/ports is LKR 1,333 million.

8. In addition, there has been severe damage to buildings and assets (including vehicles) that belong to the National Aquatic Resources Agency (NARA) headquarters, Coast Conservation Department, National Institute of Fisheries and Nautical Engineering (NIFIN), Ceynor Foundation and the monitoring, control and surveillance system of the Ministry of Fisheries and Aquatic Resources. Some private ice plants also got damaged. The replacement and repair cost of this damage is LKR 825 million.

9. Based on these estimates the total damage is about LKR 10.1 billion, excluding the damage to housing and personnel assets of the victims, which have been included in the damage assessment of the housing Sector. A breakdown of the overall damage to the sector is in Table 2.

D. OTHER OBSERVED IMPACTS

10. Several side-impacts of the tsunami will make a quick recovery of the fishery sector relatively difficult. First, the proposal to relocate the affected people outside a 100 meter coastal reservation may have adverse social and economic impact on the fishing communities. Traditionally local fishing communities have strong community bonds and help each other in their day-to-day fishing activities. There is a risk that this community bond may be disrupted if

the relocation and resettlement is not managed diligently with due attention to the associated socio-economic implications of the policy.

11. Second, the tsunami had other adverse social impacts on the fishing communities. Most of the boat owners had obtained bank loans to purchase the destroyed capital assets. About 90 percent of them still have to repay substantial amounts of the loans. The tsunami has not left them financially able to repay the loans and at the same time, mobilize own resources to acquire the capital assets required to re-establish businesses.

12. Third, rural communities rarely use banking facilities to deposit savings and instead keep their cash savings in their homes. Most of them lost their savings together with jewelry, land, and property deeds. Most of the affected people do not have the ability to mobilize formal bank loans because co-laterals (such as property deeds and jewelry) were lost. In addition, informal money sharing practices such as “*Sittu* system” (which is prevalent in rural communities) have been disrupted. However, the owners of the MDBs are less affected and they seem to be on a better financial footing and have better access to formal credit and insurance facilities.

13. Fourth, the tsunami has destroyed most of the local boat repair shops together with repair toolkits in the affected villages. Although there is a heavy demand for minor repairs to the damaged boats, the service is now not available. In addition, the large commercial scale local exporters, manufacturers and boat repair yards will not be able to meet the demand for new boats, fishing gear and implements, and construction and repair material (e.g., fiber glass and resins) in the forthcoming recovery period.

14. Fifth, in the short term there is a drastic reduction of demand for locally caught fish due to the mistaken belief that the fish are contaminated. Consequently, less affected fishermen and many other people who depend on various inputs and output market related services have lost employment. While those fishermen families whose boats are intact and houses not destroyed may be able to restart beach landings and limited use of damaged fishery ports, most of the fishermen and their families will require several months of support to recover their livelihoods.

15. Sixth, if the disrupted fishing industry does not recover soon, there is risk that migrant fishermen from other areas, including neighboring countries, may encroach on the traditional fishing areas. This problem is relevant to some affected districts where open water shrimp fishing is at its peak during this period. Fishermen in these districts usually earn substantially more during the first 3 months of the year.

D. RECONSTRUCTION AND RECOVERY NEEDS

Short Term Needs

16. The reconstruction and recovery efforts should be carried out in two phases. In the short term phase (1-12 months) a coordinated national effort should be made to bring the industry back to operation as early as possible. Commencement of the rebuilding and renovating the urgently needed infrastructural facilities (such as ports and anchorages, boats, small port landings, etc.) is absolutely essential. However, the completion of the reconstruction would extend beyond the short term phase. During this phase, the focus should be on helping the affected families recover

from their losses. This can be done by ensuring that those who depended on sea fishing are included in the general housing, food and cash grant assistance programs. It may also be useful to hold discussions with the commercial banks about the possibility of providing concessions to those who have already taken loans and other affected people. In addition, the affected should be provided with micro-credit facilities through community-based revolving fund mechanisms to restart the lost income sources. Regarding the latter, funds may be used that are already available through some on-going government and donor-funded programs with related assistance components.

17. In the short term, there would be a huge demand for the boats, the local market may not be able to supply. As such, there would be a need to review the feasibility of working with the private sector to import certain types of boats of an agreed design. Rebuilding the damaged boat fleet through local boatyards may also substantially delay the reconstruction efforts. In this regard, there is a need to work closely with the large local, as well as overseas commercial boat yards, facilitating and providing necessary assistance to them, to assist them in managing risks.

18. Until the fishermen are able to repair their damaged boats or acquire new ones, they need to have an alternative source of income. Also, if the rebuilding of the boat fleet is substantially delayed, there would be a need to extend support programs for the affected fisher families. There are other rehabilitation and reconstruction activities that are needed urgently at the village level (including repairing damaged village roads, cleaning up of drainage canals, clearing debris and rubble, etc.). These works should be started as early as possible to provide immediate local wage labor employment opportunities. [See Annex VIII on Livelihoods.]

Medium and Long Term Needs

19. At present, the management of the sector is weak with poor regulation, surveillance and monitoring; under-developed infrastructure; low vessel efficiency; and consequently, low total annual production. A more detailed assessment of the damages and issues is needed to improve the productivity and efficiency in the long run.

20. This opportunity should be used to rationalize and modernize the sector with a long term vision. An essential element of such a vision should be to make the sector more productive and efficient. In this regard, strategies should be adopted for improving the fishing vessel design, fish handling and packaging techniques, quality assurance, fishery information management, licensing and regulating fishing crafts and use of fishing gear, surveillance fishing zones and boundaries and providing vocational training to fishermen. Sri Lanka has a long history of heavy investment in shore-based facilities (including ports and boats) but catches per boat and vessel income have been modest as fish resources have been excessively exploited. This situation will require a closer analysis of the ideal fleet size, composition of fleets, design of the fishing vessels, and the shore-based fishery infrastructure that would lead to a sustainable balance between the resources base and the fish harvests while optimizing the catches per boat. A longer term rebuilding of the sector and its physical and economic infrastructure should be based on a detailed technical study. With regards to fishery harbors, a strategy should be adopted to improve their management, in particularly, through exploring public-private partnerships.

**Table 1: Needs Assessment
(LKR Million)**

No.	Activity	Phase I Short term	Phase II Mid term	Total
1	Providing new fishing boats or repairing damaged boats, including fishing gears	6,000	2,000	8,000
2	Reconstruction of fishery ports/harbors, anchorages and landing center facilities, provision of machinery and equipment.	500	1,200	1,700
3	Desilting/dredging of harbor basins and removing and cleaning of sand and debris from harbor and boat landing basins		550	550
4	Micro credit schemes		110	110
5	Reconstruction and repairs to ice plants other fishery related small service infrastructure.	500		500
6	Repairing public buildings and replacing damaged office facilities	200	700	900
7	Technical and financial assistance for modernizing the sector	50	500	550
8	Vocational training and skill development		55	55
	Total	7,250	5,115	12,365

Table 2: Estimated Damages to the Fisheries Sector from the Tsunami

DISTRICT	Estimated damage to boats & fishery harbors LKR million	Estimated damage to buildings LKR million	TOTAL LKR million	TOTAL US\$ million (LKR 104.65)
Jaffna	994	88	1082	10.34
Mulaitivu	1103	98	1201	11.48
Kilinochchi	80	7	87	0.83
Trincomalee	1559	138	1697	16.22
Batticaloa	648	58	706	6.75
Ampara	540	48	588	5.62
Hambantota	846	75	921	8.80
Matara	1256	111	1367	13.06
Galle	1273	113	1386	13.24
Kalutara	688	61	749	7.16
Colombo	25	2	27	0.26
Gampaha	269	24	293	2.80
Puttalam	15	1	16	0.15
Mannar	10	1	11	0.11
TOTAL	9306	825	10131	96.81