Impacts of the Tsunami on Fisheries, Aquaculture and Coastal Livelihoods

- Sri Lanka –

(As of 12 January 2005)

Affected areas
The Sri Lankan coast was one of the heaviest impacted areas in the region. This unprecedented natural calamity, 26th December Tsunami, has caused severe damage to coastal communities in twelve of the fourteen coastal districts of the country, namely Colombo, Negombo, Jaffna, Kilinochchi, Mullaitu, Tricomalee, Batticaloa, Ampara, Hambantota, Matar, Gale and Kaluthara districts. The other two districts viz. Puttalam & Mannar had minimum damage.

The total number of deaths caused by the Tsunami is estimated at 30,893 as at 12th January. A total of 6,038 are missing, while 441,410 are displaced from their homes.

Fisheries
Fishing Community
The fishing community suffered heavy loss of life, with 7,574 dead, further 5,686 still missing (presumed dead) and 90,657 families displaced, about half the total number. More than 96,000 houses mainly belonging to the fishing communities located along the coast have been completely destroyed and thousands of others have been partially damaged. These fishers have lost their belonging and their livelihoods.

Fishing boats and gears
A very preliminary assessment carried out by the Assistant Directors of Fisheries and their staff on behalf of the Ministry of Fisheries and Aquatic Resources estimates that of a total fleet of 29,694 boats, it is now estimated that 19,637 or approximately 66.1 percent, were damaged or destroyed, made up of 1,225 large multi-day boats, 8,097 motorized day boats and 10,316 traditional non-
motorised craft. In addition, most of the fishing gear was also lost or damaged and needs to be replaced.

**Table 1- Summary of damages to the fisheries sector**

<table>
<thead>
<tr>
<th>District</th>
<th>Fishers dead (missing)</th>
<th>Landing centers (damaged)</th>
<th>Multi-day Boat</th>
<th>Day Boat</th>
<th>Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>Lost/damaged</td>
<td>Total</td>
</tr>
<tr>
<td>Colombo</td>
<td>01</td>
<td>10 out of 12 fishing ports Damaged</td>
<td>21</td>
<td>17</td>
<td>184</td>
</tr>
<tr>
<td>Gampha</td>
<td>06</td>
<td></td>
<td>216</td>
<td>173</td>
<td>1338</td>
</tr>
<tr>
<td>Puttalam</td>
<td>00 (02)</td>
<td></td>
<td>180</td>
<td>144</td>
<td>3271</td>
</tr>
<tr>
<td>Mannar</td>
<td>649</td>
<td></td>
<td>1</td>
<td>1</td>
<td>164</td>
</tr>
<tr>
<td>Jaffna</td>
<td>300 (1,000)</td>
<td></td>
<td>0</td>
<td>0</td>
<td>1221</td>
</tr>
<tr>
<td>Kilinochchi</td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>381</td>
</tr>
<tr>
<td>Mullaitu</td>
<td>1,500</td>
<td></td>
<td>43</td>
<td>35</td>
<td>1492</td>
</tr>
<tr>
<td>Tricomalee</td>
<td>818</td>
<td></td>
<td>0</td>
<td>0</td>
<td>490</td>
</tr>
<tr>
<td>Batticaloa</td>
<td>1,794 (684)</td>
<td></td>
<td>6</td>
<td>5</td>
<td>653</td>
</tr>
<tr>
<td>Ampar</td>
<td>2,475</td>
<td></td>
<td>184</td>
<td>147</td>
<td>834</td>
</tr>
<tr>
<td>Hambantota</td>
<td></td>
<td></td>
<td>472</td>
<td>378</td>
<td>545</td>
</tr>
<tr>
<td>Matara</td>
<td></td>
<td></td>
<td>182</td>
<td>145</td>
<td>717</td>
</tr>
<tr>
<td>Gale</td>
<td></td>
<td></td>
<td>225</td>
<td>180</td>
<td>235</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>1,530</td>
<td>1,225</td>
<td>13,124</td>
</tr>
</tbody>
</table>

**Fishery harbours and related facilities**

10 out of 12 major fishery harbours were damaged in various degree including support facilities such as ice plants, cold rooms, fish receiving and marketing centres and offices. Damages to related facilities (ice plants, cold storages, fuel and water supply systems) are being assessed. In the south, five ice plants are badly damaged and require major repairs to civil works. All fuel and water tanks and their delivery systems located in the fishery harbours have been damaged.

A preliminary assessment of the losses to post harvest fisheries infrastructure and the cost of their rehabilitation has been undertaken by the Ceylon Fisheries Corporation (CFC) and estimates that the total losses suffered by the CFC is at SL Rs. 389 million. CFC purchases fish from landing centres across Sri Lanka and distributes fish in Colombo and to other retailers. CFC runs a wholesale point in Colombo and retail outlets in many urban centres. It owns a network of cold storages as well as ice making plants at fish landing centres.

Ceylon Fishery Harbours Corporation (CFHC), which is in charge of maintenance, operation and management of fishery harbours and anchorages, has suffered major damages to its facilities, which is estimated at SL Rs. 2150 million.

**Support institutions**

Tsunami waves caused extensive damages to the National Aquatic Resources Research & Development Agency (NARA) of the Ministry of Fisheries and Aquatic Resources, which is located in the coast of Colombo. Some important equipment for its research activities such as HPLCs, GCs, spectrophotometers, ice making machines and autoclaves have been destroyed. The
institute is responsible for research and development on fish quality, new fish products and post harvest losses as well as providing laboratory testing services for the fish exporting industry and hence, is expected to play a vital role in the rehabilitation process of the fishery sector.

**Aquaculture**

Little aquaculture was being practiced along the impacted coast.

**Needs assessment**

The immediate needs are to repair or replace boats, engines and fishing gears to enable the fishermen to resume fishing in the shortest time possible. Essential facilities for cold storage, ice producing facilities, fish receiving and marketing centres, harbours and anchorages are also necessary immediately.

For immediate implementation, FAO is working closely with the Ministry of Fisheries and Aquatic Resources to concentrate on improving capacity of boatyards to undertake minor repairs to boats to make them seaworthy in the shortest possible time. FAO is bringing in technical team of master boat-builders, naval architects, engineers and master-fishermen to spearhead the recovery process.

Action plans may include setting up of temporary make shift boat repair facilities, a strong procurement team supported by the core team of experts. Teams will also be set up to supervise the repair works at these make shift yards to be set up at various fishing centres. Longer term plans include the repair and replacement of larger vessels and port facilities. This would envisage incorporating better designed boats especially with insulated fish holds or refrigerated sea water system to improve on board fish preservation. The Ministry of Fisheries and Aquatic Resources together with FAO is planning to introduce some restructuring to the industry in the recovery process to make it more sustainable, environment friendly and efficient.

**Government assistance programs**

In order to expedite the urgent rehabilitation works of the sector both on the immediate and short term basis it was agreed with the Honourable Minister of Fisheries and Aquatic Resources that:

- FAO would function as the co-ordinating agency for the emergency restructuring and rehabilitation of the fisheries sector.
- A task force of 3 to 4 members would be established at the Ministry of Fisheries to liaise and assist the FAO emergency coordinating unit in the rehabilitation process.
- Technical assistance to be provided to the Ministry for the preparation of (i) plan of action with costs for the rehabilitation and restructuring of the sector and (ii) to prepare a new and improved design for the replacement of destroyed multi-day boats.

**Key information resources**

- Tsunami disaster Management center: http://www.lk.unpd.org/
- Tsunami maps: http://csi.cgiar.org/tsunami.asp

**References**

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### REHABILITATION AND RECONSTRUCTION OF TSUNAMI DAMAGED FISH LANDING/ MARKETING FACILITIES OF THE CEYLON FISHERIES CORPORATION

#### 1. Batticaloa
- 1.1 Reconstruction of Ice Plant (50MT), Sinnayappadai /Lake Road, Batticaloa: Rs.85.00 M.
- 1.2 Reconstruction of Cold Storage facility (50 MT & 10 MT blast freezing facility): Rs.25.00 M.
- 1.3 Replacement of Office Equipment and accommodation facilities: Rs.5.00 M.

#### 2. Hambantota
- 2.1 Reconstruction of Ice Plant (50MT), May Road, Hambantota (inclusive of plant, machinery and buildings): Rs.85.0 M.
- 2.2 Reconstruction of Cold Storage (50MT and 10MT blast freezer): Rs.25.0 M.
- 2.3 Replacement of Office Equipment and accommodation facilities: Rs.5.00 M.

#### 3. Tangalle
- 3.1 Freezer containers (50MT storage/ 10MT blast freezer) at Tangall: Rs.25.0 M.
- 3.2 Replacement of Office Equipment and accommodation facilities: Rs.5.00 M.
- 3.3 Replacement of 01 unit Refrigeration truck (2.5MT) for fish sales: Rs.3.50 M.

#### 4. Puranawella
- 4.1 Replacement of Office Equipment and accommodation facilities: Rs.5.00 M.

#### 5. Matara, City Outlet
- 5.1 Reconstruction of affected fish retail outlet, Wellaweediya, Matara stall building: Rs.1.5 M.
- 5.2 Replacement of affected stall equipment at the above outlet: Rs.0.7 M.

#### 6. Mirissa
- 6.1 Reconstruction of Cold Storage at Mirissa (50MT storage and 10MT blast freezer): Rs.25.0 M.
- 6.2 Replacement of Office Equipment and accommodation facilities: Rs.5.00 M.
- 6.3 Replacement of 01 unit Refrigeration truck (2.5MT) for fish sales: Rs.3.50 M.

#### 7. Galle
- 7.1 Reconstruction of Cold Storage at Galle (400MT storage and 40MT blast freezer): Rs.53.0 M.
- 7.2 Replacement of fish packaging (packeting)/ processing equipment: Rs.7.5 M.
- 7.3 Replacement of Office Equipment and accommodation facilities: Rs.5.00 M.
- 7.4 Replacement of 01 unit Refrigeration truck (2.5MT) for fish sales: Rs.3.50 M.

#### 8. Galle, City Outlet
- 8.1 Reconstruction of affected fish retail outlet, Wellaweediya, Matara stall building: Rs.1.5 M.
- 8.2 Replacement of affected stall equipment at the above outlet: Rs.0.7 M.

#### 9. Beruwala
- 9.1 Reconstruction of office building at Fisheries Harbour, Beruwala: Rs.3.5 M.
- 9.2 Replacement of affected office equipment: Rs.1.5 M.

#### 10. Negombo
- 10.1 Reconstruction of Office building., Main Road, Pitipana, Negombo: Rs.3.5 M.
- 10.2 Replacement of affected office equipment: Rs.1.5 M.
- 10.3 Replacement of 01 unit Refrigerated sales truck (2.5MT): Rs.3.50 M.

**Total cost of refurbishing, restoration and new planned investment** = **Rs.388.9 Million**  
(1 US$ = 98.5 Sri Lanka Rupee)