

# **Post-Tsunami Reconstruction**

## ***Needs Assessment for the NorthEast (NENA)***

**Planning and Development Secretariat  
Liberation Tigers of Tamil Eelam**

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# Post-Tsunami Reconstruction Needs Assessment for the NorthEast

## 1.0 Introduction

The tsunami that struck the coast of Sri Lanka on 26<sup>th</sup> December 2004 is by far the worst natural disaster the country has experienced in living memory. The Northeast of the island took the greatest and direct impact and the full force of the fierce waves changing the lives of people and the landscape along more than 800 km of the coastline for ever. Within a few devastating minutes, tens of thousands of lives were lost, and billions of dollars worth of infrastructure, equipment and materials were shattered or washed to the seas; thousands more were wounded. Within hours more than 800,000 people became homeless or displaced, requiring immediate assistance not seen since the days of the "Jaffna Exodus" in 1995. The entire nation stood still, shocked and speechless on that Sunday after Christmas. The Sunday that has changed the lives of many people both affected and not. This event, more than any other has also exposed the extremes of human endurance and compassion cutting through cutting through cultural, religious and ethnic boundaries.

In an unprecedented show of good will and benevolence, individuals and organisations throughout the island rushed to affected areas within a couple of days providing assistance and relief; treatment to the wounded, help to bury the dead and provide for those that found refuge in schools, universities and temples. The assistance was also extended to those who had sort refuge in the homes of friends and relatives.

Of the eight districts in the Northeast, three Northern (Jaffna, Kilinochchi and Mullaitivu) and three Eastern districts (Amparai, Batticaloa and Trincomalee) were directly hit and were severely affected. In Mannar and Vavuniya, the effects were indirect due to fear and displacement.

The people of the Northeast in Sri Lanka are unique in their suffering. More than twenty years of war that was thrust upon on them had already robbed them of a life of normalcy. People here had already endured discriminatory state actions and oppressive and ruthless military excesses for years. The livelihood of many, particularly of those who lived on the coast was deprived for decades. They had lost much property and material possessions. It was only in the last two years or so that these people had begun regaining some dignity to their lives by rebuilding from scratch their will to survive and integrate their families. The tsunami, unlike in other areas of the island, has beaten these people back. In war, those running away had always the opportunity to take at least some possessions and gather their families. This time, they did not have time even to think of what to take or what to protect. In many parts, the devastation has been total.

It was evident within the first two days of the tsunami that the measures taken for emergency relief was only the very first step in the processes ahead. It was also evident that the restoration of the livelihoods of the community was going to be a daunting task for all involved and was far beyond the measures that were being addressed at that moment. Even if the spirit of resilience among the people of the Northeast, which has been the one overwhelming strength throughout the war years, it is clearly evident that the rebuilding ahead cannot be achieved without appropriate planning and assistance from national and international sources. To not let the affected people drift towards despair, the restoration and rehabilitation of the affected should be effected within the shortest period of time.

The Planning and Development Secretariat (PDS) of the Liberation Tigers of Tamil Eelam (LTTE) in Kilinochchi has identified three phases for the tasks ahead. The first is the current phase, namely the Emergency phase, helping the people to tide over the urgent needs of the immediate post-



tsunami days. The second phase, Consolidation phase, is for finding temporary shelters for displaced and ensuring that the lives are secured for the medium term. It is during this phase that planning should be done for the next and more arduous phase, Reconstruction phase. In order to plan for this the LTTE through its PDS, commissioned a team of volunteer experts to prepare a Needs Analysis Report, relatively quickly. The team of sector based experts was put together with people within and outside the nation.

The panel of six international and national persons together with several resource people were given a Terms of Reference (TOR) that was specific to the task of conducting the assessment. The assessment was confined to the following Terms of References:

1. The panel shall conduct a rapid analysis of the damages caused by the tsunami on the 26<sup>th</sup> of December 2004.
2. The analysis shall be restricted to the affected coastal areas only.
3. While identifying the losses caused by the tsunami, the replacement and rebuilding will be aimed at developing the infrastructure to address future needs and not just current needs.
4. During the preparation of the final document the panel members should exercise Conflict Sensitivity and bear in mind that the affected people have been repeatedly displaced in the past.
5. Needs for resettlement of displaced should consider a futuristic design that takes into account best Environmental Management principles and safe coastal zones.

The expertise within the panel and the resource committees was wide ranging including, management, planning, education, community health, fishery, agriculture, housing, transport, environmental science, and other cross cutting issues. The panel travelled extensively within the affected coastal areas to collate the information on damages, understand the damages for the entire affected Northeast and assess the needs of the community that is required to put back the community in motion.

The research methodology included but was not restricted to:

- Reference of existing assessment documents such as the Eastern Coastal Community, Development Project, and Northeast Needs Assessment reports,
- Consultation with district government agents' office,
- Consultation with representatives of national and international relief and development agencies, and
- Consultation with representatives of civil society members

The panel worked closely with the Secretariat for Immediate Humanitarian and Rehabilitation Needs (SIHRN), the three universities in the Northeast, Offices of the Government Agent and other relevant Government, Non-Government and International agencies in producing this report.

## **2.0 Background**

Sri Lanka has a coastline of about 1900 km of which more than 1000 km line the Northeast. The coastline is made of 41 DS divisions. Of the tsunami affected population in the Northeast, more than 60% lived on the coast. The coastal community in the East is made predominantly of Tamils (58%) followed by Muslims (39%) and Singhalese (3%) (Source: Eastern Coastal Community Development Project report). The coastal community in the affected districts of the North is predominantly Tamil, with negligible populations of other ethnic communities.

Capturing the natural opportunities on the coast and inland more than 80% of the population in the Northeast have traditionally and historically engaged in Agriculture, Fisheries and Livestock related activities. Agriculture and Fisheries have primarily contributed to the economy of the northeast



either directly or through associated value adding or auxiliary industries. During the twenty years of war that was mainly confined to the Northeast, the fisheries industry was strangled due to limited ocean access of the fishing community and to the wanton destruction to more than 90% of the industries' infrastructure.

The two decades of war in the country had put the coastal community, specially the fishermen at a severe disadvantage. The restrictions on the duration available for ocean fishing and on the coastal areas where fishermen generally lived had limited their development in the past two decades to a level far inferior to that of the fellow fishermen in the south. These restrictions had also disadvantaged the local fisherman by the promoted entry of international poachers and other fishermen from the south to freely fish in the NorthEastern fishing grounds; the entry of foreign elements in local waters had also been the cause for much debate and dispute in the recent past.

In Sri Lanka there are about 650 registered multi day boats of which only 42 were owned by fishermen in the North-East. These again were disproportionately distributed within a single ethnic community causing an uneven distribution of wealth. Though the number of fishermen, their families and the percentage of the coastal area is higher in the Northeast, the fisheries infrastructure in terms of number of landing sites and the number of fishing harbours were significantly lower (25-50%) than in other parts of the country. In addition to the above handicap, the NorthEastern fishermen, especially the Tamils, lost a large number of their fleet and gear during the war. A small proportion of the lost gear and boats were replaced under various aid programmes; fisheries committees and cooperative societies became active in gathering loans and capital for the societies and the industry was undergoing a revival, particularly following the CFA (Ceasefire agreement) of 22<sup>nd</sup> February 2004.

The agriculture in the coastal areas concentrated on two main types of crops namely Coconut and Cashew, together with scattered establishments of Palmyra. Cashew and Palmyra grew naturally in many parts of the Northeast. In some districts, cultivation of vegetables was prevalent, particularly in Mullaitivu (Mullaitivu district), Nilaweli (Trincomalee district) and Kaluthwalai (Batticaloa district) where Onions, Beetles and other vegetables were grown. These too saw a revival after the CFA. Paddy too has been affected, but to a lesser extent, in proportion.

Coastal community in general and the fishing community in particular have been on the poorer edge of the scale in society. They had also faced many displacements during the war and even lost their houses. However this is not a uniform scenario for the entire coast. The eastern coast especially was composed of variety of non-fisher communities. Each house had one or few persons overseas, either in the middle-east or in other countries. Their houses were large with at least three rooms and also had dis-proportionately higher amount of house appliances and equipments, especially electronic items. Classic examples of such communities were in Kalmunai, Karithevu and Maruthamunai, Sammanthurai, Dutch Bar, and Kallar etc. These areas also had relatively a larger number of people living on the coast and hence faced the greatest losses. This also is applicable to Trincomalee and Jaffna areas.

The Post conflict needs assessment report (2003) which was prepared by the Asian Development Bank (ADB), the World Bank (WB) and the United Nations Development Program (UNDP) has highlighted most of the setbacks of the Northeast as at 2003 and also identified the needs for many sectors, however it was not specific to the coast alone. A project was initiated (currently at implementation stage) under the ADB titled the "Eastern Province Coastal Community Development Project" to provide for the coastal communities in the east inclusive of the Fishers. Proposals within this project included the construction of landing sites and development of fisheries harbour along with the social upliftment of the fishing community.



Northeast had the highest Internally Displaced People (IDPs) numbering more than 1.5 million during the war. Some left the country and some others were resettled or had returned to their homes over time. Yet, The IDPs in the Northeast had not been completely resettled and now an additional 400,000 have been added to the number overnight, crowding the schools which have always been the prime centres for public gathering whether for meetings or for refuge.

The Health sector has had its toll too during this process. The already weak structures lost buildings, equipment and staff. Hospitals, which were built closer to the coast for good reasons, were wiped out in Nintavur, Karaithevu and other places. Inadequate hospital facilities, emergency transport and emergency para-medical facilities had caused many to die on transit or through failure to provide attention in time. Most of the eastern coastal roads, poorly constructed and already damaged during the war were unable to withstand the pressure of the tidal wave and were completely washed away in many areas including in Kattankudi, Mullaithevu and Thirukovil. Many bus stations on the coast were entirely damaged making transport unavailable during the immediate post-tsunami period (eg. Katankudi, Akkraipattu). Many private and commercial vehicles were washed off too. Environment had its own toll along the 800 km coast where the entire landscape had altered significantly together with many other impacts that could not be readily identified in the immediate post tsunami period.

Livelihood of thousands had been altered within minutes of the tsunami. Not only had the fishermen lost their livelihoods directly as a result of the tsunami, fertile top soil in large tracts of coastal agricultural lands were lost as well. The fisheries sector is the worst affected with transport businesses, labourers and daily wage earners who worked in the industries who were non-coastal have also lost employment. The loss was wide spread over many sectors, across the districts and country at large.

### 3.0 Overview

#### 3.1 Scope

The overall objective is to identify the key needs and means to enable the affected coastal community become self reliant, optimise its economic potential and regain its human dignity. It is recognised that this requires a holistic approach as it involves several sectors.

- It is recognised that it is a **holistic process** and involves a series of sectors that needs to be dealt with in an integrated manner.
- It is emphasised that the affected must be cared during this period with **dignity**. During the intervening period those affected have to be treated with great sensitivity and prompt action needs to be taken to address the **trauma** caused by the catastrophe.
- Special needs of single parents, widows, widowers, children and other **vulnerable sections** of the community need to be taken into account in developing strategies.
- The solution pursued must be one capable of **optimising the economic and human potential** and not merely rehabilitating to a level of the past.
- The approach must be futuristic in that the acceptable level target must be that which is recognised globally as the **'best practice'**.

- The action must be such that it takes into account **cultural and environmental sensitivities**.
- The **safety and security** of the individual, family and community must be paramount factors in the formulation of any solution designed to address the needs identified.
- **Priority must be given to improving the livelihood without compromising the need to maintain basic human dignity.**
- **Relocation should not cause any change to the existing ethnic demographic composition of the DS divisions in the Northeast.**
- **The land rights of the people should remain unchanged** as prior to the Tsunami, though the land use may be changed for need of safety. Any further decision on this should be participatory, allowing time for adequate discussions
- All actions must be pursued after a **due consultative process** is followed where all stakeholders are actively consulted.

The Post-tsunami relief, rehabilitation and reconstruction has different phases; the first being the emergency and relief to the affected which would include refuge, shelter and clothing; the second phase includes a transit arrangement with independent living but within assistance as far as possible; the third would be to have their own livelihood and independent lives in the community. Assistance may be provided to facilitate people to take up to the 3<sup>rd</sup> phase. A four stage system is also considered splitting the first stage into two phases, for convenience.

### **3.2 Process**

The process employed in preparing this Needs Assessment Report has been a consultative process by which the needs have been identified using a 'bottom up' approach.

The process was transparent and people centred.

Special meetings were held with Universities in the Northeast to assess the situation and to conduct academic discussions in relation to handling the disaster.

This process employed to assess the needs is:

- Teams visited all of the affected districts in the Northeast and met with the representatives of Government Agent, Non Governmental Organizations (local and international), academics, UN agencies, and members of the public and community organizations.
- Data in respect of damage were primarily obtained from various Government agencies at the National, Provincial, District, and Divisional levels. Information was also gathered during the consultation process and field visits.



- Data collected in the preparation of other reports was used to validate and supplement the data collected through the consultative process. The specific reports used in this exercise are:
  1. “The Post conflict Needs Assessment ” commissioned by SIHRN
  2. The Eastern Province Coastal Community Development Project” currently being implemented by the ADB
  3. Coastal Zone Management Plan
  4. and other Statistical Information for the North-East. Newspaper and Internet material have been accessed and studied for information on the government policies proposed and regulations prescribed.
- The data collected was then analysed and sorted to reflect needs by sectors.
- Costing parameters were developed and needs costed to arrive at indicative costs.
- Draft report prepared.
- Draft validated by representatives at the district level.
- Final report submitted to PDS.

It has been recommended that a unified committee from the three universities in the North-East could take up the role of monitoring the activities in the 3<sup>rd</sup> stage of reconstruction as an unbiased body which has an interest in the North-east as a whole.

Table 1 below provides the list of sectors that have been identified.

#### **SECTORS**

Resettlement  
 Housing  
 Health  
 Education  
 Roads & Bridges  
 Livelihood, Employment & Micro Finance  
 Fisheries  
 Agriculture  
 Tourism  
 Environment  
 Water & Sanitation  
 Telecommunication  
 Power  
 Public Sector Infrastructure  
 Urban Development  
 Cooperative Movement  
 Coastal Protection  
 Local Government Sector  
 Private sector promotion/involvement  
 Disaster Management



## 4.0 NEEDS ASSESSMENT (Sectoral summaries)

### 4.1 Resettlement:

#### Situation:

The displacement and death toll of the community in the Northeast as a direct result of the tsunami is shown in Table 2.

**Table 2: Death, Displacement, injury and missing of population, caused by Tsunami in NorthEast**

District	2004 Population		Deaths	Injuries	Missing	Members	Families
Amparai	138,839	624,778	6,897	6,771	2,207	137,960	37,988
Batticaloa	126,102	567,460	2,840	1,575	1,033	61,912	17,798
Jaffna	179,350	589,251	1,256	1,647	1,240	41,013	10,827
Kilinochchi			30		1	1,603	407
Mullaitivu	36,291	147,706	2,771	2,590	552	21,178	5,484
Trincomalee	88,344	397,550	1,076		337	69,214	17,773
Vavuniya	36,990	144,220				10	3
Total	605,916	2,470,965	14,870	12,583	5,370	332,890	90,280

Some of those affected are likely to return to their damaged but habitable homes in the foreseeable future, while others will remain in the welfare centres and with friends until permanent housing is found for them.

Many of those displaced were former IDPs who had returned from welfare centres during the cease-fire. Several others now displaced had arrived from welfare centres in India during the cease-fire.

In many instances, only a few members of the family have survived the tsunami. In other cases entire extended families have been totally or partially wiped out. The long term impact of this on communities dependant on extended family support in times of crisis is bound to be quite severe.

The majority of the deaths have been that of women and children. This has resulted in an unprecedented increase in the number of widowers. Some of these widowers are left with dependent children who need to be cared for causing a further complication as many men do not possess child rearing skills.

Children who have lost both parents require special attention.

Debris needs to be removed in areas where their presence can hamper the healing process.

#### Needs

Provision for ongoing counselling: It is important that the families affected are provided with ongoing counselling for trauma suffered and to help cope with changed social conditions. The costs have been considered under sec 3.3.

Provision of basic needs: The initial phase of the rehabilitation should focus on normalising the living conditions of the tsunami victims- while also re-vitalising the shattered local economy, by meeting the essential needs and delivering the basic services to the affected population.

Preserving the demographic balance: It is important to ensure that existing demographic compositions within settlements are not disturbed. Any move to destabilize the existing demographic composition is likely to have an adverse effect on ethnic relationships with the potential to reignite tensions

Provision of resettlement and support allowances: In order to avoid hardship and poverty for the population that was dependant on fisheries and agriculture, it is proposed that a temporary social security net be established during the transition period between complete lack of income earning capacity and eventual restoration of livelihood.

Re-issue of documents: When resettling the displaced population, it is necessary to consider re - issues of documents to those who have lost educational certificates, identity cards, marriage and birth certificates.

Granting of loans: Those victims who were primarily involved in SME need be granted seed capital to ensure re-establishment of business activities. This in-turn will stimulate employment opportunities. See 3.6 (Livelihood, Employment & Micro Finance)

Resurveying of lands: There may be a need to resurvey those lands for which the deeds are lost, and also to re-measure land that are now partly submerged due to the invasion of the sea following the tsunami.

Title Registration of Land: It is important that we adopt the Title registration mechanism at this juncture of fresh survey, departing from our deed registration system, to avoid many confusions and encroachment of land in future. This is a practice advocated by the international community.

Relocation: Should the destruction of infrastructure or other factors make it impossible for people to return to their original locations, a process must be introduced to enable a participatory decision made to determine a new location. This is particularly relevant to the Batticaloa and Amparai districts. It is reiterated that the land ownership should remain unchanged until measures are appropriate measures are taken with participation with stake holders providing adequate time for discussions.

Coastal structures: In cases where relocation is far too complicated or difficult for various reasons, alternative coastal structures as groynes, revetments, walls etc., should be considered for protection against disasters.

Caring for Orphans: A special fund needs to be established, to provide for children who may have lost their parents, grand parents or guardians, as a result of the tsunami.

**The needs identified above are estimated to cost around USD 74.5m.**



## 4.2 HOUSING

### Situation:

Traditionally, majority of houses in the Northeast are single independent units. Nearly 88% of the houses are owner-occupied in the Northeast as compared to 80% at the national level. Though CFA related uncertainty did initially dampen confidence in constructing new houses and in repairing damaged ones, in recent times, the region has experienced some growth in re-building and up grading of houses. However incidents of overcrowding, poor quality of houses and high rental, remains in some parts of Northeast. The conflict has not only increased the housing shortage, but also resulted in more rapid deterioration in the quality of habitat, thus increasing hardship and causing loss of dignity.

More than 300,000 houses were destroyed during the war over the past two decades and a USD 75m programme was funded by the World Bank under the Northeast Housing Reconstruction Programme. The tsunami has damaged about 78,000 houses.

Table 3 below provides a summary by districts of houses fully and partially damaged by tsunami.

**Table 3: Damages to Houses in North East by Tsunami**

DISTRICT	DAMAGE STATUS		TOTAL
	Full	Part	
Amparai	18,977	8,628	27,605
Batticaloa	15,584	5,542	21,126
Jaffna	6,680	1,114	7,794
Kilinochchi	246	-	246
Mullaitivu	5,033	400	5,433
Trincomalee	5,974	10,404	16,378
Total	52,494	26,088	78,582

The damaged houses range from basic homes costing about SLR 100, 000 to luxury homes valued well above SLR 3,000,000. Many homes in the East valued well above SLR 1,500,000 have been completely destroyed.

### Needs:

Minimum standards: The house should have the 'minimum housing standards (MHS)'; MHS require two rooms, porch/veranda, kitchen and tile roofing with a plinth area of 500 sq. ft. with an external toilet. The house should be disaster resistant (to be designed to be cyclone and flood resistant, as far as possible, as these areas are subject to flood and cyclone. It is also a requirement that no asbestos is used in roofing.

Use of alternative technology: Use of alternative building technology and material is recommended as long as they conform to basic standards of houses mentioned above. Alternative technologies economizing the natural resources such as sand, granite and timber need to be considered.

Skill Shortage: There is a severe shortage of skilled labour. This is bound to impact the cost of construction. Training of skilled labour in the fields of masonry, carpentry, welding and fitting also needs to be addressed.

Culturally sensitive approach to housing: Most of the villages in Amparai and Batticaloa have distinct ethnic settlements. Though densities may vary and many places have poor infrastructure, many desire to return to their own living environment where they have emotional ties. They may have a strong desire to rebuild their homes in these areas despite the surroundings being far from ideal. They may also require the homes to reflect their cultural preferences. It is important that these are given consideration in the design of houses. This would be applicable specially when apartments and storeyed housing may be suggested as alternatives on relocation.

Training and Education: The community has to be made aware of and trained building disaster-proof houses.

**The needs identified above are estimated to cost about USD 336 m.**



### 4.3 HEALTH

#### Situation:

Health infrastructures have suffered heavily in the tsunami affected areas. Loss of buildings and equipment as well as health personnel presents a crisis both in terms of human resources and infrastructure losses. Significant losses have occurred to dispensaries, hospitals and primary healthcare centres. Hospitals on the coast in Karaitheevu and Ninthavur have been totally damaged. Such destroyed hospitals were ill equipped due to the 20 year old war.

The WHO found that the preventive arm of the health care systems to be functioning at a low level in the Northeast. It was largely dependent on the INGOs operating in that region. According to WHO which had studied the Government Health Care System in 2003, the system was hampered by the lack of staff in most areas - specialist, nursing and allied health personnel.

The tsunami has brought about a crisis in health care both in terms of challenges to the health system and to the long term health of a significant proportion of the population of the Northeast.

The number health institutions comprising hospitals, dispensaries and primary health centres damaged by tsunami are shown in Table 4.

**Table 4**

**Damage to health institutions by districts and type.**

Districts	No of Institutions	GH	DH	PU	RH	CD/PHC/GHC	MOH
Batticaloa	18		4	1	1	11	1
Amparai	14		4	2	1	3	4
Trincomalee	9	1	1		1	4	2
Mullaitivu	6		1			3	2
Kilinochchi	1					1	
Jaffna	4		1	1		2	
<b>Total</b>	<b>52</b>						

Primary health care and preventive health strategies would be of high priority in the post tsunami community restoration. WHO has emphasised that the health surveillance as an important component of health promotion and effective planning of preventive health care strategies and programs.

The current post tsunami situation presents an opportunity to address in policy the restoration of the health care system, both curative and preventive.

#### Needs:

Restoration of the damaged hospitals and institutions: It is essential that these hospitals are rebuilt and are fully equipped. Specialised disciplines (paediatrics emphasised) have to be strengthened. Adequate number of beds (200 beds are considered as minimum in district hospitals) introduced.

Relocation of Hospitals: This may be necessary for those which are close to the coast (less than 300 m) e.g. Karaitheevu, Nynthavoor. Land need to be purchased if government lands are not available to avoid the hospital being moved away from the town centre.

Detailed programme for trauma and stress care counselling: The severe trauma and pain caused by the tsunami imposed disaster needs to be addressed through a well planned programme. The programme should cover psychological trauma, stress, grief, depression, coping mechanism and adaptation to changed circumstances. The affected families should receive professional mental health assessment and counselling

Establishment of a reliable health service facility at the coastal villages: Patients will be compelled to travel long distances for medical attention where road and transport service hardly exist. Therefore establishment of a health services should be a priority.

Review of staff positions & Training: Training to be provided in nursing, midwifery and technical aspects of operating medical equipment.

Development and extension of preventive health care programmes: This should include specific training for nurses, promotion of breastfeeding and nutrition supplementation and specific community reconciliation programmes to overcome disaster impacts.

**The needs identified above are estimated to cost about USD 55m**



#### 4.4 EDUCATION

##### Situation:

Schools have been used in the Northeast for a variety of purposes during the twenty years of the war. They have been commandeered for use as camps by the military, have served as refugee camps for IDPs and often used by the population as transit camps when fleeing the war.

Many of the school buildings were extensively damaged, during the conflict because they had become targets.

Reconstruction of schools was assisted under the NECORD programme. A sum of SLR 679m was allocated for this purpose. 60% of the funds allocated have been either committed or identified as potential spend by 2004. Unfortunately some schools which had been reconstructed under this programme have now been damaged by the tsunami.

The tsunami has damaged 358 buildings in 122 schools in the Northeast coast. The damage is not confined to buildings but also to furniture, fittings and laboratories.

See Table 5 for number of schools and buildings damaged.

**Table 5: Damages to schools and needs for relocation**

Education District/Zone	No of Schools	No of students	Relocation needed
Vadamaratchi (Jaffna)	11	2,095	6
Mullaitivu	12	3,395	3
Trincomalee	4	1,721	-
Kantalai	2	96	-
Muthur	17	4,027	-
Batticaloa	16	5,832	2
Kalkudah	9	3,227	5
Paddiruppu	11	4,721	2
Kalmunai	17	11,985	13
Akkaraipattu	23	6,836	7
	122	43,935	38

##### Needs:

The construction of the buildings should be such that they are able to withstand natural and man made disasters. It is also recommended that the ground is utilised as parking space or less intensive utility spaces, as most of these areas are flood prone. It is also recommended that the upper floors are provided with toilet facilities; this is currently not a feature in current constructions.

Re-equipping schools: It is important that all schools are provided with modern laboratories, computers and sporting facilities.

Relocation of schools: Some of the school buildings will have to be relocated along with the community to areas beyond 100-300 metres from the coast, in consultation with the community and consideration of the safety of the children.

Counselling for teachers and students: This needs to be undertaken actively as most residents in the coastal region have been subjected to severe traumatic experiences.

Provision of staff quarters: There is a need to provide boarding facilities for staff as many of the schools in the coastal regions are far away from the town centres. This has resulted in considerable difficulties in recruiting teaching staff. The provision of staff quarters will help overcome this particular problem.

Provision of student hostels: In many instances students have to travel long distances from places that have only meagre transport facilities. Boarding facilities may help in this regard.

special needs of children affected by disaster: This will require specific intervention, both inside and outside the formal school environment. This would include catch-up education, health and nutrition, awareness programs and campaigns, teaching-learning material, kits, equipment, and teacher training.

Training of teachers to deal with trauma: Special focus to be placed on training teachers in dealing with children traumatised by the tsunami.

**The needs identified above estimated to cost about USD 49m**

Provincial Institute/ mechanism for Education: Significant concerns have been raised in regard to the following:

1. Failure of the NIE ( National Institute of Education) to provide equal attention to Tamil medium educational development in par with the Sinhala medium.
2. Material produced from a different language had many errors in text. Further it had also distanced the Tamil medium students from their own regional and social context as the material focuses on examples and case studies from a different cultural and language background.

It is recommended that a Provincial Institute of Education, for NorthEast, be established to overcome this.



#### 4.5 ROADS AND BRIDGES (including Railway and Aviation)

##### Situation:

The success of a town or country's state of development is reflected by its road network. The road network is almost non-existent in Northeast Sri Lanka. Twenty years of neglect during the war and the damages inflicted through bombing and shelling have resulted in the worst system of roads in the entire Island.

There have been some repairs and rebuilding of roads since the CFA but the improvement has not been significant. The tsunami has devastated the remnants of the coastal road network and washed away several causeways and bridges. The claim that had the road network been better, lives could have been saved in the aftermath of the tsunami.

**Table 6 : Damages to Road network by the Tsunami in Km; The structures are not included**

Districts	RDD	RDD	Local Authority	Total
Ampara	44.4	363	330.6	
Batticaloa	23.3		360.1	
Trincomalee	35.9		172.3	
Jaffna	22.6	57.7	89.3	
Kilinochi	-	-	67.5	
Mullaithevu	268.0	101.8	66.5	
Vavuniya	-	20.1	-	
	394.2	542.6	1,086.3	2,023.1

The Rail transport in Northeast was one of the best in the country prior to 1983, and it was totally destroyed during the conflict to be partially restored only in the east at present. Some of the repaired roads have again been damaged by the Tsunami near Batticaloa.

Civil aviation facilities were available in the Northeast prior to the conflict which had been taken over or restricted for military purposes. Though civilian flights in the North had re-commenced, civilian flights in the east (Amparai and Batticaloa) are yet to commence for reasons of lack of infrastructure.

##### Needs:

The main need is to provide an all weather road network for the coastal region that at least compares to the road network existing in other parts of the Island. This objective is not to replace the roads with roads that can merely meet the immediate needs of the population. The network must, when completed, have the capacity to serve present and future traffic demands for a post-conflict construction period of at least 10 years. The needs include:

Access roads to the districts: It is important that the access road from Colombo to Batticaloa, Trincomalee, Jaffna are done to ensure that the road network serves the purpose. This involves reconstruction from Habarana to Batticaloa, Habarana to Trincomalee and Muhamalai to Jaffna. This would add about 400 km of road.

Coastal Road from Point Pedro to Panama: This has been on the cards for a long time and it is urgent that this is done. Most of it has been damaged by the Tsunami and war. This will be around 300 km.

Reconstruction of Roads: Reconstruction of previously surfaced roads with gravel or stabilised base and sealed with a double bituminous surface treatment (DBST); reconstruction of gravel roads with compacted and graded gravel or stabilised base material; reconstruction of earth roads with native lateritic soils or oori; consideration to be given to single bituminous surface treatment (SBST) or bitumen sand seals on unsurfaced roads, particularly through village areas and at junctions.

Rehabilitation of roads: Rehabilitation being the restoration of a smooth road surface with good crossfall. On previously surfaced roads this will require filling in pot-holes and an overlay of crushed aggregate or gravel, sealed with DBST. Gravel roads will require additional gravel, spread and compacted to correct level and crossfall, and possibly sealed (SBST or sand sealed) in more heavily trafficked sections or in village areas.

Improvement of roads: Improvement, being the widening of carriageways and providing verges to the national standard. In particular the most important and heavily trafficked A class roads would be provided with bitumen sealed shoulders to prevent water ingress and edge break, and to improve traffic safety.

Drainage improvements and clearing for town and rural roads.

Cross section improvements to all roads at least to national standard.

Reconstruction of bridges: Replacement of bridges that were destroyed, are damaged or are inadequate, appropriately.

Improvements to ferry and launch services through the provision of ferry vessels and launches and repairs to piers and maintenance depots.

(Note that the major principles outlined in the "The Post Conflict needs assessment" have been applied to the development of the coastal road network)

**The reconstruction of the coastal road network in the Northeast is estimated at USD 300m**

**Railway:** It is essential to restore the Railway in the Northeast and also further develop the Eastern railway system to cover areas in the Southeast. This is important to mitigate the congestion by motor traffic and use of heavy vehicles for transport of materials by road.

**Civil Aviation:** The infra structure development for civil aviation needs to be considered in the context of need for faster and easier modes of transport.

**An additional USD 300 m would be required for the rail and aviation restoration and development.**



## 4.6 LIVELIHOODS, EMPLOYMENT/SKILLS AND MICROFINANCE

### Situation:

The widespread damage caused by the tsunami has disrupted activity in general and has significantly reduced the livelihood opportunities for all employment sectors. It is estimated that around 15,000 jobs are affected in the Northeast as a result of the tsunami. This does not include the fisheries sector that has been totally destroyed.

In relation to other employment sectors- agricultural and micro/small/medium business activities- did play a vital role in the livelihoods of number of people. In some of the agricultural areas there is no work or the field is not suitable for cultivation. Further numerous Micro, Small and Medium Enterprises (MSME) have either disappeared or lost their customer base exacerbating an already difficult situation. There is no access to capital to restart lost businesses. The absence of agricultural work and day-labour opportunities has dramatically increased unemployment. All these factors hinder peoples' efforts to recover from the disaster

As such a comprehensive multi sectoral approach is required to see beyond employment and develop the capabilities in the society.

### Needs:

Finances: Financial entitlements as compensations, grants etc. for immediate post-crisis situations.

Skill development: Training for the skills needed in the building construction sector to meet demand envisaged when reconstruction programs are implemented.

Capacity Building : Capacity building would be an important sector within this; capacity building should be in diverse vocations and cover a range of skills including in Planning and Office Administration.

Savings : Saving facilities and micro insurance programmes to reduce the vulnerability of the poor.

Enterprise development: Measures to promote SME (Small to Medium Enterprises) participation in the development of the economy.

Investments: Community level investments to produce market centres and such activities which would promote individuals to trade.

Interim Employment: Employment programmes associated to resettlement under reconstruction.

**The needs identified above estimated to cost USD 33m**

Private Sector : Measures to encourage private sector participation to be developed. This would involve capacity building of necessary sectors that would play an effective role in the development of the Northeast and in reviving of the economy at large.

**The need is estimated to cost USD 10m**

## 4.7 FISHERIES

### Situation:

Northeast fishery was crippled by the war .Before the intensification of the war the Northeast met over 50% of the entire Island's fish production. However with the various measures taken by the GOSL, fishing was confined to the coast and for limited hours during daylight. These included measures taken to:

- Ban deep sea fishing
- Direct military action
- Declaration of certain areas along the coast as Security Zones and prohibition of fishing in these zones.

According to the "The Assessment of Needs in the Conflict Areas" the conflict had caused wide spread damage to the fishing industry as a whole.

*"Coastal fisheries have experienced widespread destruction of production assets, including boats, looting of fishing gear and engines, and serious damage to supporting infrastructure such as harbours, boatyards, net production facilities, ice plants, fuel supply stations and fishermen houses. This destruction is more severe in the North than in the East. Financial estimates of the dimension of the damage are not available. However in some districts, e.g. Jaffna, 90% of the boats, engines and gear may have been lost or rendered unusable"*

The GOSL policy of promoting the South through the provision of loans, grants and other incentives was to adversely impact the East. Though more than 70% of the fishing families are in the Northeast the number of harbours and associated infrastructure is below 25% of that in the country as a whole.

The first successful large scale shrimp farm was started in Batticaloa in 1977 and was destroyed in 1986 during the war and the industry remains as isolated few farms at present.

As a consequence, the fisheries sector had been completely devastated by the year 2000.

The production of 49,740 metric tons in the Jaffna district in 1983 was down to 2,211 metric tons by the year 2000. This reveals the magnitude of the devastation due to the war. However by 2003, the production had climbed back to 21,206 metric tons.

The tsunami has reversed this trend by once again destroying the entire coastal fisheries infrastructure. The loss is total in that it had destroyed everything owned by the fishing community including their homes and all fishing equipment.

More than 10,000 boats in all categories have been damaged and destroyed by the Tsunami in the Northeast.

The damage to boats and gear alone as a result of the tsunami are estimated at USD 37 m



**Table 7: Damages to fishing Crafts**

District	Multiday	31/2 tons	FRB	Motorised	Non Motorised	Total
Ampara	8	230	253	149	892	1532
Batticaloa	0	218	302	1	2712	3233
Trincomalee	34	184	1000	0	10	1228
Kilinochi	0	9	193	0	418	620
Mullaithevu	0	7	1573	81	101	1762
Jaffna	0	89	880	124	2447	3540
<b>Total</b>	<b>42</b>	<b>737</b>	<b>4201</b>	<b>355</b>	<b>6580</b>	<b>11915</b>

**Needs:**

Restoration & Redevelopment of infrastructure: In restoring the infrastructure destroyed the rationale is to not confine the restoration to mere replacement of losses, but to restore the infrastructure to a level that the fishing sector can optimise its potential. This calls for **modernising the fleet through the purchase of multi-day boats, increasing the number of anchorages, harbours, boatyards, communication and navigation devices, boat repair centres, ice plants, net factories etc.**

**Table 8: Requirement of fishing crafts for the North East**

District	Multi day Boat	31/2 ton Boat	FGD 17 1/2 -23 ft	Non Mech. Boat	Mathal	Others	Total
<b>Ampari</b>	65	976	4878	1626	243	81	7869
<b>Batticaloa</b>	30	457	2286	762	114	38	3687
<b>Trincomalee</b>	30	456	2281	760	119	35	3682
<b>Mullativu</b>	10	142	702	234	34	11	1134
<b>Gulf</b>	20	278	1390	466	69	23	2244
<b>Kilinochchi</b>	--	10	40	31	3	2	86
<b>Total</b>	<b>155</b>	<b>2319</b>	<b>11577</b>	<b>3879</b>	<b>582</b>	<b>190</b>	<b>18702</b>

Education & Training: Education and training to improve skills at all levels. Increase the technical and administrative capacity of those employed in the sector and laid the foundation for a very modern fishing sector.

Aquaculture: Development of the Aquaculture-based sub sector (eg. Shrimp industry) with adequate environmental controls is an urgent need to provide employment and to improve the economy of the region as it has one of the greatest potential for such in the country.

Research Centres: To understand more about the available marine resources, migratory routes of fish, harvesting potential etc. development of relevant streams of education in academic institutions of higher education is an urgent need.

**The needs are identified above estimated to cost about USD 100 m**

**Ownership of Boat:**

A practice which has been encountered in most of the Coastal community is the relationship between the Mudalalai and the fishermen. The Fishermen often borrow from the Mudalalai money to buy boat, engine or otherwise and he submits his catch for a discounted price to the mudalali in faith for years, but the loan never gets reduce. All is taken as interest and he never recovers from the loan. The worse is, often the boats and gears are registered in the name of the mudalalai, which rarely retransfers to the fishermen.. The replacement of boat and gear must be to those whose livelihood is fishing rather than to the money lenders.

**Non - Registration of boats**

Many fishermen who lost the boat did not have registration at that time, as they had second hand boats, bought from other owners in other districts. This is a issue to be considered during restoration of their livelihood.



## 4.8 AGRICULTURE

### Situation:

Coastal agriculture consists mainly of Coconut, Cashew, Palmyra plantations and a variety of vegetable cultivation. Cashew and Coconut are grown in plantations. Palmyra grows naturally in many parts of the Northeast including in the coastal regions. Vegetable, Onion, Beetle cultivation is significant in Mullaitivu, Nilaweli (Trincomalee district) and Kaluthawalai (Batticaloa district). There was a significant increase in cultivation after the CFA.

The tsunami has caused considerable damage to agricultural areas in the coastal belt due to the sea entering inland and salinising the land. In some cases the sea had infiltrated up to a kilometre inland. Apart from the resulting loss of crops, the salting of land is likely to adversely impact cultivation over several seasons. Availability of fresh water in the coastal areas will further exacerbate the potential for agriculture on the coast.

### Needs:

Survey of damaged lands: A Survey needs to be undertaken to determine the extent of the damage caused by salinisation of agricultural fields, as it is not really visible.

Desalinisation of fields: Implementation of a well planned program to desalinate the fields and wells, as it is not an easy reversible process.

Alternative lands: Location of new fields for the farmers while desalination program is underway.

**The needs identified above estimated to cost USD 6m**

## 4.9 TOURISM, CULTURE and HERITAGE

### Situation:

There exists a high potential for tourism in the Northeast. East has been known for its white sandy beaches and the North for its culture and history. Prior to the war the Eastern coast attracted a large number of tourists.

The presences of large forests and wild life provide an opportunity to develop these areas into wild life sanctuaries. This has the potential to attract tourists and also conserve wild life. This aspect has been largely neglected.

Many prime tourist areas and its associated infrastructure have been destroyed by the Tsunami at Arugam bay, Pasikkudah and Nilaweli in the NorthEast.

Vast number of religious, cultural and archaeological sites and centres were damaged by the Tsunami, throughout the Northeast coast.

### Needs:

Tourist infrastructure: Rebuild the coastal tourist infrastructure to a level to attract tourists locally and internationally.

Tourist Information : Publicise the tourist potential through dissemination of information.

Eco tourism: Develop the potential for eco tourism which requires responsible approach to promoting tourism by ensuring that the environment and the well being of the people are not adversely affected.

Religious and cultural centres: Reconstructions of the damaged, destroyed religious and cultural centres are of high importance as a great part of the societies coping mechanisms are centred around religious and cultural beliefs and activities.

Archaeological sites: It is important to restore the damaged monuments and restore the sites. It is also important to document the sites and also plan for protection and development of such sites.

**The above needs are estimated to cost around USD 30m**



## 4.10 ENVIRONMENT

### Situation:

800 Km of the NorthEastern coast was ravished by the tsunami within minutes altering its landscape. The tsunami which travelled around 400-800 km per hour scraped the floor of the ocean close to the shore before it entered the land. The tide swept the land with force and entered about 1,000 meters inland. It is reported that the tide was more a sludge than water. The marks left on the walls of buildings confirm this. In the aftermath of the tsunami land was left dark and muddy in many areas.

In some places, along the coast roads have been totally covered by sand. Palmyra and other trees in some areas had been 'scorched' (browned) due the force of the water. In Casuarina plantations, the front rows of casuarina had been uprooted while those at the far end had survived. Comparatively, coconut palms had not been affected at all. However, during the cyclone in 1978, 80% of coconut was damaged in the East while the Palmyra was hardly damaged. There is also evidence in the South, where the impact of the tsunami was diminished in areas with good covers of mangrove vegetation.

There is little quantitative information to measure the extent of the damage to the environment caused by the tsunami. There are, however, ample qualitative evidence of considerable damage to the environment. The impact of the tsunami has been quite widespread.

The effects have been varied and barely understood in many places.

- The well water has become saline and the effort to desalinise by pumping has not been successful in many places.
- Salinisation of the cultivated lands and paddy fields close to the coast
- Opening of the soakage pit by the water had caused concern in terms of hygiene and infections
- It is possible that the corals would have been damaged by the tsunami, directly by the physical actions and indirectly by covering them with sand, choking it. Debris have been found along Trincomalee indicating such.
- The effect on the sea grass beds and the sea weeds are not assessed, but would be substantial
- Various plantations have been flooded with saline water.

### Needs:

Salinisation: Study of the salinity problems of the soils and water and provide for cleaning up of the systems

Coastal ecosystem study: Study of the coastal ecosystems and implementation of adequate restoration practices.

Awareness building: Increase public awareness of coastal conservation issues (ie. issues relating to sand mining, dynamite fishing, removal of corals etc.)

Coastal Plantations: Measures to increase the coastal forests and plantations. It is recommended that 4,000 hectares of mainly coconut, Casuarina and Palmyra be planted at the first stage. Coconut would be an important crop as it is inn great demand for local consumption. The extent of coconut in the country is reducing with the land clearing for the real estates in North West.

Erosion controls: Protection of coastal areas from erosion by appropriate measures

Mangrove afforestation: Replanting of Mangroves near coastal lagoons and other locations to stabilise the ecosystem and increase the productivity

Off shore sand mining: Machinery to extract off shore sand for the construction industry

**The needs identified above are estimated to cost about USD 20m**

**Alternate Building resources:** Institution to develop alternate building material to minimise over-extraction of natural resources is an urgent need. Importing may be a temporary choice for materials but may not be a viable one for long



## 4.11 WATER AND SANITATION

### WATER

#### Situation:

According to the report "The Assessment of Needs in the Conflict Areas" only 19.6% had adequate water supply in the entire Northeast as compared to 45% Island wide. Limited water supply was available in all towns except Kilinochchi and Mullaitivu.

In Jaffna, the water had high nitrogen levels and in Nilaweli salinity is a major problem. The use of tube wells had contributed to the decline of ground water.

Ground water contamination is a major concern in the densely populated coastal regions.

The tsunami had further damaged the water source, salinising the wells and soil in the coastal regions of the Northeast.

#### Needs:

Availability of water to adequately meet basic needs: Provision of safe drinking water to the coastal population in a continuous and reliable way. This requires the construction of Water treatment plants, laying of main and distribution pipes, water holding reservoirs and communal wells.

Restoration of institutions, equipment and technology to a modern standard: Many water supply systems are totally or partially damaged. These need urgent restoration. Such restoration requires increasing the capacity to manage these systems.

Restoration of dug wells: This is a preferred source by most rural communities and also is related to their culture, and a high demand exists for 'a well a home'.

Monitoring of water quality: Such measures are needed to prevent outbreaks of waterborne diseases.

Training of Public Health Inspectors in modern methods: The coastal population need to be informed/educated about the use of water and the potential hazards inherent in using water contaminated by the tsunami.

### SANITATION

#### Situation:

According to the report "The Assessment of Needs in the Conflict Areas", the percentage of households who have access to sanitation in the Northeast is 25% compared to the Island wide accessibility of 72%. Ground water contamination in many cases is directly attributable to the poor sanitation.

**Needs:**

Needs of 2003: The needs identified in "The Assessment of Needs in the Conflict Areas" apply to the coastal regions of the Northeast which compared to the rest of the Northeast was much worse in any case. The tsunami has further compounded the sanitation problems of the coastal communities.

Sewerage systems: Sewerage system in Cities and Towns in the Northeast are an urgent need to avoid catastrophic events in terms of health.

Improvement of septic tank design and constructions: This is a measure that would mitigate the damages of having leaching to the soil of waste material.

Provisions of toilets : There are still a large sector of the community who do not have the toilet facilities in the coastal community.

**The needs identified above are estimated to cost about USD 74m**



## 4.12 TELECOMMUNICATION

### Situation:

The telecommunication facilities in the Northeast in comparison to the rest of the Island are extremely poor. Prior to the CFA, most parts of the Northeast were deprived of telephone facilities. Total tele-density for the North in 2003 was 2.9 per hundred and in the East 4.0 per hundred. Island wide the average was 9.6.

### Needs:

Development of Telecommunication : Establish a state of the art telephone system with private sector participation.

Cellular Phone systems: Extension of the cellular phone reception to all areas of the Northeast.

High Transmission for IT : Facilities for high speed transmission cables for IT development, which has become a real need for the electronic communication systems

**This sector is estimated to cost USD 25m**

#### 4.13 POWER

##### **Situation:**

During the period of conflict, there has been considerable damage to the power distribution system in the Northeast. While the damage in the East was partially restored, in the North 90% of the distribution system suffered damage due to the conflict. There have been some repairs to the distribution system in Jaffna. Systems in Mullaitivu and Kilinochchi were totally damaged and no repairs have been effected so far.

Tsunami too affected the Northeast significantly damaging the powerlines and the associated infrastructure.

Power is essential for any development activity to be undertaken in the present day context and therefore the sector remains a prime need. It is not possible to only consider the Tsunami affected area when a power distribution system is in consideration.

##### **Needs:**

Sustainable Power : To become self reliant in meeting its power needs through the day uninterrupted or with the minimum probability of interruption..

Rural electrification: Rural electrification schemes to be developed for remote areas of the coast and the region.

Thermal Power: Thermal power generators may be an option for the immediate power supply to the region.

Alternate Power systems: Dendro power, Coal power and other power system options need to be studied and evaluated and implemented for a sustainable power supply, environmentally clean and also efficient.

**This sector is estimated to cost USD 55 m**



#### 4.14 PUBLIC SECTOR INFRASTRUCTURE

##### Situation:

These include the structures which have not been covered by specific sectors as Schools, Health etc. They include markets, bus stations, government staff quarters and government offices located in the coastal regions that have been affected by the tsunami. These were also damaged during the war and had been restored fully or partially owing to their exigencies under various programmes. They have been damaged again by the Tsunami. Some of the buildings were already in a dilapidated condition as a result of the 20 year war, which had not been restored previously.

##### Needs:

Restoration and Reconstruction of infrastructure: These buildings need to be restored to a condition that would help optimise their utility and service and economic potential to the people. As such, they will require modern facilities to be incorporated. This gains high priority as it involves the day to day activity of the general public, inclusive of resettlement and rehabilitation.

Restoration of Vehicles and equipment: This is also included in the first need but stated for emphasis.

**This sector estimated to cost about USD 50 m**

#### 4.15 URBAN DEVELOPMENT

##### Situation:

Many of the large towns in the Northeast are located along the coastal belt. The only exception is Amparai which is located inland. Many of these towns were damaged during the war. The tsunami has caused more damage and has even altered the landscape of several places. There was hardly any urban development work done in these towns during the last two decades or more.

Recent guidelines on Coastal reservation may require relocating parts or whole of some cities and towns. Further, the delegated powers of the Urban Development Authorities (UDA) have been temporarily suspended by public notice recently, centralising all powers that were vested within the UDA. This implies that when relocation of villages would be considered under the purview of UDA, which extends the scope tremendously.

##### Need:

Development of Township: Several towns on the Northeast coast need to be developed, to meet the demands of the need and safety considerations. This includes the needs of the community to level with the present day.

Relocation of Townships: Many towns and villages may have to be wholly or partly relocated in order to optimise their economic potential and quality of life of the population while ensuring that aesthetic, environmental and cultural factors are not compromised in any way.

**This sector is estimated to cost about USD 100m**

#### 4.16 CO-OPERATIVE MOVEMENT

##### **Situation:**

The cooperative movement in the Northeast has proven its usefulness in mobilising the people. Although affected by war it had emerged to be a great source of strength to many sectors of the economy.

Cooperatives have been successful in a number of fields, including the processing and marketing of farm products, the purchasing of equipment and raw materials, and in the wholesaling, retailing, credit, banking, housing, agricultural and Fisheries sectors. They also shared many industries which operated locally promoting local employment.

The Tsunami destroyed and managed a considerable section of the Cooperative sector.

Under the present economic conditions the strengthening of the co-operative movement can help utilize common resources and make use of combined labour in a very cost effective manner.

##### **Need:**

Restoration of the infrastructure : Reconstruction of the damaged infrastructure to facilitate the operation of the Cooperative societies at the earliest, as they can contribute in the development of the community, considerably.

Replacement of the equipment, Machinery and vehicles: This is also needed to restore the local livelihood.

Strengthening of the Coop Movement: There is a need to promote and strengthen this sector through a well planned consultative process where Community Based Organisations (CBO) can participate.

**It is estimated the cost of this would be around USD 11 m**

#### 4.17 COASTAL PROTECTION

##### **Situation**

The Northeast coast represents over 60% of the entire coastline of the Island. To date no comprehensive study has been undertaken to assess its potential for development and protection.

The tsunami has caused considerable damage to the coast. The Northeast coast remains unprotected even in places of known erosion, vulnerability.

Even the issues in relation to the mineral sand removal and its impact had not been studied or adequate measures introduced to ensure that the shoreline does not 'erode' as a consequence.



**Needs:**

**Study and Survey:** Conduct an extensive survey of the coastal region in order to:

- understand the damage caused by the tsunami
- explore other threats to the coast (eg. erosion, vulnerability)
- evaluate the potential for development (Tourism, Fisheries, Biodiversity)

**Coastal Protection :** Develop & implement measures to protect the coast from environmental degradation, coastal stabilisation and coastal protection

**Economic potential and mitigatory measures:** Develop & implement measures to optimise its economic potential

**This sector is estimated to cost USD 80m**

#### 4.18 LOCAL GOVERNMENT SECTOR

**Situation:**

Local Government has a significant role in the Governance and maintenance of the districts and divisions in the country as Municipal councils, Urban councils or Town councils. Much of the cleaning of the city, maintenance of the cemeteries and other public utilities are vested with the local government.

A large component of the sector was damaged by the Tsunami as most of the cities, towns and villages were in the coastal areas in the Northeast. This varies from the damages to the garbage trucks to abattoir and cemetery walls.

**Needs:**

Reconstruction of infrastructure: This is urgently needed

Replacement of Machinery and equipment: This is urgent as many operations of clearing debris and other works will be delayed for the absence of such.

Repairs to building and equipment: A portion of the infrastructure needs to be repaired almost immediately.

**This sector is estimated to cost USD 16m**



#### 4.19 DISASTER PREPAREDNESS UNIT

##### Situation:

There is limited capacity to manage natural disasters in a planned manner. The tsunami imposed disaster has demonstrated the inadequacies inherent in the management of natural disaster.

The damage in developing countries is multiplied, not only because of the nature of the disaster, but also due to the people's lack of knowledge during an emergency situation.

It is therefore essential that a unit is established which would have a centre and adequate equipment to warn people and train people for the various potential disasters that are likely in a normal world.

The Construction of a Disaster preparedness Centre which would be equipped for the following:

- Provide early warnings of disasters
- Give logistical support
- Monitor progress on the management of disaster
- Disseminate information on potential disasters and how they should be managed

##### Needs:

###### The Infrastructure and staff for the unit:

Basic infrastructure and appropriate equipment

Training of staff and trainers

Equipment for warning systems

Equipment for linkage with other such centres

Experts to develop and conduct training programmes for the first five years

Recruitment of staff

It would have the following :

- Train emergency workers (including health workers, fire fighters, policemen, volunteer groups) on best practices of managing disaster.
- Provide training to general public to cope up with emergency situations; where to go, what to do, whom to contact etc.
- Liaise with foreign countries, media, international and local NGOs

**The above estimated to cost around USD 30m for the sector.**

## 5.0 INDICATIVE COSTS

### Summary of Costs

A summary of the indicative cost to be incurred in meeting the needs identified by each of the sectors is tabulated below in Table 6.

**Table 9: Indicative costs for Post Tsunami Reconstruction, for different sectors**

Sectors	USD Millions
Resettlement	75.0
Housing	336.0
Health	55.0
Education	49.0
Roads & Bridges	300.0
Livelihood, Employment & Microfinance	33.0
Private sector promotion/involvement	10.0
Fisheries	100.0
Agriculture	6.0
Tourism	30.0
Environment	20.0
Water & Sanitation	74.0
Telecommunication	25.0
Power	55.0
Public Sector Infrastructure	50.0
Urban Development	100.0
Cooperative Movement	11.0
Coastal Protection	80.0
Local Government Sector	16.0
Disaster Management Unit	30.0
<b>Total</b>	<b>1455.0</b>



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Equipment for warning systems

Equipment for linkage with other such centres

Experts to develop and conduct training programmes for the first five years

Recruitment of staff

It would have the following :

- Train emergency workers (including health workers, fire fighters, policemen, volunteer groups) on best practices of managing disaster.
- Provide training to general public to cope up with emergency situations; where to go, what to do, whom to contact etc.
- Liaise with foreign countries, media, international and local NGOs

**The above estimated to cost around USD 30m for the sector.**

**Table 10 : Provisional apportioning of funds for reconstruction needs in the districts**

Sectors	USD Millions	Amp	Batti	Trinco	Kili	Mullai	Jaffna	Man	Vav	Dist. Total	Prov. pool
Resettlement	75.0	26	13	10	2.5	10	8	3	2.5	75.0	0.0
Housing	336.0	117	91	55	1.5	26	36	1	-	327.5	8.5
Health	55.0	17	13	10	0.1	5	2	-	-	47.1	7.9
Education	49.0	16	13	7	0.1	3	2	-	-	41.1	7.9
Roads & Bridges	300.0	57	47	30	6	41	19	-	-	200.0	100.0
Livelihood, Employment & Microfinance	33.0	8	7	5	1	2	7	-	-	30.0	3.0
Private sector promotion	10.0							-	-		10.0
Fisheries	100	18	16	20	2	20	18	-	-	94.0	6.0
Agriculture	6.0							-	-		6.0
Tourism	30.0	3	3	3	1	1	3	-	-	14.0	16.0
Environment	20.0	2	2	2	1	2	2	-	-	11.0	9.0
Water & Sanitation	74.0	15	10	10	5	5	15	-	-	60.0	14.0
Telecommunication	25.0							-	-		25.0
Power	55.0				10	10	10	-	-	30.0	25.0
Public Sector Infrastructure	50.0	10	5	5	1	9	5	-	-	35.0	15.0
Urban Development	100.0							-	-		100.0
Cooperative Movement	11.0							-	-		11.0
Coastal Protection	80.0										80.0
Local Government Sector	16.0	3	2	2	0.5	2	1			10.5	5.5
Disaster Management Unit	30.0										30.0
<b>Total</b>	<b>1455.0</b>	<b>292</b>	<b>222</b>	<b>159</b>	<b>31.7</b>	<b>136</b>	<b>128</b>	<b>4</b>	<b>2.5</b>	<b>975.2</b>	<b>479.8</b>



**ACRONYMS**

ADB	Asian Development Bank
CBO	Community Based Organisation
CFA	Cease Fire Agreement
DBST	Double Bituminous Surface Treatment
GOSL	Government of Sri Lanka
INGO	International Non Governmental Organisation
LTTE	Liberation Tigers of Tamil Eelam
MSME	Micro, Small and Medium Enterprises
NAT	Needs Assessment Team
NGO	Non Governmental Organisation
PDS	Planning & Development Secretariat
SBST	Single Bituminous Surface Treatment
SHIRN	Sub-committee on Immediate Humanitarian & Rehabilitation Needs
SME	Small & Medium Enterprise
TRO	Tamil Rehabilitation Organisation
TOR	Terms Of Reference
UN	United Nations
WB	World Bank
WHO	World Health Organisation

## The Needs Assessment Team

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She holds a Master's Degree in Clinical Nursing from La Tribe University, a Member of the International Board of Lactation Consultants and is a research student at Deakin University in Melbourne.

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He has served as Environmental consultant to Various Ministries in Sri Lanka and World Bank, ADB, NORAD, UNDP, FAO funded projects. He had been working on effect of war on environment in Sri Lanka for a long time. He is also a governing council member of the National Peace council and had participated and conducted many conflict resolution and peace building programmes. He also led the team which drafted the development programme for the Eastern province in 2002 titled PRIDE (Post conflict rehabilitation and integrated development of the East).

**Prof. NITHIYANANDAM, V Nithi** is the Professor of Economics at the University of Jaffna. Prior to this he taught at the Massey University, Albany Campus, Auckland, New Zealand. He has over thirty five years of teaching and research experience gained in developed and developing countries. His areas of interests are development economics, political economy, and economic history.

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Between March 2003 and June 2003 this year, he worked with the World Bank (as a Consultant) in Sri Lanka to assess the needs of the war torn Northeast on behalf of multilateral donor agencies that included the World Bank, UN agencies and the Asian Development Bank.

**Mr SIVARAJAH, Kanapathipillai** is the Fisheries Advisor to the Directorate of Fisheries of Norway. He has worked in the Fisheries industry for well over forty years of which thirty two years in Norway. He holds a Master's degree in Fisheries Administration from the University of Oslo.



**Mr SRIKANTA, Yogi** is a Brisbane based consultant specializing in public policy. He has worked in Sri Lanka, New Zealand, Australia and in the South Pacific. He has considerable experience gained in the course of working with the private and public sectors. He is an Associate member of the Chartered Institute of Accountants (Sri Lanka), Chartered Institute of Management Accountants (UK) and the Australian Society of Practicing Accountants. He holds a Masters Degree in Public Policy from the University of New England, Armidale.

**NEXT TO NEEDS /Strategy**

This is a needs assessment report and not a damage assessment report and hence would go beyond the boundaries of the damage. Needs of the North-East have been assessed in the report of 2003. However Tsunami had introduced new dimensions eg. relocation. Though the focus is on the Tsunami affected areas the relocation principles affect the entire country and provisions need to be made for other districts too, at present eg. Mannar. We cannot wait for a disaster to shift Mannar population. Though priority is less this is also emphasised in the report.

This section highlights the thoughts that went into that report which may be useful for the planners and implementers of projects on Post Tsunami reconstruction of the NorthEast. Some of this may have been already highlighted in scope and sector reports within.

- The assessment is people centred; the fast recovery of livelihoods is suggested; infrastructure reconstruction for the upliftment of the community is recommended
- Development is a component of reconstruction and reconstruction is not replacement of lost assets.
- 'Do No Harm' concept is strongly advocated in the document. The programmes cannot address only the Tsunami affected in a narrow sense which would create a huge rift in society and negate the concept of assistance. In many cases development of the community or region is recommended to ensure this equity to an extent, though more focus is on the Tsunami victims.
- Coastal reconstruction to minimise risks to people is the aim and not prevent tsunamis; however providing mental satisfaction or 'safety feelings' are not discouraged as confidence building is an important measure.
- Cross cutting issues like environment, gender, ethnic sensitivity and marginalisation and minority sectors would be given equitable or appropriate preferential treatment to ensure addressing their needs.
- Adequate emphasis will be placed on counselling process as it is understood that people have a need. They have been traumatised or stressed by many factors happening too fast, and this is not true only for the affected, even those have been helping the affected/relief process may have mental fatigue. This will be addressed at all levels and by all sectors.
- Transparency and accountability would be of paramount importance in the whole process. The universities in the Northeast have proposed that a combined team of members from all three universities would assist in the monitoring of the operation of the third phase. This would be a useful and a welcome approach which would validity to the process.
- Decentralised mechanisms with decisive power at district level would facilitate faster progress addressing the values of that community; this may not be uniform across the districts and vary from district to district depending on the needs and the wishes of the each community, but, this is the underlying principle of participatory process, all wish to practice.