

094**Coordination and information management mechanisms of the tsunami emergency and rehabilitation operations in agriculture, fisheries and forestry sectors in Sri Lanka****W M B S Nissanka**

Reconstruction and Development Agency (RADA), Colombo 01, Sri Lanka

The widespread destruction caused by tsunami on December 26, 2004 brought a heavy toll on livelihoods and natural resources in the three sectors. Numerous international and national organizations assist the affected areas with main aim of restoring shattered livelihoods and for rehabilitation of natural resources for sustainable use by mitigating such disasters in the future.

Several projects were initiated to assess the damages and to restoring to build those back better. However, due to increasing number of emergency and rehabilitation projects in affected areas, there is a problem of coordination and sharing resources. Therefore, this study was focused to assess present status of coordination activities, to share experiences and knowledge for development of sustainable future plans and strategies for coordination and information management in the long run.

The study examined and reviewed the current situation with multi stakeholder participation from government, non government, private sector and community with regard to objectives of the study. Outputs were categorized under; overall status of mechanisms, opportunities for further development and improvement mechanisms best suited for Sri Lanka in line with the “build back better” strategy, and the way forward in terms of information management, exchange and coordination mechanisms for future work.

The study revealed that the need of cross sectoral coordination and information sharing is essential due various reasons such as large volume of information, as to achieve better accuracy and targeting etc., The study proposes to setup divisional/district level mechanism and focal point for coordination and information sharing among Government, donor, private agencies and I/NGOs. There will be similar setup at provincial and national level. The study further proposes certain guidelines such as, to have a focal point in each agency for dissemination of information, making coordination mandatory than voluntary, ethics in data use, giving due regard for Information management process by way of collection of specific data, sharing of data etc., Finally, two models are proposed for coordination and for information sharing among three main sectors.

095**Post-tsunami natural regeneration of coastal vegetation in the Hambantota district in south-eastern Sri Lanka.****M S J Perera¹, C N B Bambaradeniya², P G D R Perera³, V A M P K Samarawickrema² and H D D C K Perera²**¹Department of Natural Resources, Sabaragamuwa University of Sri Lanka, Sri Lanka.²The World Conservation Union (IUCN), Sri Lanka Country Office, Colombo, Sri Lanka.³The Open University of Sri Lanka, Sri Lanka.

A qualitative rapid survey was conducted in 45 plots distributed in the gentle seashore vegetation and sand dunes (n = 13), coastal scrublands (n = 19), and mangroves (n = 13) along the coastline of Hambantota District, affected by the Indian Ocean tsunami. The objective of the survey was to investigate the natural regeneration of coastal vegetation 20 months after the tsunami disturbance.

21 plant species belonging to 19 families were recorded as the prominent plants regenerating in affected mangroves, while 16 species in 15 families and 32 species in 23 families were observed as prominent plants to regenerate in affected areas of the gentle sea-shore vegetation and coastal scrublands respectively.

In tsunami affected mangrove stands *Acanthus ilicifolius* (in 50% of study plots), *Achrosticum aureum* (40%) and *Lumnitzera racemosa* (17%) were the dominant species establishing in open muddy substrates, while *Clerodendrum inerme* (57%), *Lumnitzera racemosa* and *Excoecaria agallocha* (29% each) were regenerating in sand deposited in the mangrove patches.

Ipomoea pes-caprae (85%), *Scaevola taccada* and *Calotropis gigantea* (23% each) were observed as the dominant species re-establishing in the gentle seashore vegetation, while *Spinifex littoreus* shows a slow rate of regeneration. Most of the destroyed *Pandanus odoratissimus* bushes facing the beach are not regenerating. Instead a new row of *Pandanus* was observed regenerating immediately backing the original stands. Prominent species regenerating in coastal scrublands are *Croton bonplandianus* and *Gymnema sylvestre* (37% each), *Clerodendrum inerme* (16%), *Calotropis gigantea* (10%) and *Crateva adansonii* (10%) and saplings of *Azadirachta indica* and *Limonia acidissima*.

Invasive alien plants, mainly *Opuntia dillennii* have established well and spreading vigorously in affected coastal scrublands (58%), some study plots of gentle seashore vegetation (31%) as well as on sand depositions in the affected mangroves (15%). This species was observed replacing the spaces occupied by destroyed *Pandanus odoratissimus* bushes and *Spinifex littoreus* beds. Invasive alien plants such as *Prosopis juliflora* and *Lantana camara* were also spreading in tsunami disturbed coastal scrublands.

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Assessment of tsunami damage on the coastal vegetation in five selected districts in the coastal zone of Sri Lanka, after one and half years of tsunami

D M S H K Ranasinghe and W M P S B Wahala

Department of Forestry and Environmental Science, University of Sri Jayewardenepura, Sri Lanka

Tsunami, the killer wave swept nearly two thirds of the coast of Sri Lanka on 26th of December, 2004. About 40,000 people died and around 500,000 people were displaced, more than 119,000 houses damaged either fully or partially. About 13 coastal districts were directly affected, the north and east suffered the brunt of the blow accounting for about 2/3 of deaths and 60% of displacements. In terms of ecological aspects, with the exception of few species, most of the vegetation suffered total or partial death, lagoons, estuaries, coral reefs, sea grass beds, salt marshes and mangroves experienced the damage at varying levels. This study was conducted with the patronage of the Food and Agricultural Organisation of the UN to scientifically assess the response of the coastal ecosystems with special reference to coastal forests to the Tsunami, almost one and half years of the incident.

The study focused on 5 tsunami affected districts namely, Kalutara, Galle, Matara, Hambantota and Ampara. In each district, approximately 6 sampling locations selected based on the topography maps and ground information. In each sampling location, a transect which was 10m wide and upto 250m inland was taken. The transect was divided into 50m blocks, the first one laid at the start of vegetation line of the beach. In each 50m section of the transect, all the plant species were enumerated. For the ground vegetation, percentage ground cover was taken. Using an index, the level of damage was evaluated for each plant. Composite soil samples were taken at each 50m segment and analysed for Electrical Conductivity, Soil Organic Carbon and major nutrients. Water samples were taken from existing wells located close by.

Although most of the vegetation, except for few exceptions, suffered badly at the time of Tsunami, there was extensive regeneration on the coast at the time of our study. The species which suffered the tsunami damage most were Palmyrah palm (*Borassus flabellifer*), Del (*Artocarpus nobilis*), Araliya (*Borassus flabellifer*), Puwak (*Areca catechu*), Banana (*Musa spp*), Kitul (*Caryota urens*), Guava (*Psidium guajava*), Avacardo pears (*Persea gratissima*), trees of Citrus family ie Oranges, Lime (*Citrus spp.*) Alstonia, Teak (*Tectona grandis*) etc. Of these, most of the species had regenerated to varying degrees, the most difficult ones being Araliya, Palmyrah, plants of citrus family, Kitul, Guava.

With a view to find out the species which are more robust in the regeneration, percentage ground cover (in ground vegetation) and relative abundance (in tree/shrub vegetation) were taken in each