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**SURVEY ON ESTABLISHMENT OF COASTAL VEGETATION
FOR TSUNAMI PROTECTION IN SRI LANKA**

A PROJECT REPORT PRESENTED BY

M.S.M.FASLY

To the Board of Study in Earth Sciences of the
POSTGRADUATE INSTITUTE OF SCIENCE

In partial fulfillment of the requirement

For the award of the degree of

MASTER OF SCIENCE IN DISASTER MANAGEMENT

Of the

UNIVERSITY OF PERADENIYA

SRI LANKA

2008



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Coastal vegetation acts as a natural barrier against natural and man made disasters protecting infrastructure and saving lives. It proved again in 2004 December Indian ocean Tsunami. After the tsunami, countries have understood the importance of developing methodologies to minimize the risk of future tsunamis and other related natural disasters. Establishment of hard infrastructure for tsunami protection is not feasible to developing countries like Sri Lanka. On the other hand, establishing of coastal vegetation is feasible for tsunami protection to Sri Lanka.

Many government institutions and NGOs initiated establishment of coastal vegetation for tsunami protection. A survey was conducted to compile details of the coastal vegetation established for tsunami protection, to understand the scientific background of coastal vegetation and conduct an assessment of existing establishments of coastal vegetation for tsunami protection along the southern and western coasts of Sri Lanka. Thirty seven such establishments of coastal vegetations for tsunami protection were identified for the above purposes from Hambantota to Colombo. An evaluation was carried out to assess whether the coastal vegetation establishments fulfilled the functions such as dissipation of energy of waves, trapping effect, escaping effect and soft landing effect. The assessment also included the existence of continuous maintenance and awareness about coastal vegetation, community participation, long term institutional support from government, non-government groups, academic institutions, or other institutions within an integrated framework.

Approximately forty percent of the sites were found effective in terms of energy dissipation, trapping debris escaping soft landing effect and management of views. Monoculture and Mixed culture were found in less than 40% and more than 60% of the locations, respectively. More than 60% are with *Panadanus* which have high energy dissipation effect. *Barringtonia asiatica* was the second preferred plant may be due to the familiarities with the coastal communities. Tolerance to salt spray, facilitation to soft landing and escaping are found to be positive reasons for this result. Fifty percentage of the establishment are less than 2 rows due to the land availability between near to main road, near to railway track.

Forest Department, Coastal Conservation Department, NGOs and Universities were involved in establishment of the coastal vegetation. More than 75% of the sites were established by the NGOs. Continuous maintenance is ensured only for 50% sites with community participation. Dissemination of knowledge and coordination with government institutions and research institution are very important for establishment of coastal vegetation for tsunami protection with community participation for an effective establishment and management of coastal vegetation for tsunami protection.

The survey also revealed data on scientific and non scientific methods of establishment and selecting appropriate species and structure of the construction of vegetation strips for tsunami protection. This will lead to proper mapping of coastal vegetation establishments for tsunami protection in Sri Lanka.