RESTORATION AFTER THE TSUNAMI:
The Kalmunai experience

The town of Kalmunai is located on the east coast of Sri Lanka where the impact of the December 2004 Indian Ocean Tsunami was worst felt with a high death toll and catastrophic damage to property.

The Neo Synthesis Research Centre (NSRC) began to work in Kalmunai in January 2005 by distributing food, supplying drinking water, cleaning wells and constructing wells and toilets. NSRC also provided roofing, furniture, uniforms, books, past examination papers, stationery, duplicating machines and milk food to 12 schools. Tools and other supplies were distributed to carpenters, masons, weavers and tailors. A total of 16,625 persons including 8009 children were benefitted.

In 2006, NSRC initiated an ecological restoration programme in selected sites in the hamlets of Periyaneelavenai, Periyakallar, Kalmunaikudy, Maruthamunai, Kalmunai and Pandirrippu with the support of the Green Coast project. To start with, a series of 75 enclosures totaling 3 kms in length were planted with coastal vegetation comprised of mostly native species of trees and shrubs in a manner similar to the closest natural forest in the area.

The project also included the planting of micro-catchments around 1001 drinking water wells with native trees and shrubs. Surface vegetation is known to hold soil and filter nutrients through a number of biophysical and biochemical processes.

Through strategic planting, vegetation can be used as a form of bioremediation to keep contaminants from reaching surface and groundwater. Beyond the immediate micro-catchment, the gardens surrounding drinking water wells were enriched with plants that provide utility benefits including food, fuel wood, timber, green manure, fodder and medicine.

In 2007-2008, NSRC initiated the ecological restoration of 45 large home gardens as demonstration models and in 115 small or kitchen gardens with the support of the Green Coast Project and the Global Environmental Facility (Small Grants) of the United Nations Development Programme. The land management techniques of Analog Forestry and organic agriculture were applied to convert these gardens in to forest gardens. Analog forestry seeks to establish a tree dominated landscape that is similar in architectural structure and ecological function to the closest climax forest using species that have utility to the farmer. In an ongoing project, NSRC went on to restore another 80 home gardens in 2009-2010 with the support of Overseas Italian Cooperation and the European Union.

The outcome of the forest garden programme was phenomenal, with farmers generating income from the first month onwards from annual crops and, as time went on, from fruit trees and early bearing tree crops. What was significant was that a substantial proportion of the produce was used for home consumption bringing in its wake the framework for food security. The establishment of trees has resulted in the development of shade and with the increasing leaf fall, enriching the sandy soil. Bioremediation planting around the wells has enabled beneficiaries to drink clean water once again and the recreated habitat has increased birds, butterflies, frogs and lizards in the gardens.

The project's greatest achievement is the mobilization of members of the community groups that were established by the project. These communities are now cognizant of the need for a protective belt of vegetation alongside the beach, not only in the face of another tsunami but also as a buffer against sea level rise. Participants are being initiated into an environmentally friendly lifestyle where they are made aware of the dangers posed by the use of agrochemicals in agriculture as well as improper management of garbage.

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