

The tsunami gardeners

A simple organic gardening and ecosystem restoration program is building new self-sufficiency in Sri Lankan communities striving to overcome tsunami damage and effects from the ongoing civil war.

Just over three years after the 2004 Boxing Day tsunami hit, killing more than 30 000 people, disaster relief efforts in Sri Lanka have moved well beyond the relief phase into the recovery and consolidation modes.

On top of the wave's deep social impact, escalating civil war is hampering aid efforts and strangling the economy, increasing life's pressures for the many Sri Lankans trying to re-establish basic comfort.

A related curse, rampant inflation, has contributed to price rises in fuel, basic commodities and food of 120 per cent in the past two years, forcing most folk, living on just a few dollars each day, to new poverty levels.

Jobs are scarce, and in the picturesque southern coastal districts which rely on an annual tourist bounty, the visitor numbers are the lowest in 30 years because of the wave's impact and the civil strife.

Under these conditions self-sufficiency becomes imperative. The tsunami, however, wiped out hundreds of thousands of village food gardens and significantly damaged the coastal vegetation which people relied on for basic nutrition and supplies. And so it is now, particularly, that the efforts of both international and local humanitarian aid organisations are crucial in continuing to support the traditional agrarian and fishing communities set inland from Sri Lanka's warm, opal sea.

While many larger international aid groups have wrapped up their primary tsunami relief work and departed, a number remain. Solidar, an international consortium of European aid organisations,¹ is one that is providing committed, longer term assistance through both post-tsunami recovery and conflict resolution programs.

Rebuilding basic livelihoods

Solidar's Coastal Community Rehabilitation Project (CCRP) has proved more valuable and timely than expected by contributing to reduced household

expenses, food provision and income generation capacity in the southern coastal districts of Galle and Matara.

In conjunction with a key implementing partner, local conservation and community services group Rainforest Rescue International (RRI),² the multi-pronged program has been running since May 2005 to improve coastal livelihoods through small enterprise development, home garden rehabilitation for nutritional and financial security, and ecosystem restoration through strategic plantings.

The initiative revolves around sustainable community based organisations (CBOs), established in seven key towns, which run nursery-cum-training centres that grow and distribute a variety of food, medicinal, ornamental and utility plants for home gardens and ecosystem repair.

A central cooperative guides the seven CBOs in management, agricultural training programs and involvement in broader ecosystem restoration work along affected coastal areas. Training in mushroom cultivation, floriculture, organic farming techniques and small business management is given to selected farmers and CBO members to spread knowledge and encourage crop and income diversification.

The nurseries now support the CBO capacity building process by generating revenues from sales of plants and compost, beyond their free distributions to CCRP projects. They also provide at least five regular jobs which support a number of families.

The ecological restoration element of the program aims to engage community members to rehabilitate the vital south-west coastal zone, which suffered considerable tsunami damage. The mangroves, wetlands and coral reefs of the area normally provide protection from most coastal storms and mitigate flooding.



Sri Lankan women have employment and education while working at Koggala Nursery under the Coastal Community Rehabilitation Project. James Porteous

They are also vital fish breeding grounds, and produce edible plants, firewood and building materials.

New biodiversity via home gardens

Like many women, Chandra Pathmini Mullegamage lost her husband to the tsunami, and with him, her family's main income provider. But after being selected for the CCRP's home gardens program she now has a thriving garden that just one year after planting provides her with food, self-sufficiency and a renewed sense of purpose.

She and her daughter Saduni have become local gardening supremos – experts on making organic compost in a bin provided by RRI, and eager learners of the basic horticultural skills needed to establish a thriving mixed garden. Like most other villagers, she previously lacked the knowledge to grow a variety of useful plants successfully around her home.

'This program has been very happy luck for us,' she explains. 'Now we are getting a lot of vegetables and spices, and next year I should be able to sell some at the market.'

When asked about the life in her garden, Chandra says, 'Yes, the butterflies and birds are coming back.'

RRI Program Manager Benjamin Van der Auwera explains that initial mapping

¹ Based in Colombo, but with operations around the country, the Solidar INGO consortium (Sri Lanka) primarily encompasses Norwegian People's Aid, German organisation Arbeiter-Samariter-Bund (ASB) and Swiss Labour Assistance (SAH) as implementing Agencies, but is also supported by around 20 other European and international donors and partner organisations. See www.solidarsrilanka.org

² Swiss Labour Assistance's principal donor, Swiss Solidarity, funds the CCRP programme across seven tsunami affected communities in Galle and Matara districts. As lead agency, Swiss Labour Assistance provides both technical and financial contributions to the project.



Coastal mangrove forests in the south-west which sustained tsunami damage are crucial habitat for fish breeding, supporting other local fauna and providing community materials. Right: Mangrove seedlings ready for sale and distribution to restoration sites. James Porteous



Koggala Nursery produces a range of different food, medicinal and utility plants for local residents. RRI officer MD Chand discusses orders with Benjamin Van der Auwera, Program Manager at RRI. James Porteous



Charith Senanayake and Benjamin Van der Auwera are behind RRI's active environmental restoration efforts around Sri Lanka. James Porteous

for appropriate plant choice and placement is a key part of the home garden's additional role in creating a patchwork of restored local habitat for animals.

'Our work aims to take up the dual opportunity of planting a working garden and restoring local biodiversity through matching species to the original ecosystems in the region,' he says.

'RRI field staff meet with the homeowners to first establish their preferred choice of plants, and then we overlay that with analogue forestry³ to integrate an appropriate species mix that will suit the local area. We literally draw a map of what plants should grow where in the garden, and then it's just a case of getting them in from the CCRP nursery

The health of Sri Lanka's coastal zone is fundamental to the communities that draw on its resources each day. James Porteous

and teaching the beneficiaries about their rearing and care.

'The homeowners can then manage things as they like,' he says.

Specific plants for special roles

Food plants, at 45 per cent, form the majority of community nursery production, followed by other non-food local species (27 per cent), medicinal plants (14 per cent), and flowering and mangrove plants (7 per cent each). The CCRP is the only project to be growing mangroves in the country and so these are also in high demand from other organisations for other coastal zone restoration projects around Sri Lanka. The mangroves not only provide new protection against oceans and weather, they also improve vital breeding ground for fish, Sri Lanka's staple protein source.

The food plants comprise fruit trees and shrubs (mango, tomato, coconut, eggplant, cucumber, jak fruit, passionfruit, woodapple), vegetable herbs (spices and

³ Analogue forestry involves mixed plantings of species carefully mapped to the original, local biodiversity.



Chilli varieties are essential to traditional, spicy Sri Lankan cooking. James Porteous



Chandra Pathmini Mullegamage and her daughter Saduni show off some of their now regular harvest. James Porteous

other food additives) and green leaves (spinach and local leaves such as gotukola and katuru murunga).

The non-food plants include trees for firewood, shade or hedges, palms, and soil stabilising or improving species. These are also the key plants for biodiversity and add value to cottage gardens, protection for the food species and health to the soil by fixing nitrogen and delivering compost. Parts of these usually fast-growing plants can also be used for other domestic needs such as leaves for basket and mat weaving.

The medicinal plants, which are used in traditional ayurvedic medicine, allow people to self-medicate various ailments, reducing their expenses on Western medicine.

Flowering plants add important visual amenity to gardens and homes. The cleanliness and beauty of a house is very important to Sri Lankans.

Since establishment, nearly 700 000 plants have been produced by the seven CBO nurseries, of which over 200 000 have so far been distributed or sold. About 4000 seedlings of mixed food and revegetation species are grown per month, and at full capacity 300 000 plants are being grown each year. Seventy-five per cent of those are available for distribution or sale within three to six months and are being readily taken up by other organisations and locals.

Re-greening the coast

By late 2007 over 60 acres of the 180 identified for coastal ecosystem rehabilitation under the CCRP were completed in five locations along the coast, with the help of communities under the World Food Programme's food for work initiative, and local schools.

Ultimately the three-year project, which is supported by Solidar consortium member Swiss Labour Assistance, aims to recreate a green belt along the coast which will restore the soil cover, improve biodiversity, and last but not least, provide a wind barrier and shade that will allow home gardening activities to take place only metres from the coast.

RRI is again employing its experience in analogue forestry, along with methods from international organisations such as IUCN and Green Coast.

A key component is the Dutch Canal Restoration Project which is focusing on the riverine habitat near Galle, and planting bamboo and mangroves to assist

return of the area to its pre-tsunami amenity.

Managing Director of RRI, Charith Senanayake, explains that the coastal belt restoration is part of the organisation's broader national conservation objectives. 'We are aiming to create a biodiversity corridor linking the vulnerable remnants of original rainforest in the wetter south of the country,' he says.

'These are some of the last high endemic biodiversity areas left and the pressures on them grow. We want to make Galle the rainforest city in the south and raise the importance of working to preserve these habitat areas,' he emphasises.

Going by the success of the CCRP to date, that goal may well be achieved.

Kathrin Bergmann, Country Representative for Swiss Labour Assistance at Solidar, is delighted with the momentum and ongoing impact of the program's home gardens and environmental rehabilitation projects.

'CCRP built on initial nursery development work under Solidar's earlier Nutritional Security Project, and by involving 700 families selected as agricultural producers, links with our broader community recovery program,' he said.

'RRI, with their proactive approach and successful domestic gardening and restoration work were the obvious partner for CCRP in Galle and Matara. It's been a strong partnership with encouraging progress.'

RRI has initially been running the program's community nurseries but management responsibility is being handed over to communities step by step via the involvement of the CBOs. There has also been important coordination with local Galle District and national government agencies, and community organisations, which see the program as a practical alternative to existing capacity building sources.

A marketing survey carried out in May last year, less than a year after the home gardens part of the CCRP commenced, underlined the strength of the program.

It showed that five per cent of the project families had reached a level of self-sufficiency with their produce supply, and many said they were already able to sell excess supply to supplement their incomes.

On this evidence, the model is working fabulously.

● James Porteous

More information:

Rainforest Rescue International:
www.earthrestoration.org

Solidar Sri Lanka: www.solidarsrilanka.org

Note: The online version of this article has been modified from the print edition.