Lanka Landcare: a remarkable project

By Victoria Mack, Sue Marriott and Matt Stephenson

The bond of cricket between Australia and Sri Lanka is being challenged by a more recent Australian and Sri Lankan passion – Landcare. In late May 2010, three Australian Landcare representatives joined fellow American, Indian and Sri Lankan Landcare practitioners to celebrate the launch of Landcare in Sri Lanka.

Sue Marriott and Victoria Mack, from the Secretariat for International Landcare (SILC) Inc, and Matt Stephenson, from Bass Coast Landcare Network[1], experienced a remarkable six day tour which included: visits to Landcare projects and trial sites across the island; three district Landcare launches; a presentation of musical instruments (donated by fund raising in the USA) at a school in tsunami devastated Kalmunai; and a comprehensive Landcare Conference at Haputale attended by a host of Sri Lankan natural resource management specialists and launched by the Governor of the Uva Province, Mr. Nanda Mathew.

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Kamy Melvani

The Lanka Landcare movement is grounded on the successful work of NeoSynthesis Research Centre and its Managing Director Kamy Melvani. The decision to develop a Landcare brand took shape following Kamy's attendance at the 2nd International Landcare Conference in Melbourne in 2006, which included participation in the Crawford Fund's Landcare Master Class following the Conference. What followed was four years of dedicated work by Kamy to establish real life demonstrations of the Landcare model on the ground including social, environmental and economic values.

The launch of Landcare in June 2010 is even more significant considering the planning and groundwork was undertaken in the midst of a twenty five year long civil war in Sri Lanka which ended only recently.

With seed funding sourced from a range of International donors Kamy and her team have achieved impressive results on the ground through well researched and well documented demonstrations of change - in the economic and social wellbeing of local people as well as a change to the landscape and water quality. Projects sites include tsunami damaged communities on the east coast, the mountainous tea estates in the central water catchments and contaminated ground water areas on the west coast.

With a population of 20 million people on an Island the size of Tasmania the pressure to secure food supply, water quality and livelihoods as well as protect what is left of natural areas is challenging. The Landcare team

[1] Matt Stephenson also visited the above mentioned sites in the week preceding the official tour. He presented workshops at Hupatale, Kulmanai and Monaragala, speaking to Sri Lankan Landcare professionals about his experiences in Australia. Matt gave examples of some of the initiatives that have been developed in Australia and talked about challenges and successes. He also spoke to enthusiastic local groups embarking on Landcare projects who were amused by his descriptions of rabbit control work in Australia (rabbits are a much loved species in Sri Lanka!). Matt was encouraged by the resilience and practical applications of the groups contributing toward landscape change and consequently improving health aspects, particularly water quality.

Matt, together with Jerry and Yvonne from the United States also met with representatives from organisations based in Colombo, and held discussions exploring the potential for some funding support for Lanka Landcare. Matt was sponsored by Australian Landcare International (ALI) to attend the training workshops and inauguration tour in Sri Lanka.

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Sue Marriott and Victoria Mack are currently involved in establishing the first Landcare program in Indonesia, north of Yogyakarta in central Java, and variously involved in supporting International Landcare awareness and developments.

has made remarkable progress but there are many challenges ahead. Landcare's future will require both support within the country but also importantly from the International Landcare movement.

So what has been achieved?

Kitchen and forest gardens at Kalmunai, Moneragala and Kalpitya

The building blocks of the Landcare Lanka program have been laid at the local level. In the tsunami devastated region of Kalmunai on the east coast the establishment of 125 home and 115 kitchen gardens as demonstration plots has resulted in a transformation of bare and unproductive land into tiny oasis of food production. These projects have subsequently been extended using the techniques of Analog Forestry and organic agriculture to turn these small gardens into larger forest garden sites. Analog Forestry seeks to establish a tree dominated landscape which can replicate the ecological function of indigenous landscape while using species that have utility to the farmers.

Kalmunai (tsunami damage in foreground): from this ....

to this .... project site

Kalmunai (neighbouring land not in project) compared ....

to this .... project site next door

Kalpitiya (nearby land not in project): compared ...

to this .... project site nearby

Kalpitiya (neighbouring land not in project): from this ....

to this .... project site next door

The establishment of the forest gardens has resulted in the development of shade and increasing leaf fall which has enriched the sandy soil - the outcomes have been phenomenal. Farmers and households have been able to generate income from the first month onwards from annual crops and later from fruit trees and tree crops. A substantial portion of the production has been used for home consumption with the balance being sold at local markets – a sound basis for food security.

Landcare's greatest achievement has been the mobilization of the community groups and their ongoing support and enthusiasm for the tangible and substantial rewards for their work.

Bioremediation at Kalpitiya

Ground water in the Kalpitiya Peninsula, and in other areas of Sri Lanka including Kalmunai, was good until modern agriculture introduced inorganic fertilizers and chemical pesticides. Today it is particularly nitrates in drinking water that exceed World Health Organization drinking water standards. This has significant human health implications for communities that rely on the wells for all their water needs.

Bioremediation well at Kalpitiya – a restored micro watershed around a drinking water well

Bioremediation planting around the water wells has improved drinking water quality and the whole system has increased habitat for indigenous birds, butterflies, frogs and lizards. Bioremediation involves: dense planting around the well with deep rooted, native trees to form a 'root mat' below the surface for pollutant uptake; fencing to act as a wind break in exposed areas; and organic cultivation of annual and perennial crops including vegetables, fruit, timber, fuel wood and medicinal plants.

The bioremediation project has proved to be a low cost technology with multiple benefits including: increased canopy closure (shade, soil building and biodiversity conservation); environmental sustainability (clean water); increased food security and poverty alleviation through annual and perennial crops for family consumption and the sale of the surplus; increasing beneficial insect populations to balance pest predators; and community participation and capacity building.

The Haputale Landcare Workshop – 3 June 2010

The workshop was conducted in three languages (Tamil, Singalese and English) and was well attended with over 100 delegates from the regional centres of the central south. In the morning session the presentations centred

on technical issues such as hydrology, water quality, soil conservation and governance. In the afternoon presentations included how Landcare works in the USA, Australia and Indonesia.

One of the key points made to the Governor after his opening address was that Landcare 'is not an "aid" project'. The Governor had stressed was that it was critical that "Landcare" was not an "aid " project as many aid projects, particularly following the tsunami, were viewed as a vehicle for other countries and international agencies to take advantage of Sri Lankan misfortune.

International and Sri Lankan delegates (from left):
Willie Baber (USA), Pal Singh (India) Sue Marriott (Australia – rear) and Victoria Mack (Australia – sitting), Feisal Mansoor (Sri Lanka – back) Jerry Moles (US – standing) Yvonne Everett (USA – sitting) Matt Stephenson (Australia), Parveen Dassenaike (Sri Lanka) and Robert Smith (USA).

Yvonne, Jerry, Parveen, Sue and Victoria are members of the Landcare Lanka Board.

The Water Towers Project

The Water Towers project involves community based restoration of the Kalkanna Oya watershed in the Lipton Valley. In Sri Lanka 103 river systems begin in the montane zone, also called the 'cloud' forests, that is largely under the management of 23 plantation companies. The removal of forest cover over a century ago to establish tea plantations has resulted in erosion of the montane soils, a reduction in dry season water flow in streams, loss of biodiversity, landslides and water contamination. The Water Towers project is a private public partnership that involves collaboration between the Tea Estates, Landcare Lanka, the Estate Line communities and villagers, local administration and local government.

The project is focusing on replanting mountain ridges, riparian zones and the steep gullies using species from the native 'cloud' forest. Tea Estates are encouraged to diversify with tree crops with economic value such as cinnamon, cloves and avocado. Home gardens are being converted to forest gardens using the silvicultural techniques of analog forestry. Education in organic production techniques and composting of non-recyclable wastes and grey water is being introduced to protect water quality.

Landcare Lanka is a unique partnership allowing communities, governments and organisations to come together to repair and better manage an area's natural resources The adoption of Landcare methodologies entails the formation of watershed committees/groups and mobilization that is currently underway.

An added incentive is that the Tea Estates can benefit from international accreditation schemes that require sustainability with production systems. 'Already on Greenfields Estate, one season of planting native forest trees in eroding gullies and diversifying marginal tea with multi-purpose trees in the upper watershed has taken place, a robust nursery has been established with native plants growing for the next planting season and surrounding the residences of the Tamil estate workers experiments are underway with how to improve their quality of life and financial benefits. Working at the estate level, hundreds of thousands of acres can be influenced' (J. Moles, 2010).

Conclusion

Our overall impression of our visit to Sri Lanka, now that peace has been restored to the island, is that it is time to move forward together to build for the island's future and improve opportunity for the Sri Lankan people. The challenges are significant: infrastructure; economic development; water and food security; employment and livelihoods; and protecting the natural resource base. If the island's traffic chaos on crumbling roads is an indicator of the task ahead, then the challenge is indeed significant but equalled by the will of a now united people to succeed.

There is growing recognition of what Landcare has achieved in Sri Lanka and growing interest what can be achieved in the future.

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