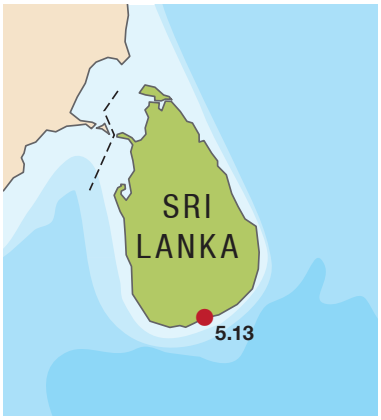
Mangroves for the Future
INVESTING IN COASTAL ECOSYSTEMS

Cultivating bamboo as a wood substitute to protect mangroves and control erosion at Rekawa lagoon

Bamboo nursery, Sri Lanka © K. Ekaratne



LOCATION
Rekawa, Ussangoda and Kalametiya (RUK) area, Sri Lanka

PRIORITY POWS
- Strategies for Management
- Community Resilence

DURATION
One year

MFF GRANT AMOUNT
US$4,060

Objectives

This project had four main objectives:

1. to introduce bamboo planting;
2. to create an alternative source of wood for local communities;
3. to prevent mangrove exploitation; and
4. to develop supplementary sources of income.

Background

Rekawa lagoon, covering 250 hectares, is a highly productive ecosystem which supports the livelihood of a large fishing community. As a result of constant harvesting of wood for construction, pole-making and fuel, the mangroves and scrub forest surrounding the lagoon have declined steadily in area and quality. The shores of the lagoon have also been degraded by wood extraction, and in many places this has led to the lagoon silting up. Silting has had a direct and negative impact on the productivity of the lagoon fishery, creating an urgent need to develop alternative sources of wood.

The NGO Ruhunu Development Consortium (RDC) obtained a small grant from MFF to introduce cultivation of the bamboo *Dendrocalamus hookeri* as a substitute for wood. Bamboo is widely used in the construction industry for scaffolding and for building house roofs and walls. The dense root structure of bamboo also gives it soil-binding qualities, making it a useful plant for controlling erosion on the banks of rivers, tanks and streams. RDC has planted bamboo both in home gardens (as a substitute for wood) and along the banks of watercourses and water bodies to combat erosion. Its foliage also provides valuable fodder for livestock.

Target beneficiaries

Landowners at Rekawa lagoon and community members who can benefit directly from selling bamboo wood and other products.

Outputs

- Delivery of awareness programmes for more than 90 families.
- Mobilisation of communities and other potential beneficiaries.
- Training given to selected community members in raising and planting bamboo.
- Establishment of three community-based nurseries to propagate bamboo.
- Propagation of 4,500 bamboo plantlets.
- Planting out of bamboo in selected sites.
- Monitoring and maintenance of planted bamboo stands.
- Development of lessons-learned materials and case studies for dissemination.

Accomplishments and challenges

The community has developed an interest in bamboo planting as an alternative source of income. Demand for bamboo seedlings has increased and all three community-operated nurseries are working to meet this demand. Project participants also planted 4,500 bamboo plants on 15 hectares of river banks, tanks and lagoon banks, as well as home gardens bordering water canals and public places such as schools and temples.

Challenges

The project encountered several obstacles with the bamboos selected and their growth. The proposed bamboo species, Yoda Una (*Dendrocalamus giganteus*) and Yellow Una (*Bambusa vulgaris*), were unavailable at the start of the project. As a result of inflation, prices of bamboo seedlings rose by 50% in the period between planning the project and implementing it. Some of the shoots that were brought from Kotmale also died. Lastly the 2009 rains did not arrive until mid-November, causing a delay in replanting and retarding growth rates.

Contributions to cross-cutting themes

Gender equality

The project benefitted both men and women, as everyone could engage in home gardening of bamboo and contribute to improving the environment of the lagoon.

Lessons learned

The communities have taken to cultivating bamboo with great enthusiasm, which augurs well for the sustainability of project outputs. As the bamboo grows, it will help to stabilise and protect riverbanks, lakes and lagoon banks, and it will help to reduce the pressure on mangroves.

The community needs to appreciate that, with its help and understanding, good results can be achieved in protecting the environment. Success will be ensured if: a) an increasing number of community members grow bamboo in their home gardens or on empty land; and b) bamboo becomes a sustainable source of income for the community.

Bamboo vegetation will prevent soil erosion, act as a wind barrier, reduce the adverse effects of stormy weather conditions, prevent siltation of the lagoon and improve water storage capacity. In time, bamboo plantations will also enhance the natural beauty of the lagoon environment and provide an alternative livelihood.

In the post-project period, RDC has continued to provide technical support and monitor bamboo planting. A case study of the project has been prepared and will be useful to those wishing to replicate the project elsewhere.

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