

Finally, another important challenge is achieving sustainability of the joint management program. There is therefore a need to establish and operationalize sustainable financing mechanisms.

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CONSERVATION TECHNIQUES AND PROGRAMS - COMMUNITY PROGRAMS

Community Participation in Turtle Conservation in Sri Lanka: a Summary of Community-Based Turtle Conservation Project's (TCPs) Activities in Sri Lanka

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Five of the world's seven species of marine turtle come ashore to nest in Sri Lanka. Despite the protection of marine turtles under government legislation since 1972, Sri Lankan fishermen are still exploiting marine turtles for their meat, eggs and shell. The TCP predicts that the marine turtle populations of Sri Lanka will decline to extinction within the next few decades because of the above mentioned threats.

Sri Lanka's marine turtle populations can recover from this inevitable decline, but only if effective conservation measures are carried out immediately and are continuous for at least the next 10 years. In order to facilitate the necessary recruitment of hatchling turtles into the local turtle populations, as many nests as possible must be allowed to hatch naturally and the hatchlings allowed to make their way to the sea. Where it is not possible to protect marine turtle nests "in situ," scientifically managed hatcheries should be established. Marine turtle by-catch in fishing gear must be reduced, critical habitats must be protected and rookery-monitoring programmes must be established at the most significant rookeries. These measures will only be effective if the coastal communities of Sri Lanka are involved and informed. To achieve this, coastal communities must be educated about the importance of conserving the coastal ecosystems on which they depend.

Turtle Conservation Project (TCP) in Sri Lanka was established in 1993 to address the issue of marine turtle conservation through research, education and community participation. The TCP has launched three major community-based turtle conservation programmes to address the identified threats to marine turtles of Sri Lanka.

The TCP has selected Rekawa, a small village on the South coast of Sri Lanka, approximately 10 km east along the coast from Tangalle, for community-based turtle conservation activities. Rekawa is located on the border of the intermediate and dry climatic zones of Sri Lanka, and borders on a large saline lagoon surrounded by extensive mangrove forests. There are no electricity or telephone lines in the village and the majority of households do not have running water. Water is primarily obtained from roadside storage tanks.

The village is divided into two divisions, Rekawa East and Rekawa West, and the numbers of families in these divisions are 121 and 144 respectively (Foerderer, 1996, in press). Income generation activities for the families in the Rekawa area include agriculture (47%), lagoon fishing (10%), sea fishing (18%), coral mining (9%) and others (17%) such as masonry, carpentry, government services and labor.

The community of Rekawa village has suffered several setbacks in the last decade. During the late 1980's and early 1990's, Rekawa was the location of political violence which bereaved many families of their skilled men-folk. An irrigation system designed by the government to improve the quality of the agricultural land surrounding nearby Tangalle drained Rekawa of its groundwater. The groundwater was eventually replenished by saline water from the sea and Rekawa lagoon, which rendered the land unsuitable for agriculture unless there are heavy rains. These events have resulted in low incomes for most of the families in Rekawa with approximately 57% of the families dependent to some degree on government welfare.

Rekawa's Natural Resources. Because Rekawa is located on the border of two climatic zones there is a high local biodiversity. As well as the mangrove forests, the local vegetation consists of scrub jungles, medicinal plants, fruit trees and a wide variety of wildlife including 150 resident and migratory birds, 27 species of mammals, 23 species of reptiles, many arthropods and aquatic life.

Community Participation. TCP has initiated three major community based turtle conservation programmes in Sri Lanka, in order to conserve the marine turtles. These programmes are listed and described below:

i. An in situ nest protection and research programme is managed by a full-time coordinator and supervised by 5 full-time research officers, 3 of whom were recruited from the University of Peradeniya, the Department of Wildlife Conservation (DWLC) and the National Aquatic Resources Agency (NARA).

The programme employs 17 former turtle egg poachers to assist TCP, DWLC, NARA and University of Peradeniya research officers in the collection of biological data and the *in situ* protection of marine turtle nests. These nest protectors patrol the beach and guard the nests from predators.

The TCP aims to make this programme sustainable by organizing turtle-sensitive, nocturnal “Turtle Watches” for fee-paying visitors.

ii). *The TCP school workshop programme and South-West coast beach survey.* The TCP has conducted a series of educational workshops for pupils and teachers in schools along the southwest coast (phase 1). At the lectures, pupils and teachers were invited to set up school turtle conservation groups and are invited to participate in the TCP Southwest coastal beach survey (phase 2). So far over 1,500 pupils and teachers from 130 coastal schools have participated in the educational programme. During this programme, the TCP distributed the school educational materials that were produced by the TCP in cooperation with the GTZ and the Coast Conservation Dept (CCD).

15 potential school conservation groups have been identified and over 450 pupils and teachers have volunteered to participate in the Southwest coast beach survey. The TCP School lecture programme coordinator, in charge of this programme predicts that there will be a total of approximately 50 school conservation groups when the series of workshops has been completed at all central schools within the extended programme boundaries from Kirinda to Puttalam.

The proposed third phase of this programme, will aim at strengthening the school turtle conservation groups and encouraging them to actively participate in the design, funding and implementation of turtle conservation and awareness raising activities in their local communities. The TCP also aims to undertake an extension of this programme to include the area between Colombo and Chilaw.

iii). *Environmental education workshops.* In October 1995, the TCP launched a wide-ranging programme of environmental education workshops in the Rekawa community. In March 1996, 14 Rekawa community members graduated

from an initial 6-month training programme during which they were trained in educational methods and taught about various environmental subjects relevant to their locality.

These Community Environmental Education Trainers (CEET’s) conducted environmental education workshops for school children and community groups in the Rekawa area. The workshops focused on the environment as a whole using techniques such as participatory resource mapping to identify conservation issues and seek sustainable solutions to problems of destructive exploitation.

The TCP currently employs 4 CEET’s to run the core environmental and educational programmes such as model medicinal garden project, mangrove nursery, free herbal drink project and library project in Rekawa.

English classes for Rekawa Community members.

The TCP has been conducting English language classes in Rekawa since January 1994. These classes employ volunteer teachers from the UK and are attended by approximately 350 community children, adults and English teachers from Rekawa and the surrounding area. With these classes, the TCP aims to improve the employment prospects of participating community members in non-resource dependent jobs and therefore reduce community dependency on environmental exploitation. The classes also helped improve the communication abilities of community members who are employed in TCP research and conservation activities in Rekawa and also they will act as tour guides for the nature trail programme.

Marine Turtle Conservation Workshops/Exhibitions.

The TCP has conducted several workshops and exhibitions to increase awareness about marine turtle exploitation in Sri Lanka and the work of the TCP in trying to implement sustainable community participation strategies to combat these threats. Many of these workshops were organized by the CEET’s of TCP for important government and non-government institutions such as the Teacher Training College at Unawatuna, the Ceylon Tourist Board, Fisheries Societies, Police station-Tangalle etc.

The Protection Program of the “Caná” Sea Turtle (*Dermochelys coriacea*), and the Participation of the Community; a Cultural Appropriation of a Preservation Process at Acandi and Playona Beaches, Uraba Gulf, Colombia

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The Urabá Gulf is one of the 19 nesting sites of *Dermochelys coriacea* of worldwide importance. The leatherback sea turtle, named by the locals as “tortuga caná”, arrives at Acandí and Playona beaches between February and July every year. Rueda *et al.* (1992) concluded that this population is probably the largest one among the Colombian Caribbean Coast nesting populations.

In 1993, the Darién Foundation, an environmental NGO working with the communities to conserve and sustainably manage the biodiversity within the Chocó Biogeographic region, organized a protection program for the Caná sea turtle, which included: education, protection and research.

Aside from the need to protect the species because of its critical situation, the caná sea turtle presents itself as an