

COMMUNITY PARTICIPATION IN THE MANAGEMENT OF THE KANNELIYA-DEDIYAGALA-NAKIYADENIYA PROPOSED BIOSPHERE RESERVE

H. M. BANDARATILAKE

Director, Forest Resources Management Project

Ministry of Environment and Natural Resources, Sri Lanka

Proceedings of the South and Central Asian MAB Meeting of Experts on Environmental Conservation, Management and Research, Hikkaduwa, Sri Lanka 15-18 October 2002

Introduction

The forest cover in Sri Lanka has been continuously declining during the last several decades. The forest cover, which was around 44 % in 1956, had declined to 23.9 % in 1992 and to 22.4 % in 1999. The total forest cover in 1999 was 2.02 million hectares, representing around 30.5 % of the total land area of the country, whilst the dense natural forest cover remained 1.46 million ha which is around 22.4 % of the land area. The main causes of deforestation have been the increasing population and resultant land hunger, which have exerted pressure on forestlands for conversion to non-forest uses. Another key factor for reduction of forest cover has been conversion of forestlands to plantation agricultural crops such as, coffee, tea and rubber. Inappropriate land use trends, unsuitable forestry practices and illegal felling of timber are some other causes for deforestation. As a result of deforestation and forest degradation, the government has imposed a complete logging ban on all natural forests since 1990.

The forest types in Sri Lanka range from “Montane Forests” to “Mangrove Forest” and reflect a wide range of ecological and climate conditions. The following eight forest types have been identified in the forest map prepared by the Forest Department in 2000. The Montane Forests, Sub Montane Forests, Lowland Rain Forests, Moist Monsoon Forests, Dry Monsoon Forests, Reverine Dry Forests, Mangrove Forests and Sparse Forests. At present, nearly 50% of the forests in Sri Lanka have been identified as Protected Areas and this represents around 14 % of the total land area of the country.

Protected Areas and the MAB Network

Around 80 % of the Protected Areas (PAs) in the country are managed by the Department of Wildlife Conservation which includes Natural Reserves (National Parks, Nature Reserves, Strict Natural Reserves) and Sanctuaries. Protected Areas managed by the Forest Department include National Heritage and Wilderness Areas, Conservation Forests and Man and Biosphere (MAB) Reserves. The PAs network

under the Forest Department (FD) consists of different types of forest and mangrove ecosystems. All the natural forests above 1,500m elevation have been classified as PAs. The natural vegetation types included in the PA network under the FD consist of Montane Forests, Sub-Montane Forests, Lowland Rain Forests, Moist Monsoon Forests and Mangroves. A limited extent of Dry Monsoon Forests has been included in the MAB network. The MAB network under the Forest Department includes MAB reserves ranging in size from 10 to 5,000ha.

National Policy on Conservation and Community Participation:

The current National Forest Policy was formulated and approved by the Government in 1995. This policy acknowledges the fact that natural forests are heavily depleted, and expresses concern for safeguarding the remaining natural forests for posterity in order to conserve biodiversity, soil and water resources. It emphasizes the importance of retaining the present natural forest cover and increasing the overall tree cover in the country. A large part of the natural forests are to be completely protected exclusively for conservation objectives. Multiple use forestry is to be promoted. The policy emphasizes the need for development of partnerships with local communities for the protection and management of forest resources.

The Kanneliya - Dediya-gala - Nakiyadeniya Forest Complex :

The Kanneliya - Dediya-gala - Nakiyadeniya (KDN) Forest Complex is located in the southwestern part of Sri Lanka about 35km northeast of Galle. The total area of forests in the KDN complex is 10,139ha. The Kanneliya Forest Reserve is the largest of the three conjoined forests, which is about 5,306ha in extent. The entire area of the Kanneliya Forest Reserve has been identified as a MAB reserve. Extents of forests in the KDN complex are shown in Table 1.

Table 1: Extents of Forest Cover in the KDN forest complex.

Forest	Dense Forest (ha.)	Sparse Forest (ha.)	Forest Plantations (ha.)	Total (ha.)
Kanneliya FR	5,108	168	29	5,306
Dediya-gala FR	3,306	198	-	3,504
Nakiyadeniya FR	1,300	29	-	1,329
TotalKDN	9,714	395	29	10,139

Source : KDN Forest Complex - Conservation Management Plan (1995)

The natural vegetation of the KDN complex is Lowland Rain Forests (Wet Evergreen Forest) which is a climax forest formation. The floristic region where the

KDN complex is located is considered an area of exceptional endemism, as 17 % of the wet zone lowland endemic flora is confined to this range of forests. This region has been identified as one of the most floristically rich areas in South Asia. The Kanneliya Forest Reserve had been selectively logged for many years for supplying wood to a plywood mill; this logging operation was suspended in 1988. The species richness and diversity of flowering plants are still relatively high in the KDN forests, although much of the resource value has been destroyed by logging. Despite heavy logging, Kanneliya has retained its high biodiversity value, and in terms of biodiversity per unit area it rivals the Sinharaja World Heritage Forest. Biodiversity assessments in KDN recorded 319 woody species of which about 52% are endemic, 22% are classified as endangered, 27% vulnerable, and 45% are in the rare category.⁴ Some 220 faunal species with 41 (19%) endemics have been recorded from KDN and the adjacent forests.

There are 78 villages surrounding the KDN forests. More than 50 % of the households in most of the villages receive food stamps as they are below the government recognized poverty line. The rural economy of villages around the KDN complex is based primarily on tea and paddy smallholdings. The homesteads are cultivated with crop mixtures. The villagers living around the forest are at least partially dependant on the forest for both timber and Non Timber Forest Products (NTFP). The use of NTFP appears to be more for subsistence and tradition than commercial purposes. Medicinal plants, fuelwood, poles and posts are the most frequently used forest products by the villagers.

Participatory Management Planning :

As stated in the National Forest Policy, the Forest Department has recognized the need for the involvement of local people in forest management, planning and implementation. This policy has already been put into practice in the management of KDN, Sinharaja and Knuckles forests.

The management plan for KDN was formulated in 1995. Conservation of biodiversity including rare and threatened species, conservation of soil and water resources, enhancement of the quality of life for local people and sustainable flow of goods and services from the forests in order to provide economic opportunities for local people, are the main objectives of the management plan. ~

Basic Principles in Participatory Management Planning:

The following are the basic principles which serve as the basis of the management plan.

- Effective recognition of the interdependence of communities and forests.
- Local people to be involved effectively in planning and management.

- Benefits of forest use to remain primarily with the local people.
- Negative impacts of use to be minimized.
- Traditional uses to be accommodated in a manner consistent with objectives.
- Management planning to be linked with local development aspirations.
- Support local NGOs and community organizations.

Zoning the Forest :

The zoning system adopted in the KDN forest complex is resource based, whereby forest resources are classified according to their need for protection, requirements for management interventions, and ability to accommodate community use. Different zones are managed for different objectives. The management zones in the KDN forests consist of the Protection Zone (PZ), Traditional Use Zone (TUZ), Cultural Zone (CZ) and Buffer Zone (BZ).

The management objectives of different zones are as follows:

- Protection Zone - Conservation, research, education and recreation
- Traditional Use Zone - Research, traditional use, rehabilitation and recreation.
- Cultural Zone - Preservation of religious and cultural values.
- Buffer Zone - Physical, biological and social buffer, (outside the forest boundary)

The Management Strategies :

The key management strategies used to achieve the management objectives are as follows;

- Restore or rehabilitate the natural forest.
- Preserve the remaining areas of primary forest.
- Involve local people and CBOs effectively in all aspects of management.
- Use local forest goods and services principally for local benefits.
- Promote non-extractive economic activities based on forest resources.
- Promote traditional use of forest products consistent with objectives.
- Carry out research in order to improve forest management capability.
- Use the forest as an educational resource

Key Participatory Management Programmes Implemented in KDN :

Two participatory forest management projects are being implemented in the KDN forest complex at present.

Conservation of Globally Threatened Species in the Rainforests of Southwest Sri Lanka (UNDP/WB/GEF)

This project, which is being funded by UNDP/WB/GEF, commenced in the year 2000. The project is implemented by the Forest Department with the active participation of the local communities. The project includes two clusters of buffer zone villages and adjacent forests in the south of the Sinharaja World Heritage Site and KDN forest complex, together with two clusters of villages in the buffer zone and the adjacent forests.

Project Objectives:

The main objectives of the project are:

- To conserve the forest ecosystems in Sinharaja and Kanneliya
- To evolve a participatory management system

Project Activities:

The activities implemented in the KDN in order to achieve the project objectives are as follows;

- (a) Surveying and landmarking the boundary of KDN with community participation
- (b) Mobilization of communities in the selected villages in the buffer zone to form CBOs.
- (c) Training members from CBOs in entrepreneurship, vocational skills, and extension services relevant to managing tea smallholdings etc.
- (d) Providing priming funds to CBOs to enable them to initiate capacity building and enterprise development.
- (e) Training suitable members of CBOs to serve as guides to nature tourists and educational parties etc.
- (f) Opening nature trails to cover interesting sites and providing interpretation facilities with community involvement.
- (g) Setting up Village Forest Participatory Management Committees.
- (h) FD and CBOs jointly identifying Traditional Use Zones (Pilot areas), agreeing on NTFPs to be collected, promoting enhancement of NTFP resources in the buffer zone.

- (i) Setting up demonstration plots in Traditional Use Zone and Buffer Zone to promote conservation, sustainable use and propagation of NTFPs.

Other activities of the project include, establishment of a project management unit, setting up of a conservation center, training, research, education, extension and public awareness programmes.

Conservation and Sustainable use of Medicinal Plants Project

The Conservation and Sustainable Use of Medicinal Plants Project funded by a grant from the WB/GEF commenced in 1998. The activities of this project in Kanneliya are implemented by the project with community participation and in collaboration with the Forest Department. The project has identified a Medicinal Plant Conservation Area (MPCA) within the Kanneliya FR, and this consists of the western part of Kanneliya FR and seven Grama Niladari Divisions (GND) in the western boundary.

Project Objectives :

The principle objective of the project is the conservation of globally and nationally important medicinal plants, their habitats, species and genomes, and to promote their sustainable use in Sri Lanka.

Project Activities :

The activities implemented in the buffer zone of the Kanneliya FR which covers seven GN Divisions are;

- a. Community mobilization - linkages have been made with state officials, CBOs, NGOs, traditional healers and village communities.
- b. Establishment of a Conservation Area Management Committee and eight Village Project Management Committees with representatives from CBOs and village communities (one representative from each household).
- c. Conducting awareness programmes for various target groups.
- d. Establishment of demonstration plots (*Osu Uyana*) for medicinal plants in villages and schools in the buffer zone.
- e. Promoting the establishment of village nurseries, purchasing planting stocks and distribution among villagers.
- f. Promoting the planting of medicinal plants in home gardens.
- g. Conducting socio-economic surveys in all GN Divisions.
- h. Conducting a survey on extraction of NTFP and income generation from forests.
- i. Conducting ethno-botanical survey in all eight GN Divisions in the buffer zone.

- j. Preparation of a micro plan for each GN division in the buffer zone.
- k. Training of village communities to prepare, implement and manage their own Village Action Plans (VAP).

In addition to the above activities carried out in the buffer zone, a resource inventory has been completed in the Kanneliya FR in order to survey the occurrence of medicinal plants and multiple use trees in the forest. The management plan for the Kanneliya Medicinal Plant Conservation Area was prepared by the project in consultation with the Forest Department. This management plan provides management recommendations for both the forest and the buffer zone.

Conclusion

The Forest Department of Sri Lanka still has very limited experience in participatory forest management. Participatory forest management was first started when managing the Sinharaja and Knuckles forests. As participatory management of KDN was started 2-3 years back, it is too early to assess the impact of interventions. However, all the activities of the management plan implemented in the KDN forests at present are project oriented, but in order to maintain the sustainability of the process developed, the management procedures should be institutionalized.

References

- 1 *Conservation of Globally Threatened Species in the Rainforests of Southwest of Sri Lanka* (1999). UNDP/GEF, Colombo.
- 2 *Kanneliya-Dediyagala-Nakiyadeniya Forest Complex. Conservation Management Plan* (1995). IUCN/FD, Colombo.
- 3 *Management Plan for the Kanneliya Medicinal Plant Conservation Area* (2002). Sri Lanka Conservation and Sustainable Use of Medicinal Plants Project. IUCN/FD, Colombo.
- 4 Sinhakumara, B.M.P, (1994). *Ecological Assessment of KDN Forest Complex of Sri Lanka* IUCN, Colombo.
- 5 *Sri Lanka Forestry Sector Master Plan* (1995). Ministry of Agriculture, Lands and Forestry.