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KMTR - An eco-sensitive area in Tamil Nadu



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Challenges, Initiatives and Best Management Practices in Kalakad-Mundanthurai Tiger Reserve

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INTRODUCTION

The Kalakad-Mundanthurai Tiger Reserve (KMTR) is the 17th and Southern most Tiger Reserve in India and the one of the three Tiger Reserves in Tamil Nadu. It forms part of the Southern Western Ghats. KMTR is located between 77° 10'E and 77° 35'E longitudes and between 8° 25'N and 8° 53'N latitudes. The KMTR is spread over an area of 895 sq.km. encompassing portion of Tirunelveli and Kanyakumari Districts of Tamil Nadu. The very location of the Reserve in the Western Ghats recognized as one among the 18 global 'hot spots', makes it unique in its tropical forest conglomeration and extremely rich floral and faunal diversity, both in terms of species richness and endemism. KMTR also forms part of the Inter State (Kerala and Tamil Nadu) Agasthyarmalai Biosphere Reserve. The Agasthyarmalai hills, part of which falls within the Reserve, is recognized as one of the five centres of plant diversity and endemism in India. The Reserve proudly treasures some of the largest and most intact

extents of natural forests, which harbour a variety of altitudinal climax forest communities. All the 14 endemic mammals are found in Kalakad Mundanthurai Tiger Reserve. Out of 19 endemic birds found in Western Ghats, 15 are found in Kalakad Mundanthurai Tiger Reserve. The rich forests of the Reserve are the catchment for many important rivers and streams, which serve as backbone for the irrigation network and drinking water supply for the people of the district. Seven major reservoirs located in and around the Reserve owe their existence to the rivers and forests of the Reserve.

THREATS TO BIODIVERSITY

The main demands and pressures that the Tiger Reserve was historically subject to was from the human habitations that depended rather heavily on the natural resources. In addition to being the single source of livelihood, the forests were also used

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rather intensively for spurious trade of timber and associated collection, fuel wood, thatch and fodder. This intensive extraction directly contributed to devastating fires on a regular basis, which in turn led to lower availability of natural resources and an increase in area of exploitation by fringe elements.



UNIQUENESS OF THE APPROACH

Tamil Nadu pioneered the concept and implementation of Eco-development in Tiger Reserves. The uniqueness of the programme was the 'approach' component, which made use of locally organized units such as the Eco development Committees (EDC) and the Village Forest Councils (VFC) as the operational units.

The VFCs are registered under the Tamil Nadu Societies Act 1975 and thus become a statutory body attracting the provision of the Act. No activity carried out under the project is absolutely free. The VFC members contribute 25% or even more of the cost of all activities. The contribution many a times comes in the form of kind, if not in cash. This brings a sense of attachment or at times even custodianship, to the activities carried out under the project.



IMPACT OF ECO-DEVELOPMENT

Eco Development Committees (EDCs) that were evolved and enabled to function within the Tiger Reserve were included actively in the protection and conservation efforts. These included activities such as forest protection, fire protection, firefighting, anti-poaching activities, mitigation of man-animal conflicts, awareness programme, patrolling, etc. Some of the more notable changes evidenced in KMTR since the inception of Eco-Development programmes are as follows:

a. Fellings

The cessation of felling for fuel wood and timber within the Tiger Reserve increased the forest cover which is essential for the survival and propagation of the animal population. Proper and effective fire protection works increased the forest cover further. In the recent years, no cases of habitat destruction have been reported from KMTR.

b. Cattle Grazing

Open grazing, especially within forest areas, had been controlled to a great extent. In the past, the ex-zamin forest of Singampatti, Papanasam Range and Kadayam Range suffered the most from grazing, and these were specially addressed.

c. Forest Fire

With the assistance of VFCs, forces were mobilized to control forest fires. A mechanism was established in which during emergencies, EDC members would be called for assistance. It is a matter of pride that during many instances, the VFC members had on their own acted as fire fighters. Thanks to the support of the local communities, there has been a significant decrease in.

d. Positive impact on forest area

One of the most striking results of the project has been in the domain of local climate and hydrology. The inflow of water to the dams and rainfall had increased and the local temperature had remarkably

reduced following the implementation of the project. GIS based analysis of the landscape revealed an increase in forest cover, especially in the Vadagarai beat and Nambikoil beat. Re-appearance of wild fauna was also noted in all the fringe areas as poaching and illegal felling had completely stopped

e. Impact of alternative livelihood

The livelihood options and skill development trainings offered by the department as part of the project was effectively utilized by the forest dependents to improve their economic status. As the training provided by the forest department was job oriented, many forest dwellers were absorbed into mainstream jobs like nursing, computer operator etc. The other dependents were provided various alternative employment options and income generation activities. The status of the women also improved thanks to the training and financial assistance provided to women self help groups. The support has since been translated into several micro-enterprises which increased household income.



f. Awards and recognitions

The World Bank in their report no. 24270 dated 06.06.2002 has recorded as the “Eco Development Work at Kalakad Mundanthurai Tiger Reserve was successful”. Over all Implementation at Kalakad Mundanthurai Tiger Reserve was good.

Considering the successful implementation of the Eco Development project in Kalakad Mundanthurai Tiger Reserve, the world bank has chosen “Kalakad Mundanthurai Tiger Reserve as Role model and for establishing Field Learning Centre in 2011”.

Kalakad Mundanthurai Tiger Reserve taken much efforts and appraised of the facts of the works done in Co- Existence and Buffer Management to National Tiger Conservation Authority who had also visited Kalakad Mundanthurai Tiger Reserve and the fringe villages and satisfied with the Eco Development works. National Tiger Conservation Authority has issued award to Kalakad Mundanthurai Tiger Reserve for excellence (for the year 2010-11) in the category of “Co-Existence and Buffer Management” on 02.05.2012.

CONCLUSION

“Together we do Better” is the slogan for forest conservation through peoples’ participation. People are our greatest strength. We have to make them aware of their role in conservation. We need to involve them in protection activities by creating a conducive atmosphere. We will definitely see the success that we have seen in KMTR when our attitude changes from “We know what is best for them” to “They know what is best for them”. If we take care of people, the people will take care of forests. This is therefore the win-win situation that can be replicated in all our protected areas to help the forest fringe dwelling communities and at the same time protect the forest and its denizens.

The Kalakad Mundanthurai Tiger Reserve model of Eco development has yielded a desired result by fulfilling all objectives as envisaged in the project. Whole hearted involvement of local people in the conservation of Kalakad Mundanthurai Tiger Reserve biodiversity is unique. Total reduction on Forest resource dependency through best practiced alternate livelihood (Eco development) practices resulted in improved status of Flora & Fauna of Tiger Reserve and sustainable use of Eco System services (especially water source).

EVENTS

Mega Science exhibition at Erode district

A mega science exhibition was conducted by the Tamil Nadu Pollution Control Board at Sri Vari Arangam, Erode district on 16th and 17th October 2015. Thiru Thoppu N. D. Venkatachalam, Hon'ble Minister for Environment inaugurated the programme. Thiru K. Skandan, IAS, Chairman, Tamil Nadu Pollution Control Board, Thiru. Hans Raj Verma, IAS, Principal Secretary to the Government, Environment and Forests Department and Dr. H. Malleshappa, IFS, Director, Department



of Environment also participated in the event. The ENVIS centre of the Department of Environment put up a stall with awareness posters on topics such as reduction of plastics, climate change etc. The Hon'ble Minister for Environment and other delegates visited the ENVIS stall and appreciated the effort. More than 5000 school students also visited the ENVIS stall.

CoP 21 at Paris, France

The CoP-21 meeting was held in Paris, France from 23rd November to 11th December 2015, wherein governments of more than 190 Nations gathered to discuss a new global agreement on Climate Change, aimed at reducing global greenhouse gas emissions and thus avoiding the threat of calamitous climate change. A four member delegation from Tamil Nadu consisting of Thiru. K. Skandan, IAS, Chairman, Tamil Nadu Pollution Control Board, Thiru. Hans Raj Verma, IAS, Principal Secretary to the Government, Environment and Forests Department,



Dr. H. Malleshappa, IFS, Director of Environment and Dr. Sudhanshu Gupta, IFS, Chief Conservator of Forests participated in the side event during the CoP-21 from 4th December to 10th December, 2015 and showcased the State Action Plan of Climate Change of Tamil Nadu. Thiru. Hans Raj Verma, IAS, Principal Secretary to the Government, Environment and Forests Department presented the concept paper on “Risks, Vulnerabilities and Resilience: Charting a Pathway to Address Climate Change” and highlighted how the long coastline of Tamil Nadu forms a fragile ecological boundary while being a gateway to significant developmental activities requiring adaptation and mitigation measures for safeguarding the resources of the State.

Advisory Committee meeting to finalise the State of Environment Report for Tamil Nadu

The Advisory Committee meeting to finalise the State of Environment (SoE) Report for Tamil Nadu 2014 was held in the chamber of the Principal Secretary to Govt., E&F Dept., Secretariat, Chennai on 19th October 2015 at 2.30 P.M. Dr. H. Malleshappa, IFS, Director of Environment welcomed the participants and briefed the officials on the framework of the SoE Report for Tamil Nadu 2014. He also highlighted that two



stakeholders meeting were held to collect data, comments and suggestions from various line departments. Dr. K.S. Kavikumar, Professor, Madras School of Economics who is the Lead Agency made a detailed presentation of the Report and explained the methodology followed in the preparation of the report. The committee approved the draft Report for Tamil Nadu subject to incorporation of the above suggestions.



Capacity Building Programme for Implementation of the TNSAPCC

The Department of Environment, Government of Tamil Nadu in collaboration with, CCC&AR of Anna University conducted a workshop entitled “Capacity Building Programme on Implementation of Tamil Nadu State Action Plan on Climate Change” on 27th October, 2015. The main aim of the workshop was to enhance the sector wise capacity building for climate governance and prepare proposals for funding under Green Climate Fund (GCF) and National Adaptation Fund (NAF). The



workshop was designed for the sectoral nodal officers identified in TNSAPCC. Twenty five participants from different sectors of the Government of Tamil Nadu attended the workshop. Dr. H. Malleshappa, IFS, Director and Dr. Jayanthi, M., IFS, Additional Director Department of Environment and other senior officers of the Tamil Nadu Forest Department participated in the programme. The staff of the ENVIS centre also participated in the programme.

National Conference on Coastal Environment (NCCE-2015)

A National Conference on Coastal Environment (NCCE-2015) was organized by the Centre for Remote Sensing and Geo-informatics, Sathyabama University, on 29th October, 2015. Dr. H. Malleshappa, IFS, Director, Dr. Jayanthi, M., IFS, Additional Director and Dr. Divya Subash Kumar, Program Officer, Department of Environment participated in this programme and presented a paper titled Tamil Nadu State Initiatives to Respond to Climate Change Challenges in Coastal Environment. The staff of the ENVIS centre also participated in the programme.



Interactive Session organized by the Tamil Nadu Agriculture University

As a part of the collaborative project on climate change adaptation in Agriculture namely the South India AgMIP (The Agriculture Model Inter-comparison and Improvement Project), Tamil Nadu Agriculture University organized an interactive session between Project Scientists and Policy Makers on 17th November, 2015 at the Seminar Hall, Agriculture Production Commissioner office, Secretariat, Fort St. George, Chennai. Dr. H. Malleshappa, IFS, Director of Environment and Dr. Divya Subash Kumar, Programme Officer, Climate Change Cell, Department of Environment attended the meeting. Project team members, scientist like Dr. Ravindranath, IISc, Bangalore, policy makers from the Department of Agriculture, Thiru Santhana Gopalakrishnan, who is also the nodal officer for Implementation of TNSAPCC in Agriculture sector and the General Manager from NABARD, Regional Office were present at the meeting.



Science exhibition at RKM Saradha Vidyalaya

A science exhibition was conducted by the RKM Saradha Vidyalaya on 29th October 2015. Dr. H. Malleshappa, IFS, Director, Department of Environment gave a special address and highlighted the importance



of environmental awareness and the role of the school children in



creating awareness to the general public. The ENVIS centre of the Department of Environment had provided awareness posters on topics such as reduction of plastics, climate change etc for displaying in the exhibition. The Director of Environment interacted with the students and encouraged them to be green ambassadors.

Workshop for District Forest Officers on TNSAPCC

The Principal Chief Conservator of Forests, Chennai – 15 conducted a workshop for the Senior officers of Forest Department, including Territorial Conservator of Forests and 18 District Forest Officers on 24th November 2015. Thiru. R.K.Upadhyaya, IFS, Additional Principal Chief Conservator of Forests (APCCF) (P&B), who is also the Nodal officer for Forest and Biodiversity Sector, of the Tamil Nadu State Action Plan on Climate Change (TNSAPCC), chaired the meeting. Dr. H. Malleshappa, IFS, Director and Dr. Jayanthi, M., IFS, Additional Director Department of Environment were present in the meeting along with officers from NABARD and interacted with the forest officers on preparation of proposals for “Climate Change and Mitigation Measures” on funding procedures for projects under Green Climate Fund (GCF) and National Adaptation Fund for Climate Change (NAFCC). The staff of the ENVIS centre were also present in the discussion.



POSITIVE OUTCOMES OF ECO-DEVELOPMENT IN KMTR

As an outcome of the eco-development activities in KMTR, an increase in forest cover, especially in the Vadagarai beat and Nambikoil beat has been recorded.

2002

Nambikoil beat

2010



A census of the predator population in Kalakkad Mundanthurai Tiger Reserve (KMTR) has shown a 25% increase in the population of tigers and leopards in the year 2013.

Camera trap photos of tiger and leopard taken in KMTR



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