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OPINION

CONSERVATION-DEVELOPMENT PROGRAMMES IN PERIYAR- AGASTHYAMALAI LANDSCAPE

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INTRODUCTION

India, comprising of only 2.4% of total global geographical area, holds about 7-8% of world's biodiversity, with high level of rarity and endemism as well as four biodiversity hot spots on this planet (MoEF 2014). This rich biodiversity is not only because of the strategic biogeographical location of the country but also due to diverse landscapes and varied socio-cultural values (Rodgers & Panwar 1988). India has made concerted efforts to preserve this biological heritage through an extensive network of about 870 Protected Areas (PAs), most of which are either National Parks or Wildlife Sanctuaries (WII Database 2019). However, exclusionary approaches to conservation have their limits. There has

been a growing recognition of the need to integrate conservation approaches with the development aspirations of the local communities (Chapin 2004; Lele et al. 2010). In human dominated landscapes, Integrated Conservation Development Programs (ICDPs) have been a major part of India's conservation approach for well over three decades now. Known as eco-development in India, these programs aim at inclusive management initiatives that focus not only on maintaining the ecological integrity of the area but also to preserve the traditions and practices of the local communities living in and around PAs (Badola et al. 1998; Uniyal & Zacharias 2001; Bhardwaj 2007). Several of these ICDPs have been successfully implemented across India. However, in the

light of small size of Indian PAs and biotic pressures from an ocean of population living on the fringes of these PAs, it has been realized that PAs alone cannot achieve the larger objectives of biodiversity conservation and human well-being. Therefore, a landscape approach is becoming critical for ensuring sustainability of ICDPs (Uniyal *et al.* 2014).

Integrated Conservation-Development Programmes in Southern Western Ghats

Periyar-Agasthyamalai landscape of Southern Western Ghats of India is spread over an area of about 7000 km² across the states of Kerala and Tamil Nadu, covering 7 PAs and 10 forest divisions (Asian Nature Conservation Foundation 2012). About 57% of the entire stretch of landscape lies in the state of Kerala. This landscape covers a mosaic of landuses including PAs, territorial forests, plantations, townships, villages & tribal settlements, revenue enclosures, leased areas, hydroelectric projects, roads & railway lines, tourism destinations and pilgrimage sites. It is also home to 10 different tribal communities that have traditionally depended on the forests not just for their livelihoods but also socio-cultural living. The major tribes are the Kannis, Ulladans, Mannans, Paliyans, Uralis, Mala-aryans, Malamandarams and Malavedars (Kerala Forests and Wildlife Department 2018). Periyar Tiger Reserve (PTR) and Kalakadu Mundanthurai Tiger Reserve (KMTR) form the two important PAs in Kerala and Tamil Nadu parts of the landscapes respectively. Local tribal communities in these PAs had traditionally been nomadic, practicing some form of shifting cultivation and have had unique

linkages with these forests, both in terms of biodiversity use (non timber forest produces and medicinal plants) and their cultural practices (religious worships, folklores, dances, food habits, health systems, etc). Owing to the recognition of the ecological value of these areas, during the 1940s, the then Maharaja (King) of Travancore initiated the process of resettling the tribal communities of Periyar on the fringes of the PA with the expectation that these communities will have better lives through settled agriculture and thereby, reduce their dependence on PA resources. However, these communities were exploited by vested local interest groups, due to which they could neither reduce their dependence on forest resources nor benefit from settled agriculture (Kerala Forest and Wildlife Department 2001). Break down of traditional systems, on one hand, and inability of the communities to mainstream themselves on the other hand, led to over exploitation of forests and illegal activities in the form of smuggling of forest produce. Taking advantage of the local communities, outsiders used the area for serious offences like illegal cultivation of Ganja (*Cannabis sativa*), poaching and debarking of cinnamon trees (*Cinnamomum verum*), leading to further degradation and destruction of habitats (Bhardwaj 2007). In this background, first ICDP initiatives were started in PTR during 1991 followed by a comprehensive Eco-development Project with the support of World Bank and GEF (Global Environment Facility) in 1995 (World Bank 2004b). These initiatives have tried to rebuild positive linkages of local communities with Periyar through a sustained process of providing alternate livelihoods, generation of social capital,

capacity building and awareness. Several studies on eco-development initiatives in Periyar Tiger Reserve (PTR) of Kerala, have shown positive results with respect to evolution of new paradigms of conservation and development (Uniyal & Zacharias 2001; Damayanti & Masuda 2008; Bhardwaj 2019). Enhanced synergies between conservation, community participation and institutionalization of processes of development have also been witnessed. This has been made possible by reducing local communities' dependence on forests through alternative livelihoods while enabling preservation of their cultural practices. Within the boundaries of PTR, community-based ecotourism, strengthening of agriculture practices including cultivation of organic pepper and other spices, pilgrimage management through local communities and sustainable use of some forest resources have provided major source of livelihoods to communities. The success of the programme is evident from the fact that the some of the local communities who were once a part of the poaching nexus in the area, today stand as the second string of protection for the reserve. Further, a women's group, *Vasantha sena*, who have been under taking voluntary patrolling of PTR fringe areas without any remuneration for the last more than 15 years, form an example of empowerment of communities, particularly women (Chaudhuri 2013). The programme has ultimately evolved a new PA level institutional arrangement in the form of a Foundation to provide technical and financial support to Village level Eco-development Committees (EDCs) for sustainability of the programme (World Bank 2004a). Now, as a part of cultural

revival, local traditional dances of tribal communities have also been included in the various tourism programmes.

Similar stories of community participation in biodiversity conservation have evolved in KMTR through community mobilization, livelihood strengthening by enterprise development, women empowerment in the form of Self Help Groups (SHGs), capacity building and awareness (Melkani 2001; Dutt 2001). Both, PTR and KMTR, are now being recognized as learning centres at national level for participatory governance of PAs. Outside PAs, the participatory forest management programmes have been initiated in all the forest divisions. Here, efforts are being made to continue the traditional livelihoods of the local communities in a sustainable manner. In each forest division, local forest dwelling communities (both tribal and non-tribal) have been organized into Forest Protection Committees, locally called *Vana Samarakshama Samities* (VSSs). These work under the umbrella of Forest Development Agencies (FDAs) at division level and all FDAs are being coordinated by State Forest Development Agency (SFDA) at state level. As part of the programme, the processes of collection, value addition and marketing of Non Timber Forest Product (NTFP) and medicinal plants have been strengthened to improve livelihood of local communities.

Other ecologically compatible development and awareness generation programmes have contributed towards the socio-economic and cultural empowerment of communities, ultimately leading to maintenance of ecological integrity of the area. Ecotourism has also been initiated by

VSSs in some pockets, the income from which is being used for welfare of communities as well as forest protection. One of the interesting experiments undertaken here is the cultivation and sale of *Arogya Pacha*, a rare medicinal herb collected by the Kanni tribe for its revitalization properties and used in formulation of a licensed herbal drug, 'Jeevani' (UNDP 2012). This area also has a series of temples dedicated to Lord Ayyappa (depicting various stages of life of Lord *i.e.* childhood, youth, married life and old age), which attracts large number of pilgrims every year. As a part of cultural and religious revival, efforts are also being made to strengthen the involvement of local communities in management of pilgrimage activities (Bhardwaj 2007).

Extending Learning to the Landscape

Comprehensive landscape conservation programme was initiated with the support of World Bank and GEF for expanding the good practices of participatory biodiversity conservation and community empowerment of PTR and KMTR. The programme focused on improving community livelihoods, their participation in forest conservation and mainstreaming biodiversity conservation concerns in development processes through long-term engagement with local communities and prominent stakeholders (Mishra *et al.* 2015). The project also involved ecological mapping and village level microplanning for conservation and livelihood support, capacity building and community mobilization. Field level implementation of these initiatives has been carried out through 99 EDCs and 105 VSSs under the guidance FDAs at division and state level as well as overall technical

support of Periyar Tiger Conservation Foundation (Kerala Forest and Wildlife Department 2018). Some of the major achievements of the landscape initiatives so far have been establishment of a responsible system of collection and value addition of NTFPs by communities, door to door NTFP marketing facility called *Vanasree*, community contracting of developmental works, establishment of river conservation fund, revival of some traditional practices of communities, new cleanliness initiatives under *Swachh Bharat Abhiyan*, improved ecological understanding of landscape (World Bank 2014a).

The process of extension of the ICDP lessons to the larger landscape has also unveiled newer issues, including challenges in securing of corridors and connectivity outside the boundaries of PAs, integration of conservation and development programmes through continuous engagement of diverse stakeholders and enabling institutional mechanisms for mainstreaming conservation into developmental processes (World Bank 2014b). The progress of the initiatives in the Periyar-Agasthyamalai landscape will now dependent heavily on how well and timely these issues are addressed.

CONCLUSION

It has often been argued that development and conservation are antithetical to each other *i.e.* development, in its present form, necessitates exploitative use of natural resources like land, water, forests and wildlife, leading to their degradation. However, the eco-development program in Periyar-Agasthyamalai landscape has questioned this dominant notion. Eco-

development programmes that focus on providing for socio-economic and cultural needs of the local communities while maintaining ecological values of a landscape provide a way forward in this regard. It proves how the process of development and conservation can be understood as part of a larger framework, wherein the objectives of the two are in tandem. At this juncture, it is also important to underline that the process on integrating conservation and development entails a number of challenges too. While a lot needs to be done in terms of bridging the gap between conservation and development, it is important to understand that a one fits all approach can lead to more harm than good.

It is the need of the hour to better understand the specific economic, socio-cultural, political and ecological dimensions of an area in order to design conservation-development programmes, which can contribute to both preservation of nature and advancement of economies meaningfully.

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