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How a restoration project in Karnataka is helping revive revive ecology, community livelihood

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Jeddiah has been leading his team of 20 people into the reserved forests around Karnataka's Bandipur for the last 10 years. Their mission is to restore areas, degraded due to invasive species like *Lantana camara* and anthropogenic factors such as cattle grazing and fuelwood collection, back to biodiverse habitats.

Jeddiah's is one of three community eco-development groups, comprising around 50 villagers, living at the edge of Bandipur Tiger Reserve. They are trained and supported by Junglescapes, a grassroots non-profit working on ecological restoration since 2008.

Working in collaboration with the forest department, these community groups have helped restore over 1,000 hectares of forests to healthy habitats for wildlife with a significant increase in diversity and abundance of flora and fauna.

Restoration-based livelihoods

A majority of these forest-abutting villagers belong to indigenous communities, who were relocated from within the forest when the national park was formed around 50 years ago. They are historically nomadic people with a low affinity towards agriculture; most parcels of land given to them at the time of relocation lay fallow.

Before the start of the restoration activity, they led a subsistence existence, working mostly as casual labourers in nearby farms for a few months of the year.

In comparision, the restoration activity provides them sustained livelihood throughout the year. Family incomes have tripled in most cases, and intangible gains in terms of self-confidence and social status have been considerable.

In a thesis presented as part of her Masters' programme at Oxford University, which was based on the community-participative model of Junglescapes, Manasi Anand described communities involved in restoration as 'conservation-subjects'. They are different from those involved in collection of forest produce, whom she termed 'consumption-subjects'. The former derive their livelihood by augmenting natural resources and by being custodians of the forest, while the latter may develop a more utilitarian view of the forest.



Collection and marketing of forest produce pose many challenges, including sustainable collection. In contrast, restoration provides a simple, yet powerful, livelihood alternative that is a win-win for the forest-dependent communities and the ecology surrounding them.

Restoration and traditional ecological knowledge

While the restoration benefits the indigenous community groups, biodiversity often gains more.

"Bellamma, an elderly lady from the *Jenu Kuruba* group, is a fountainhead of knowledge on shrubs and herbs, when and where they grow best and their uses for wild fauna. Such traditional ecological knowledge is invaluable for the success of our restoration efforts," said CR Hanumanth, a Junglescapes member.

Conventional approaches to rehabilitation of indigenous people have focused on training them in non-forestry vocational skills. These have had limited success so far due to challenges they face in integrating with mainstream society.

Many end up in unskilled jobs in villages and small towns. A more serious and irreplaceable impact is the loss of traditional ecological knowledge because of their disconnect with the forests.

Restoration activity underway in Bandipur

It is now recognised globally that traditional knowledge is as valuable as scientific discovery for ecological conservation.

Such knowledge is passed from one generation to another experientially, and any break in this chain leads to its near-permanent loss. Restoration, on the other hand, provides a golden opportunity to conserve such knowledge.

"Traditional knowledge is being lost rapidly around the world. By ensuring that the indigenous youth participate in the restoration activities, we try and facilitate knowledge transfer from their elders," adds Hanumanth.





Building a restoration-based livelihood model

Getting the community to trust a restoration-based livelihood option and participate in it enthusiastically requires sustained institutional support over a long period. It also requires incomegenerating activities encompassing the entire year.

The restoration model, therefore, consists of a bouquet of activities that spread across all seasons. Pre-monsoon months involve activities like seed collection, soil conservation and raising rarer plants in nurseries. Monsoon months are focused on water harvesting, accelerating growth of natural vegetation, etc.

Drier periods are utilised for removal of invasive species. This ensures stable monthly revenues to the communities and builds trust and confidence in the model.

A community-based restoration model also has to prioritise human-oriented restoration techniques as opposed to machine-oriented ones. In line with this, all activities are designed for being carried out manually with the use of simple local tools.

This has the added advantage of avoiding collateral impacts on the ecosystem.

Capacity-building is an important aspect. Today these community groups take active part in restoration planning and decision making. And are learning to run self-help group meetings and operate bank accounts. Local team leadership is also evolving.

The potential

K Anand, a Jungescapes volunteer, has been assessing the potential of a restoration-based economy at a pan-India level. "If a modest effort like ours can sustain annual livelihoods worth Rs 40 lakh for a decade, the country-wide potential is immense," he said.

Estimates of degradation at a national scale are hard to come by. At a conservative estimate at least 20 per cent of our forest ecosystems may need to be restored. Multiplying this by a factor of two to account for other ecosystems, we are looking at a restoration economy of almost a trillion rupees spread over the next 20 years.

Over half a million marginalised people can gain livelihoods. This does not include the value of incremental ecosystem services arising from such restoration, which could be several times the livelihood benefit.

Restoration can also help buffer rural populations from the vagaries of agricultural incomes and reduce migration from villages. At the same time helping restore ponds, lakes, grazing lands,

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