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Conserving sacred groves through community participation

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A Pune-based conservationist and a group of environmentally-conscious citizens are trying to protect forest trees by creating a seed bank and recreating sacred groves. Raghunath Dhole, 64, has collected over 150 seeds of tree species from forests in various parts of Maharashtra.

Talking to Mongabay-India, Dhole explained that a plantation has a single species of trees over acres of land but sacred groves have more [biodiversity](#) in a small area. Sacred groves play an [important role](#) in ecosystem services such as clean environment, flora and fauna conservation, and temperature control.

Dhole compared the sacred groves to an open library of trees. "People can visit, see it and experience the tree species to study and understand. They are habitat for birds, reptiles and a range of biodiversity," he added.

The seeds are collected, germinated into saplings and then distributed for free to whoever requests him. When asked why he gives away the saplings for free, Dhole said, "The cost of a tree sapling cannot get evaluated in terms of money. The amount of carbon sequestration (removal of carbon dioxide from the atmosphere to slow pollution and mitigate global warming) it does, the huge amounts of oxygen it releases to purify air over its lifetime and other environmental benefits would make it worth millions of rupees."



Raghunath Dhole with *Oroxyllum indicum* seed. Photo by Himanshu Nitnaware.

Dhole, who is a landscape gardener by profession, has been preparing saplings since 2012 and estimates that he has helped grow 100,000 trees across the country.

He wants people to avoid aesthetic plantation and instead plant and conserve native species and forests. For this, awareness is necessary, he mentioned. It's important for people to know the seeds of plants, how they look, where they are seen on a tree, the season during which they can be retrieved and how to collect and germinate them, he commented.

In the last four years, he has taken conservation efforts to establish the sacred groves lost in urbanisation and helped bring up 17 sacred groves on private land belonging to individuals in Karnataka, Maharashtra and Tamil Nadu. These groves include 7,000 plants of forest tree species.

Speaking about the process, Dhole said that the sacred groves are set up in a planned fashion. Four species of trees are clubbed together in a square or a line. This way, when the canopy forms, the seeds of one species fall between the canopies and become easy to collect, he explained.

Ecology, economics of sacred groves

Sacred groves are thousands of years old forests, largely untouched by humans, and are highly productive ecosystems, stated Gurudas Nulkar, an ecologist and trustee of Ecological Society, Pune.

Sacred groves have a thriving population of insects, lichens and micro-organisms, and the abundance of vegetation offers various habitats, which attract birds and animals, and creates a robust food web, Nulkar added.

By observing sacred groves, one can estimate the composition of species that existed in that region before the human settlement came in, he explained. “This knowledge can guide afforestation and conservation programs in that region since it is critically important to allow only native trees, and that too specific to that habitat, in plantation programmes,” he added.



Raghunath Dhole arranging seed samples. Photo by Himanshu Nitnaware.

Sacred groves have potentially high economic value, a factor that often gets disregarded. These forests, Nulkar mentioned, are gene banks and don't cost even a rupee. They safeguard important flora and fauna, which have ecological, medicinal and nutritional value for humanity. As the ecological productivity of sacred groves is high, it helps maintain the micro-climate, and helps enable seed germination of rare and endemic flora, he added.

Artificially made gene banks are expensive, consume enormous energy and are vulnerable to natural and human-made disasters, Nulkar said.

Sacred groves contribute to the carbon sequestration capacity of the country and provide critical ecosystem services, which do not have any market value, but are an invaluable contribution to the life-sustaining capacity of the planet, he commented.

Community-driven conservation

Taking a cue from Dhole's efforts, many people have started establishing sacred groves. They receive seeds via courier, transport and even personal visits.

A retired army officer, Suresh Patil, from Pune, has taken an acre of reserved land from Pune Cantonment Board (PCB) area to create a sacred grove in the heart of the city. He underlined that care has been taken to ensure that plants are native to the geographic area and weather conditions and the diversity of plant species ensure that they complement each other's growth.

Birds and other ecosystem linkages will follow suit as the trees grow, he added.



Sacred grove taking shape in a patch in Pune Cantonment Board area. Photo by Himanshu Nitnaware.

Another Pune resident Nayanatai Nargolkar has taken 10 acres of land in Sipna near Pune, with a group of like-minded people, to develop it into a sacred grove. They have put fencing and are monitoring the activities like grazing and creating awareness among villagers, she mentioned.

Experts push for local conservation

For years, studies have highlighted the involvement of community in conservation practices. An old study from 2002, rings true even today as it notes that local participation is essential for conservation efforts, while emphasising that forest genetic resources can be conserved with combining technical expertise and an understanding and consideration of the underlying political and cultural processes.

The founder of the Centre for Ecological Sciences and noted ecologist Madhav Gadgil said that local communities are the most crucial elements in conserving these habitats. Pushing for the involvement of local communities in conservation, he stated that in the villages of Mendha (Lekha) and neighbouring Marda in Gadchiroli district of Maharashtra, the

community opposed the stone quarry and thus protected the natural forest. The locals are the true custodians of these habitats and steps should be taken to empower the local communities in the conservation effort and mere forestation of such unique entities will not suffice the purpose, he added.

Jui Pethe, who has documented over 100 sacred groves in a stretch of about 130 kilometres from Kalsubai to Bhimashankar in Maharashtra, told Mongabay-India that the concept of sacred groves is embedded in the culture of communities as can be observed in Dhangars, a pastoral community. Pethe, a biodiversity expert at The Rural Energy Enterprise Development, added that there is more sentimental connection to the sacred groves from these communities as they interact, seek resources and depend on them for their livelihoods. She mentioned that many practices, considered as superstitions in terms of taboo or restrictions, have a logic of sustainable lifestyle ingrained in them.

“The British era resulted in disrespecting and exploitation of these sacred groves and its perception has changed over time. Over the past 200 years or five generations, we have repeatedly lost the value and importance of these resources. It is important for more scientific research to percolate and increase the meaning of conservation,” she commented.

Yogesh Gokhale, a senior fellow at The Energy and Resources Institute (TERI), New Delhi, stated that private sacred groves are a common feature in coastal parts of Karnataka and Kerala and almost every household has one portion of land dedicated to sacred groves at the family level, left untouched.

With degraded land around sacred groves, these small habitats often serve as ecological resort to the flora, fauna, particularly to the birds and small mammals, Gokhale said.

Creating a sacred grove should have the purpose and perspective of providing ecological refuge to endangered, locally extinct species and help in restoring the local biodiversity to establish the broken ecological link, he added.

“For example, having trees that will support a roosting of many birds, nesting sites for woodpeckers, etc. by creating a safe habitat, may be considered. They can act as live museums of biodiversity in the area,” Gokhale said adding, “These patches can serve as seed banks for local vegetation and natural afforestation along with establishing the important cultural linkage of local people with nature.”

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