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Empower communities to restore forests: Study

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Around 300 million people across the world lived on land where tropical forests could be restored, said a new study. The local communities that lived on this land needed to be empowered for the restoration of tropical forests to mitigate climate change.

Around one billion people or roughly a seventh of the world's population lived within eight kilometres from sites where forest restoration can take place between 2020 and 2050, the study said. The success and viability of restoration projects can, thus, only be ensured through community participation, it pointed out.

Crucial forest-restoration areas in low-income countries were home to 12 per cent of their total population. This can have an impact on carbon sequestration projects, biodiversity conservation and local livelihoods, according to the study. "To realise the full potential of forest restoration, rural populations cannot be avoided," said the study.

The study was a collaboration of experts from the Indian School of Business in India, the University of Manchester and the University of Sheffield in the United Kingdom and Dartmouth College and University of Michigan in the United States. It was published in the journal *Nature Ecology and Evolution* August 24, 2020.

Restricting sparsely inhabited forest landscapes can remove concerns of displacing or marginalising local populations. This, however, can also limit global restoration in three ways, according to the study:

- Remote restoration regions — with one person per square km or less within a 500 km radius — represented only 11 per cent of global forest-restoration opportunity areas
- Because remote forest restoration was possible only in areas far from human settlements, fewer people can enjoy local benefits from remote restoration
- Pursuing only remote forest restoration will not contribute as meaningfully to biodiversity conservation

The study analysed 22 countries with strong legal frameworks for community ownership of forested lands that were also home to two-thirds of the total number of probable forest restoration sites and 70 per cent of the people living near them.

Forest restoration work

One good example of the opportunity for forest restoration was India, where local communities were empowered under the community forest resource rights provision under the Forest Rights Act (FRA), 2006.

Gujarat and Maharashtra did considerable work in this regard, according to the authors of the study. Other forest-rich states — Chhattisgarh, Jharkhand and Odisha — with a

significant proportion of the population that depended on forest produce followed suit on community rights programmes over forests in the past two years.

Less than three per cent of potential areas for community rights over forest in India, however, were covered under FRA provisions, showing a lot of work still needed to be done, the study pointed out.

There were significant forest restoration and community participation opportunities in Brazil, Indonesia and several parts of Africa that can lead to carbon removal from the atmosphere, according to the study.

Enabling communities

This removal will not just mitigate the impacts of greenhouse gas emissions that led to the climate change crisis, but also support local livelihoods, the study said. "Enabling communities to design forest restoration by extending rights to manage forest areas promotes more inclusive environmental governance, said James Erbaugh, the lead author of the study, based out of Dartmouth College.

"There are countless examples of how conservation projects — though often well intentioned — excluded and disenfranchised indigenous people and local communities," he added.

Such initiatives can go a long way in helping countries achieve the target of restoring 350 million hectares of forests by 2030, set under the New York Declaration on Forests (NYDF) in 2014 by the United Nations Climate Summit.

The NYDF was a voluntary and non-binding international declaration to take action to halt global deforestation. It had over 200 endorsers, including national governments, sub-national governments, multi-national corporations, groups representing indigenous communities and non-profits.

"We highlight the critical need for close ties between researchers, decision makers and local communities to secure greater well-being for people and ecosystems," said Arun Aggarwal, a co-author of the study and professor of sustainability at the University of Michigan. "Those working on forests — whether government agencies or researchers — forget far too often the necessity of working with people, not against them," he added.

The restoration of forests — wherever it is done — must also follow scientific methods and not be done in a quick-fix way. Secondary forests could be restored to primary forests that are scientifically better for biodiversity and water conservation.

"This could be done using the model of succession. You cannot plant sensitive species of an ecosystem in open areas as they will be scorched in sunlight," said MD Subhash Chandran, a senior scientist with the Centre for Ecological Sciences at the Indian Institute of Science, Bengaluru.

"There are certain transitional species that need to be planted first. Ecosystem needs should then be allowed to grow around them, with sensitive species introduced at a later stage," he added.

There were several problems with tree plantation exercises in India, including those by forest departments. "They (forest departments) generally used tree species that give good results, which in this case, meant survival," said Chandran.

So, there were very few choices of tree species that were fire-resistant and consumed less water. "This criterion for the choice of tree species to be planted needs to change if we have to restore secondary forests and plantations back to primary forests," Chandran added.

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