Tropical forests regrow surprisingly fast
9 December 2021

But we also notice that tropical forests have the potential to regrow naturally in already deforested areas on abandoned lands."

"These regrowing forests cover vast areas, and can contribute to local and global targets for ecosystem restoration. They provide global benefits for climate change mitigation and adaptation and biodiversity conservation, and many other services for local people, such as water, fuel, wood, and non-timber forest products."

Forest traits

Regrowing, so-called secondary forests recover surprisingly fast. According to Poorter, this indicates that there are large short-term benefits of natural tropical forest restoration. Yet, the speed of recovery differs strongly across forest attributes: Recovery to 90% of old-growth forest values is fastest for soil fertility (less than 10 years) and for plant functioning (less than 25 years), intermediate for structure and species diversity (25-60 years), and slowest for above-ground biomass and species composition (more than 120 years)."

Secondary tropical forests

Secondary forests are forests that regrow naturally after nearly complete removal of forest cover for anthropogenic use (usually for shifting cultivation, conventional cropping or cattle ranching). Currently over half of the world's tropical forests are not old-growth, but naturally regenerating forests of which...
a large part is secondary forest. In tropical Latin America, secondary forests cover as much as 28% of the land area.

**International goals**

According to last author Bruno Hérault, from CIRAD, Ivory Coast, the local and global importance of secondary forests and their rapid recovery after 20 years show why the authors encourage adoption of (assisted) natural regeneration as a low-cost, nature-based solution to meet the international goals for ecosystem restoration, climate change mitigation and biodiversity restoration.

Hérault concludes, "Yet, there is no silver bullet to restoration, and a mix of natural and active restoration may be needed. There is a whole gradient of solutions, ranging from natural regeneration, assisted natural regeneration, agroforestry, to plantations. The optimal solution depends on local site conditions, the local people, and their needs. By using such a mix of approaches we can create more natural, biodiverse, and resilient landscapes."


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Provided by Wageningen University