

Planted forests in Vietnam enhance ecosystem goods and services

10 August 2020



Bouncing back from the impact of war involves not only rethinking and reshaping policies to repair social, cultural and economic infrastructures, but requires concerted efforts to restore damaged biodiversity and degraded landscapes.

During the Vietnam War (1955-1975), which is known in Vietnam as the American War, vast tracts of land were decimated by massive quantities of chemical defoliants that were sprayed on forests and fields during U.S. military operations.

Reforestation initiatives began in the 1980s. By 2000, 2 million hectares of forest had been planted. These efforts increased over the years and the country now has 4.2 million hectares of planted forests, equal to 26 percent of the total forested area of 14.6 million hectares.

Some two thirds of these planted forests, mainly consisting of Acacia and Eucalyptus trees, are managed by smallholders.

These efforts, primarily designed to meet demand for industrial-use timber and boost incomes in rural areas, places Vietnam among other Asian countries that have increased forest cover and enhanced many forest ecological functions, according to the authors of a new research paper published in *Forests* journal.

“While there is good understanding of the extent of these new forests, there has been little investigation of the ecosystem services they provide,” said Kiran Paudyal, lead author on the paper. “Ecosystem services are the direct and indirect contributions of ecosystems to human well-being. These include provisioning, regulating and habitat services.”

PLANTING DYNAMICS

Scientists with the Center for International Forestry Research (CIFOR), Australia’s University of Melbourne (UoM) and the Vietnam Academy of Forest Sciences (VAFS) measured the ecosystem

services provided by Vietnam's planted forests using a framework developed by CIFOR and UoM researchers.

Through the research – which is part of a broader multi-disciplinary project in Lao PDR and Vietnam – they aimed to learn more about landscape management amid increasing population-related pressures on forests.

The scientists assessed land-use change between 2005 and 2015 in Quang-Tri and Thien-Hue provinces in central Vietnam, where national and provincial governments have been supporting forest restoration for watershed protection and timber production since the 1980s.

“Through satellite data, we learned that land cover change — primarily conversion of non-forest land to planted forest — significantly improved the capacity of the landscape to provide ecosystem services,” said Himlal Baral, senior scientist at CIFOR and co-author of the paper.

“Although the expansion of planted forests and the increased area of poor forest on non-forest land reduced the capacity of the landscape to supply fresh water, ecological beneficiaries were sediment retention, habitat provision and carbon stocks, all of which increased.”

By assessing the benefits of ecosystem services provided by planted forests, scientists can help shape strategies for effective land management to inform policymakers, forest managers and other stakeholders.

“Our project team developed policy options to improve sustainability outcomes from plantations,” said Rod Keenan, a professor with UoM and project leader for the study.

“Findings indicated that, with the right investors and the right enabling policies, plantations can provide long-term benefits to communities and the environment while supporting local industry development.”

BIG PICTURE

Globally, natural forests are decreasing while planted forests are expanding. Planted forest area increased by about 12.3 million hectares between 2010 and 2015 – the current area of planted forests is about 7 percent of forest cover worldwide.

Converting intact or managed natural forests to plantations results in increased timber production, but a loss of many other ecosystem services because planted forests cannot replicate the many of the functions and benefits of natural forests — therefore conversion should be avoided, Baral said.

“However, through careful landscape planning and investing in plantations on degraded or less productive agricultural land, planted forests can enhance carbon sinks, improve the water cycle, protect the soil, improve habitat for many wildlife species and provide benefits to communities” Baral said. “This can be done using a ‘4R’ approach: planting the right trees in the right places for the right purpose and respecting local people’s rights.”

Maintaining and improving natural forests is also vital.

“In this study, we found that the area of rich natural forest areas decreased by 20 percent over the 10-year period,” Keenan said. “This resulted in a decline in services such as carbon stocks and biodiversity habitat. Other processes are degrading natural forests in these landscapes, leading to an overall loss of important values. More effective, integrated policy approaches are needed to restore forests and increase ecosystem services across the landscape.”

Intensively managed, planted forests must be considered as part of such long-term sustainable forest landscape restoration strategies as the Bonn Challenge, the scientists said. The Bonn Challenge is a commitment to restore 150 million hectares of the world's deforested and degraded land by 2020, and 350 million hectares by 2030 agreed during the 2014 U.N. Climate talks as part of the New York Declaration on Forests.

Planted forests can take economic pressure off of natural forests, provide livelihoods and support local industry development, Keenan said.

"The expansion of planted forests is considered a great contribution to enhancing the Vietnam's forest cover, ecosystem services and poverty reduction," said Vu Tan Phuong, a deputy director at VAFS.

"Vietnam is now aiming to improve the quality of planted forests and to sustainably manage planted forests to secure timber supply for domestic wood processing sector and environmental protection," Phuong said.

Other countries are implementing tree planting, planted forests and ecosystem restoration as part of nature-based solutions to reduce greenhouse gas emissions and the future impacts of climate change.

"By working with local communities and integrating planted forests into the landscape, we can develop programs that will provide many direct and indirect benefits," Baral said.

Source: <https://forestsnews.cifor.org/66784/planted-forests-in-vietnam-enhance-ecosystem-goods-and-services?fnl=en>