New research shows community forest management reduces both deforestation and poverty

May 8 2019, by Joe Paxton

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Giving local communities in Nepal the opportunity to manage their forests has simultaneously reduced deforestation and poverty in the region, new research has shown.

In the largest study of its kind, an international team of experts led by The University of Manchester has found that community-forest management led to a 37% relative reduction in deforestation and a 4.3% relative reduction in poverty.

This is particularly significant in a low income country, where more than a third of the country's forests are managed by a quarter of the country's population.

The findings, published in *Nature Sustainability*, is the largest study on community-based forest management. It estimates the impacts of more than 18,000 community forest initiatives across Nepal, where community-forest management has actively been promoted for several decades.

Forests are critical to sustainable development: they regulate the world's climate, sequester carbon from the atmosphere, harbour biodiversity, and contribute to the local livelihoods of millions of people worldwide.

Over the past four decades, governments and international organizations have actively promoted community-based forest initiatives as a way to merge natural resource conservation with human development. Local communities now legally manage approximately 13% of the world's forests.

But evidence of the impact of community-based forest management has been largely limited to small-scale evaluations, or narrowly focused studies until now.

Lead author Dr. Johan Oldekop, The University of Manchester said, "Our study demonstrates that community forest management has achieved a clear win-win for people and the environment across an entire country. Nepal proves that with secure rights to land, local communities

can conserve resources and prevent environmental degradation."

Reductions in deforestation did not occur at a cost to local wellbeing. The study found that areas with community forest management were 51% more likely to witness simultaneous reductions in deforestation and poverty.

Co-author Professor Mark Whittingham, Newcastle University said, "It's not easy to balance sustainable management of the environment against the needs, or wants, of mankind. These findings highlight one positive solution."

The research, authored by an interdisciplinary team of ecologists, economists and political scientists, overcomes previous data limitations by using rigorous techniques to analyse publically available data on forests, people, and institutions. The team combined satellite image-based estimates of deforestation with data from Nepal's national census of 1.36 million households, and information on more than 18,000 community forests.

Co-author author Professor Arun Agrawal, The University of Michigan said, "Identifying a mechanism—community forestry—that can credibly reduce carbon emissions at the same time as improving wellbeing of the poor is an important step forward in global efforts to combat climate change and protect the vulnerable."

Mexico, Madagascar, and Tanzania have similar community-forest management programmes, with Indonesia and others developing them.

Co-author Katharine Sims, Amherst College, said, "We sought to learn from Nepal's experience implementing an innovative conservation policy. We hope our methods will be useful for future study of community forestry in different contexts and compared to alternate

governance structures."

If other areas are able to replicate Nepal's success, community-forest management could play an even greater role in achieving multiple Sustainable Development Goals.

More information: *Nature Sustainability* (2019). doi.org/10.1038/s41893-019-0277-3

Provided by University of Manchester