

## Local government engagement, decentralized policies can help reduce deforestation

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Cows grazing in a forested area near Samaipata, Bolivia. Credit: Daniel Beams

Empowering local governments with forestry decisions can help combat deforestation, but is most effective when local users are actively engaging with their representatives, according to a new University of Colorado Boulder-led study.

Using a combination of survey data, census info and satellite images dating back to 2000, the researchers meticulously compared deforestation results from Bolivia and Peru, two countries with differing approaches to forest governance.



The study, which was published today in the journal *Proceedings of the National Academy of Sciences*, finds that a local, ground-up approach can yield better results than national, top-down policy so long as local forest users are working closely with their officials.

Such interactions might include a one-on-one meeting with a town mayor or attending an open planning forum, the two methods that the researchers found to be the most common forms of interactions between <u>community members</u> and local government officials.

"Natural resource use is, by nature, local in character. You need buy-in from local politicians in order to make forest governance work," said Krister Andersson, director of CU Boulder's Center for the Governance of Natural Resources and lead author of the new study.

Deforestation remains a major global environmental challenge, with the United Nations estimating that 18 million acres of trees are lost each year worldwide. Forests are complex systems that have historically proven difficult to govern due to contradictory user groups and longterm recovery trends that tend to outlast political regimes.

Since the 1990s, several countries (with encouragement from international aid organizations) have shifted from a national, top-down forestry policy to a more decentralized approach in which more decisionmaking power is given to local municipalities. To date, however, there have been few comprehensive studies of the overall effectiveness of this approach.

"For every theoretical advantage of decentralization, you can come up with a disadvantage. The results are often so conditional that 'it depends' had become the de facto conclusion on this subject," said Andersson, who is also a professor in CU Boulder's Department of Political Science and a research associate in the Institute of Behavioral Science.



Andersson and his co-authors aimed to provide more conclusive data by comparing 100 municipalities apiece from Bolivia and Peru, two countries with similar forestry and culture whose policies had diverged sharply after 1996. Bolivia embraced decentralization reforms while Peru did not.

"Bolivia received more political commitments to decentralize governance, made it part of election debates, tied reform to other issues like education and health and thus got a mandate from voters," said Andersson. "We find here that that has led to a substantive change in how forests are governed in the two countries. Peru, on the other hand, excluded forestry from its local government mandate and it seems to have backfired."

The result of the long-term study was a unique, longitudinal data set that examined policy implementation at a grassroots level across multiple decades.

"We asked how community members were interacting with their municipal government authorities in these areas," said Andersson. "Our idea is to continue to monitor these interactions over time so that we can develop new and better knowledge about the factors that drive local decision makers to care about the environment."

The researchers note that while deforestation is far from eliminated in either country, the results suggest that Bolivia's forest loss would have been far worse in recent years had it not been for the country's decentralized approach forest governance.

"The lesson is that all levels of government - municipal, state and federal - have a role to play when it comes to addressing a complex problem like deforestation," said Andersson. "The mandate of local governments to work on forestry issues really does seem to matter."



**More information:** Decentralization can help reduce deforestation when user groups engage with local government, *PNAS*, <u>www.pnas.org/cgi/doi/10.1073/pnas.1610650114</u>

## Provided by University of Colorado at Boulder

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