



Environment for Development

RESEARCH BRIEF

August 2024

China's Natural Forest Protection Program may have a better effect on forests held by village households than state-owned forests

Based on EFD Discussion Paper MS-329 *A regression discontinuity assessment of the differential impacts of China's Natural Forest Protection Program across forestland property right regimes* authored by Qi Liu, Shilei Liu, Zhaoyang Liu, Jintao Xu and Andreas Kontoleon.

China's Natural Forest Protection Program (NFPP) is the country's flagship program for forest conservation and restoration. The program primarily targets state-owned forestland, which is mostly managed by state-owned enterprises (SOEs), but has also enrolled large areas of semi-private forestland held by village households. We performed statistical analyses to assess, i) the overall impact of the NFPP on forest cover, and ii) whether such impact differs across the two types of property right regimes.

Key Messages

- Overall, the NFPP has a moderately positive effect on forest cover in the program areas.
- The NFPP has a greater positive effect on forests held by village households than on state-owned forests.
- The NFPP might be able to achieve enhanced performance by (re)directing larger proportions of the program's funds and forest restoration activities towards village forest managers.
- Our findings support the (heavily debated) proposed reform to assign more substantial rights of China's state forests to individual workers of SOEs or even to village households who did not have formal rights to state forests.

Background and Methodology

China's Natural Forest Protection Program (NFPP), launched at the turn of the century and currently ongoing, is a large-scale forest conservation and

restoration program that restricts logging and finances afforestation in more than half of China's provinces. The program's total spending has amounted to roughly 0.4% of China's GDP in 2020, and has

been suspected of being responsible for a dramatic increase of China's imports of forest products which might have displaced deforestation to China's abroad.

The NFPP was initially intended for state-owned natural forests, which are mostly managed by state-owned forest enterprises (SOFEs). However, the program has also enrolled large areas of semi-private forestland held by village households, who tend to be under-compensated for their losses associated with the program's logging restrictions, and receive less financial and administrative support for afforestation.

This study seeks to assess statistically the overall impact of the NFPP on forest cover in the program areas, and whether such impact differs for forestland held by SOFEs and village households. We compiled a rich panel dataset at the forestland plot level concerning four Chinese provinces, and adopted a spatial regression discontinuity design (RDD) which exploits the spatial borders of the NFPP to better identify the impact caused by the program *per se*, rather than by other possible confounding factors.

Results

We find that, overall, the NFPP has a moderately positive effect on forest cover in the program areas: forest cover just inside the NFPP borders is about 6% higher on average (in relative terms) than that just outside. In addition, the program has a greater positive effect on forests held by village households, which is up to 82% higher than that on state-owned forests and has stronger statistical significance.

Policy Implications

Our results find that SOFEs are outperformed by village households in the NFPP, despite that village households receive less resources and support from the program. This suggests that the NFPP might be able to achieve enhanced performance by (re)directing larger proportions of the program's funds and forest restoration activities towards village forest managers.

Moreover, our findings support the (heavily debated) proposed reform to assign more substantial rights of China's state forests to individual workers of SOFEs or even to village households who did not have formal rights to state forests, because the state property regime appears to underperform the semi-private regime, at least in the NFPP.

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Chile, China, Colombia, Ethiopia, Ghana, India, Kenya, Nigeria, South Africa, Sweden (University of Gothenburg), Tanzania, Vietnam, Uganda, and the US (Resources for the Future). Financial support is provided by the Swedish International Development Cooperation Agency (Sida).