

► Project *brief*

Thünen Institute of International Forestry and Forest Economics

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Deforestation drivers in the tropics, do jurisdictional scale and context matter?

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- **Population pressure and the suitability of the land for crop production are recurrently identified drivers of deforestation.**
- **The harmonization of international environmental policies with demographic strategies appears to be even more decisive than considering agricultural measures.**
- **Deforestation forces occur independently of political boundaries, indicating the need to adjust jurisdictional and landscape approaches.**
- **The implementation of policy instruments such as REDD+ requires flexibility to be modified and adapted to specific national, regional or local conditions.**

Background, method and aims

The study focuses on three countries in Africa (Zambia), America (Ecuador) and Asia (Philippines), which present very different tropical deforestation contexts. The research makes use of spatial econometrics and a multilevel approach to conduct a set of multiple linear regressions comprising more than 3,000 units at three different subnational levels. With this, it is analyzed whether well-studied drivers of tropical deforestation behave similarly across countries and nested subnational jurisdictions. This information has still been unclear, but yet crucial for efficient policy design and implementation of international land use strategies such as REDD+.

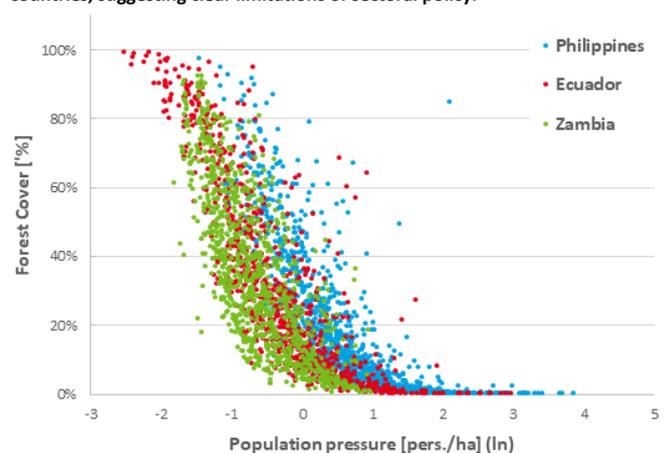
Key findings

- Recurrently identified drivers across countries and administrative levels could be confirmed, namely population pressure (with a strikingly strong influence) and the suitability of land for crop production.
- Scale and context dependencies were observed, such as an increased heterogeneity at local scopes, with a larger and more diverse number of significant determinants of forest cover, including biophysical and economic factors.
- Stronger spatial interactions at smaller levels were detected, providing empirical evidence that certain deforestation forces occur independently of the official political boundaries (leakage effects).

Conclusions

International and national policy makers should focus on addressing demographic/infrastructure development specially and

The impacts of demography on forest cover were strikingly strong across countries, suggesting clear limitations of sectoral policy.



Source: Ferrer Velasco et al. 2020.

overcoming conflicts with agricultural purposes, while designing the framing conditions for efficient land use planning and policies. Jurisdictional approaches have to take care of undesired leakage effects from neighbouring jurisdictions. This can only be effective if large scale REDD+ policy leaves enough flexibility for adaptation of its frameworks to the local socioecological conditions. Some promising examples could be decentralization efforts such as landscape approaches or participatory and community-based forest management, if broader political commitment is present.

Further Information

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