Where do state and local governments have authority to reduce deforestation?

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1) Reducing emissions from tropical deforestation and forest degradation (REDD+) is critical to preventing more than 2 °C of global warming. Actions to reduce emissions from deforestation within tropical countries can take place at three scales: national; site-level; and intermediately, state and local “sub-national jurisdictions.”

2) International initiatives for REDD+ have increasingly emphasized this intermediate jurisdictional scale. However, unlike the national and site-level scales, there has been no systematic investigation of where jurisdictional REDD+ investments offer the greatest return.

3) Our study identifies which states and localities within 30 large tropical countries offer the greatest potential for jurisdictional-scale REDD+ initiatives. We first construct a novel data set on where state and local governments possess the authority to make forest-related decisions independently of national governments, based on five measures of general authority (elected independently; raise tax revenue; set a budget; maintain police; maintain a court system) and ten measures of forest-related authority (own land or forests; issue permits for agriculture; issue permits for mining; issue permits for hydrocarbon exploitation; issue permits for logging; issue permits for infrastructure; declare protected areas; recognize indigenous territories or affairs; conduct official spatial planning; conduct official development planning). We then intersect states that score highly in authority with states that are expected to produce high levels of future emissions from tropical deforestation (derived from Busch et al, Nature Climate Change, in press).

4) From a scholarly perspective, our paper takes a systematic approach to quantifying variation across countries in “multi-level governance and forests” (e.g. di Gregorio et al, Global Environmental Change, 2019). As a practical application, our results can help institutions concerned with jurisdictional-scale REDD+ initiatives (e.g. the Forest Carbon Partnership Facility; Germany’s REDD Early Movers program; the Governors’ Climate and Forest Task Force; the Jurisdictional and Nested REDD+ Framework) prioritize international funding across regions to maximize return on investment in reducing emissions from deforestation.

5) As an analysis of “the implementation of forest governance across scale and space” the study is ideally suited for the meeting theme on “Forest Policy Mixes: Trade-Offs and Synergies Between Forest Management Institutions.”