

Equitable approaches to mitigation in the land sector

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It is well known that land-use change is a major driver of global warming, contributing approximately 10% of annual greenhouse-gas emissions – largely from deforestation in tropical regions. Avoiding these emissions by reducing forest loss and conserving natural forests has become a key driver for climate-motivated forest policies under REDD+. The advent of REDD+ as a climate solution has brought with it a wealth of social issues regarding indigenous peoples, land-tenure, knowledge asymmetries, community based forestry, with justice and equity related aspects of REDD+ now enjoying a well-established research agenda (Okereke & Dooley, 2010; Schroeder & McDermott, 2014).

More recently, the role of terrestrial sinks in removing carbon from the atmosphere to create 'negative emissions' has captured attention in the policy and scientific debate, due to the inclusion of carbon-dioxide removal strategies in integrated assessment models used to determine future long-term mitigation scenarios (Fuss et al., 2014). These carbon-dioxide removal strategies consist largely of afforestation, where CO₂ removal occurs through the creation of a new terrestrial carbon sink; and large-scale bioenergy, combined with carbon capture and storage to create a geological carbon sink. The scale of inclusion of negative emissions in modelled mitigation scenarios implicates large tracts of land - ranging from one-third to double the world's arable cropping area (Kantha & Dooley, 2016) - raising questions around both the social and ecological impacts of such extensive land use, and the distributional impacts given that the bio-resource potential is located mostly in the developing world.

From the context of climate justice and equity, the prevalence of land-based negative emissions as a mitigation strategy raises two strands of research questions: the first is related to rights – human rights and the right to development; and the second question is related to how climate mitigation strategies inadvertently allocate risk and responsibility.

RQ.1. What are the potential impacts from land-based mitigation strategies for negative emissions on human rights (including the rights of indigenous peoples), and the right to development?

- Mapping the impacts of land-based negative emissions options on the SDGs, at local, national and global scales (focusing on food, land and biodiversity risks and co-benefits).
- Defining social and ecological boundaries for biomass production and supply.
- Assessing how and to what extent strengthening collective and customary rights to land contributes to climate mitigation.

RQ.2. Whose interests does reliance on negative emissions in climate mitigation policy serve, and whose voices are excluded?

- Research is needed to reveal how the normative assumptions that are obscured in model-based knowledge reflects particular interests and 'sociotechnical imaginaries' (Jasanoff & Kim, 2015), that fail to challenge the dominant economic and policy paradigm, while setting trajectories for future development and mitigation pathways.
- An equity perspective allows us to examine the distributional outcomes of technocratic policies, and hence enables the inclusion of differential impacts as a consideration in policy effectiveness, balancing concerns of cost optimisation with considerations of impacts on the most vulnerable.

References

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