

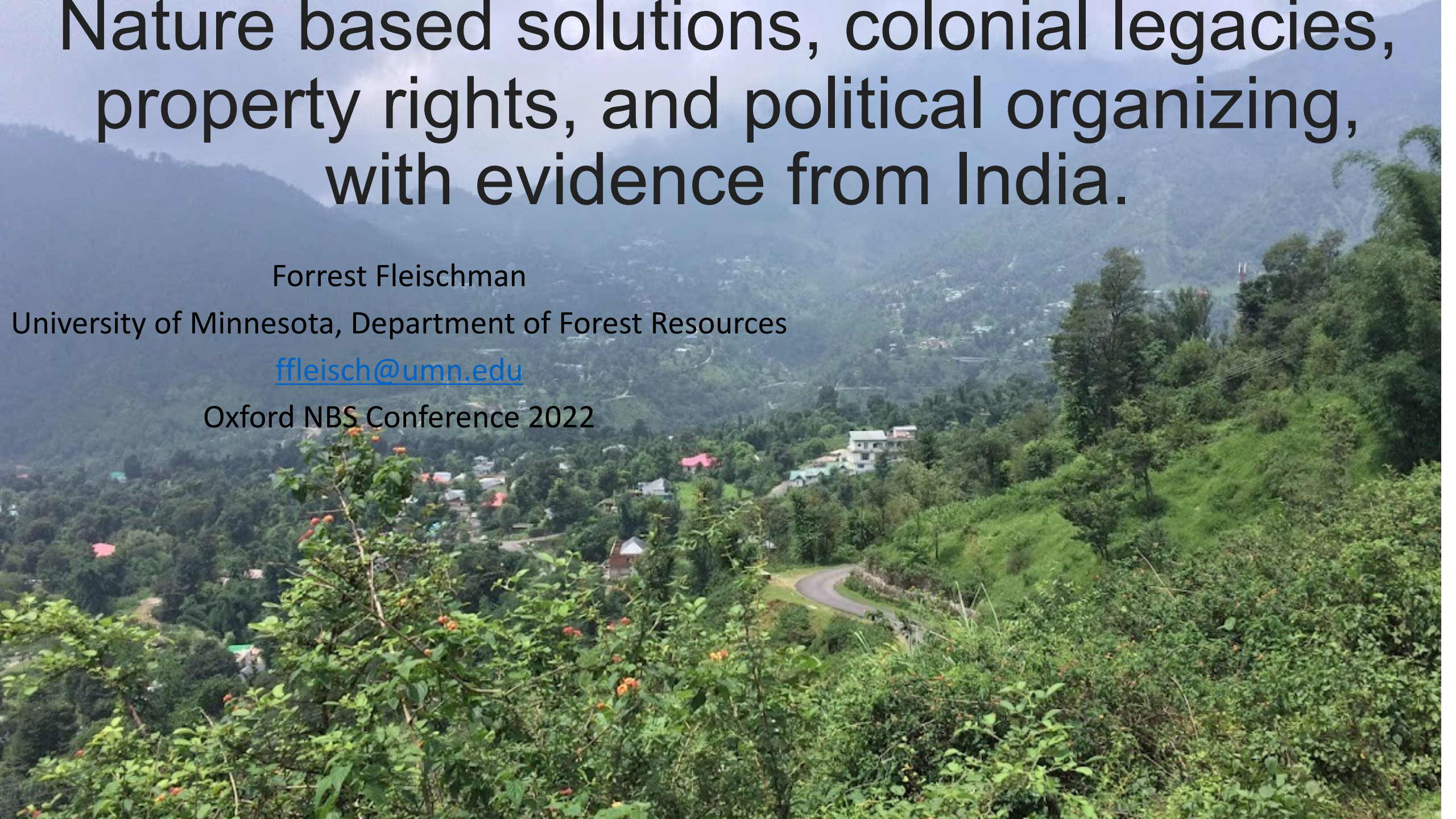
Nature based solutions, colonial legacies, property rights, and political organizing, with evidence from India.

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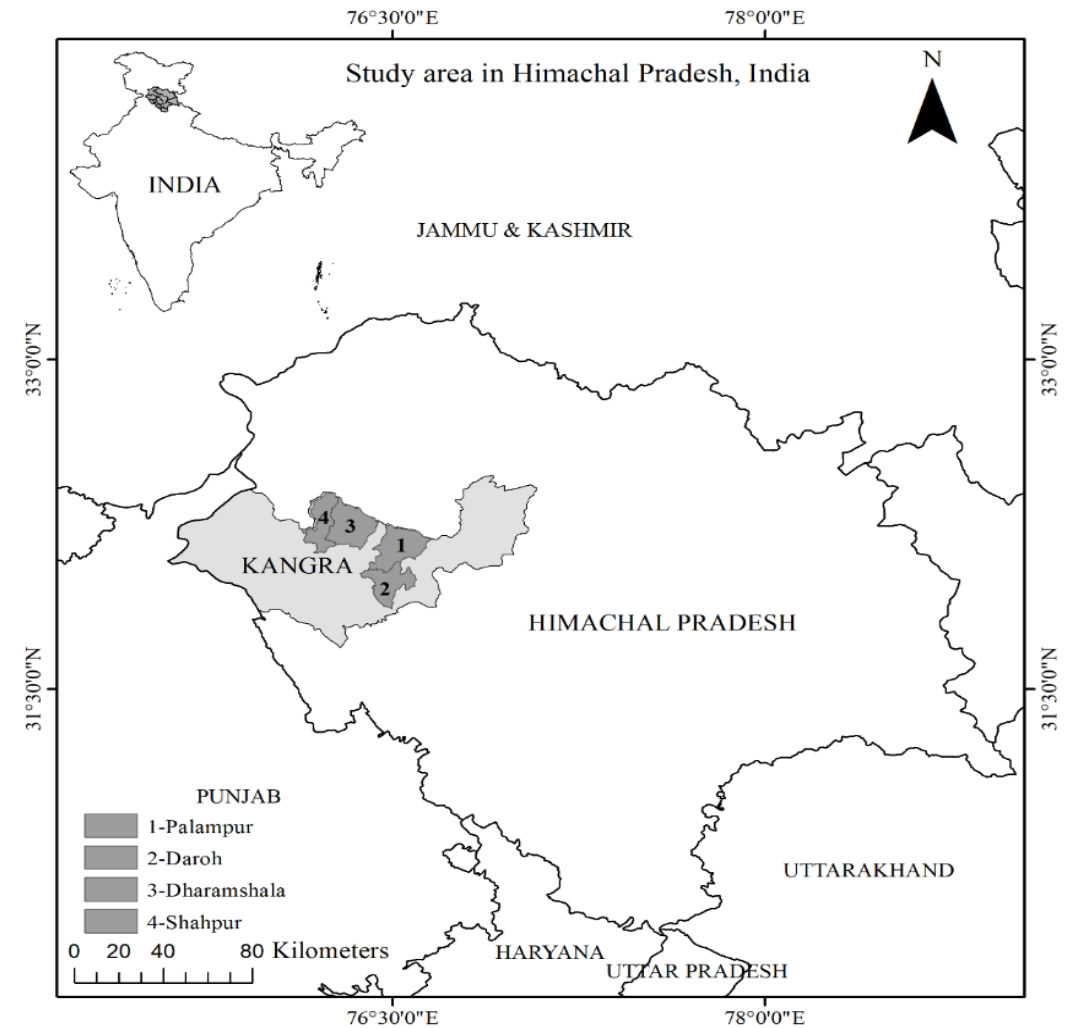
Oxford NBS Conference 2022



Main messages from this talk

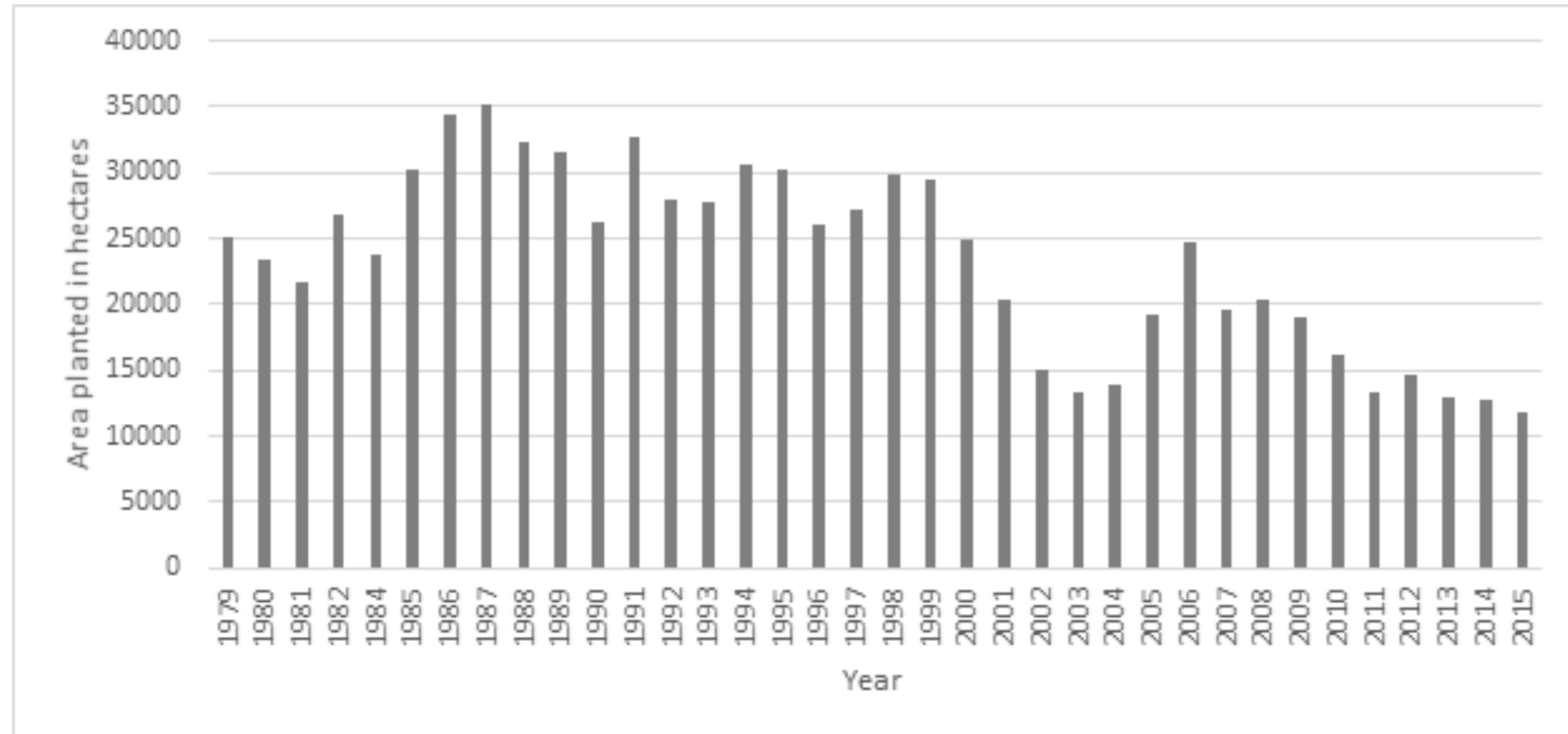
1. Potential for failure from reliance on existing – deeply flawed – institutions
 - Example from India demonstrates why Indian govt. is unlikely to deliver on NBS potential without significant reform
 - We can't wait for perfect institutions but we can contribute to building better ones
2. Potential success requires re-thinking what policy tools are relevant
 - Examples from India & Nepal show that forest re-growth is driven by factors other than forest policy.
 - Democratization of decision-making
 - Raising living standard
 - Doing good is hard

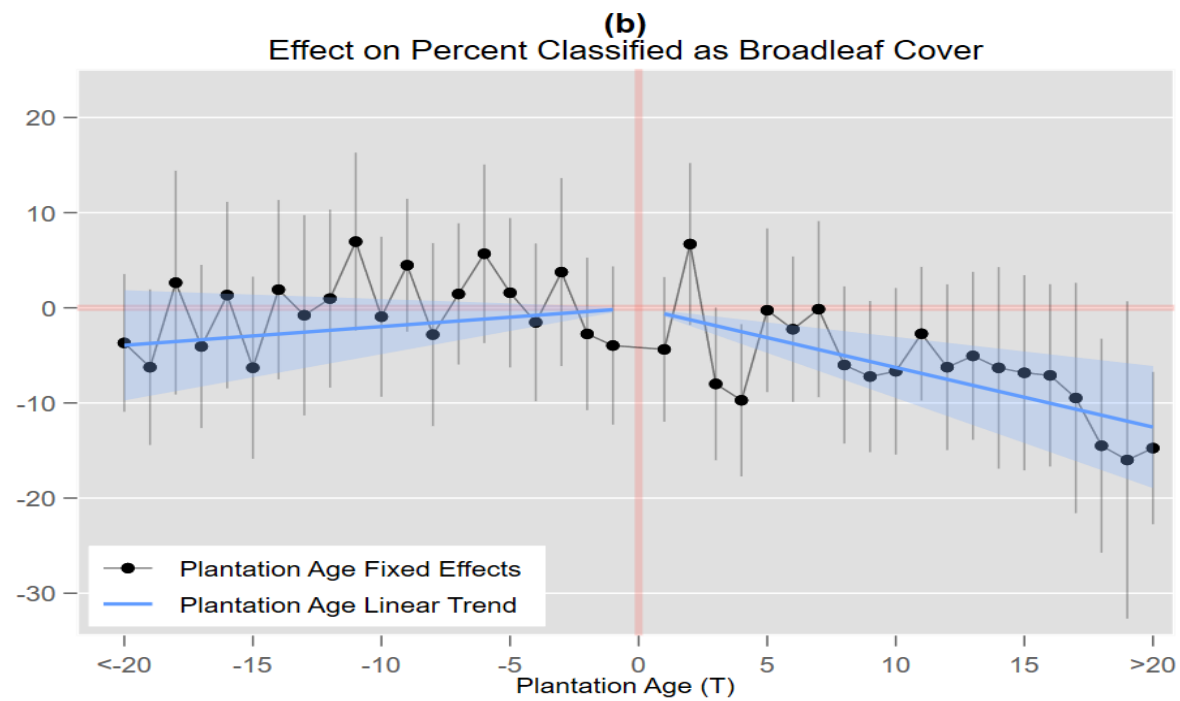
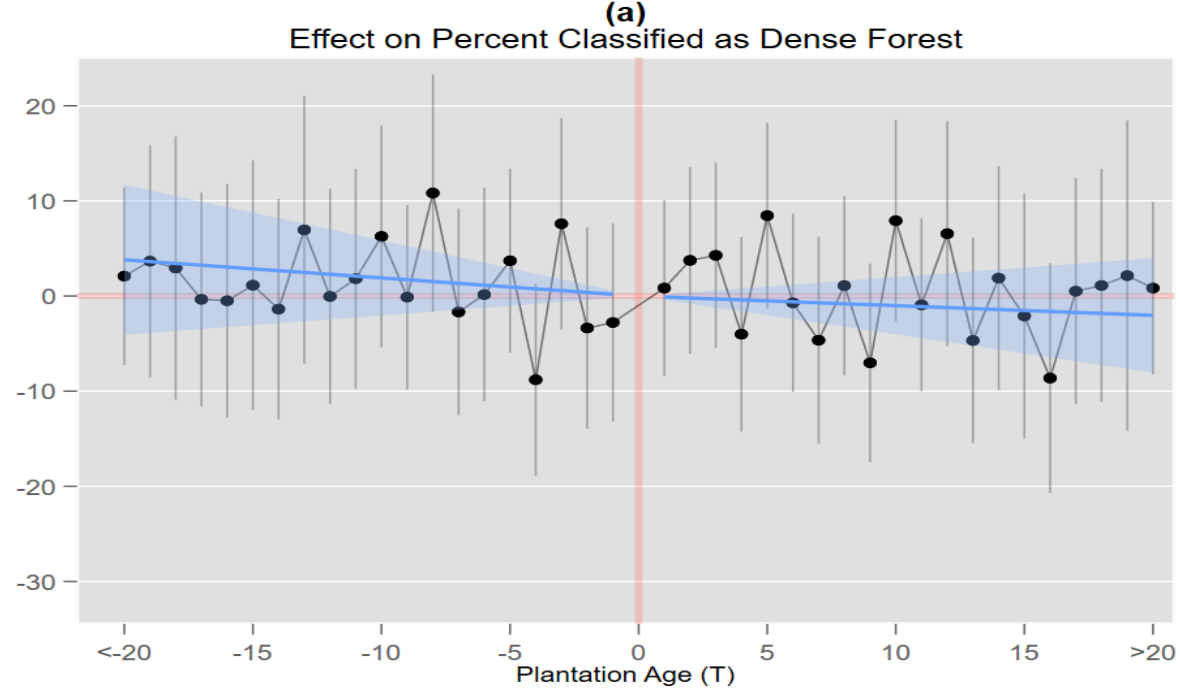
NBS fails in the Indian Himalaya



Afforestation in Himachal Pradesh

- Afforestation activity in Himachal Pradesh peaked during the 1980s-1990s
- Focus was on improving forest cover for environmental & social goals
- We can evaluate outcomes after many years of potential tree growth
- (Fleischman et al in prep)



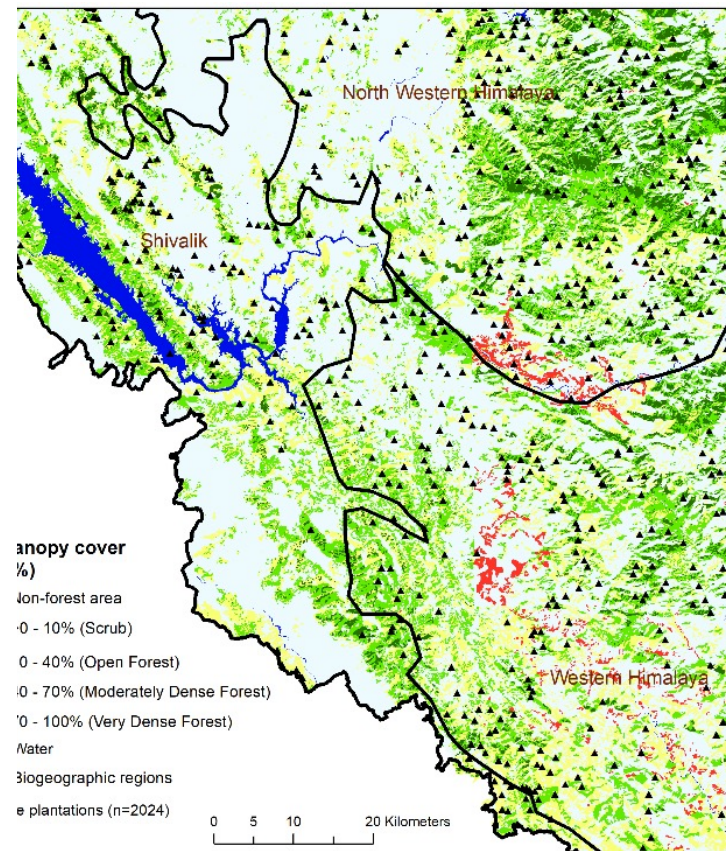
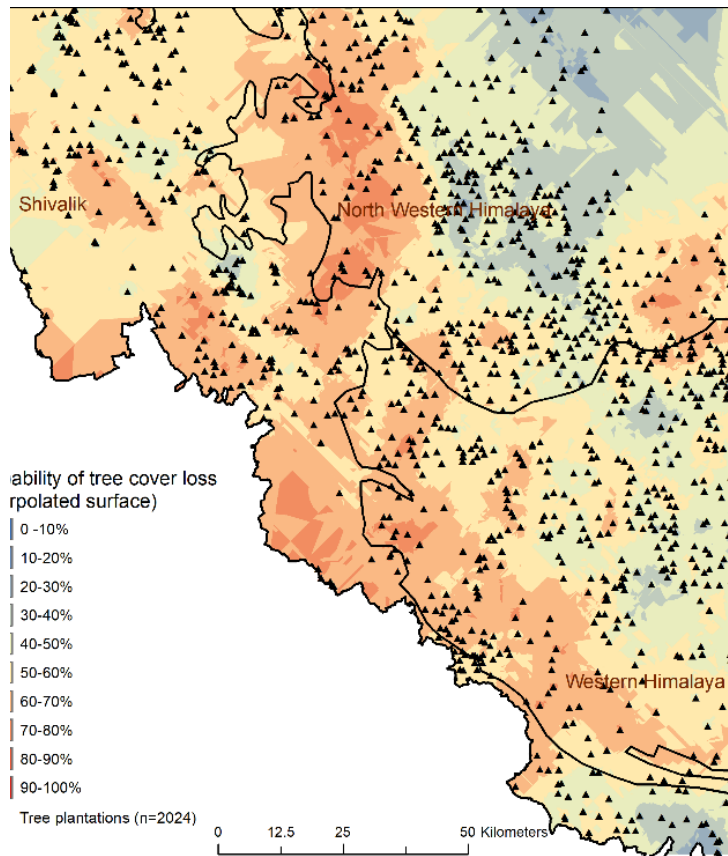


Planting trees does not have + impacts

Coleman, et al (2021). Limited effects of tree planting on forest canopy cover and rural livelihoods in Northern India. *Nature Sustainability*. doi:10.1038/s41893-021-00761-z



Continued emphasis on ineffective strategies



- Exact locations of all 2016-2019 plantations
- Most plantations are targeted towards forests that are already dense (38%) or non forest areas (48%)
- 60% of spending in areas where probability of experience tree cover loss is greater than 50%
- Continued heavy focus on commercial timber sp
- Almost no community-managed forests
- Rana, Pushpendra, Forrest Fleischman, Vijay Ramprasad, and Kangjae Lee. 2022. "Predicting wasteful spending in tree planting programs in Indian Himalaya." *World Development* 154:105864. doi: <https://doi.org/10.1016/j.worlddev.2022.105864>.

Impacts on people mixed

- Overall, people in study area are not dependent on forests for much of their livelihood.
 - Changes in forests thus have limited impacts
 - Strong local preference for broad leaved trees (good for fuelwood & fodder) vs govt. preference for planting conifers (grow faster, good for timber production)
- Some people experience disproportionate negative impacts
 - Migratory herders lose access to pastures, migration routes
 - Anecdotal reports of worse impacts elsewhere
 - See Valencia 2022
- Ramprasad, V., Joglekar, A., & Fleischman, F. (2020). Plantations and pastoralists: afforestation activities make pastoralists in the Indian Himalaya vulnerable. *Ecology and Society*, 25(4). doi:10.5751/ES-11810-250401



Image captured by Vijay Ramprasad from film "Gaddis of Himachal Pradesh)



Why do we get these results?

- Indian forest departments are colonial enterprises, originally designed to extract profits out of Indian forests for the benefit of the UK
 - Forest laws dating to the colonial era succeeded in alienating local people from forests
 - State ownership over forests is contested, local informal practices are often illegal
 - Attempts to reform have been hampered by complexity, political powers entrenched in existing systems
 - Political reform and behavior change are very hard

What might improve success?

- win-win outcomes (improvements in forest cover & in provision of livelihood benefits) are associated with:
 - Higher levels of village level collective action (e.g. contributions to traditionally customary labor)
 - *Long-enduring* collective action
 - (see Rana et al. In review, Fischer et al. in prep)
- Agroforestry might be a better target than forestry (Gopalakrishna et al. 2022)
 - Likely more human co-benefits, but tradeoff with biodiversity/carbon



Policies in South Asia that work

- In Kerala, widespread adoption of agroforestry was facilitated by *land reforms* that gave users rights to plant trees (see Kumar & Nair)
- In Madhya Pradesh, *improved household living standards* in the form of subsidized LPG cookstoves & concrete houses led to forest regrowth (Defries et al 2021)
 - Note tradeoff with climate goals, but huge health benefits
- In Kerala & Nepal, *rural outmigration* led to forest regrowth/adoption of agroforestry & was result of economic opportunity in other countries or distant urban areas (Marquardt & Khatri)

Current policy focus in NBS discourse vs decades of research on forest transitions

NBS discourse

- “Nature” does the work
- Often framed as low-cost or easy
- Plays up cobenefits, ignores tradeoffs
- Mobilizing finance to pay people to store carbon through market structures
- Large-scale government/NGO/donor investments
- Individual projects ignore underlying causes & non-obvious but effective policies

Past & present research

- People do the work
- Complicated institutional changes needed to incentivize forest conservation/regrowth
 - Politics more than money (see Fleischman et al. 2021)
- Tradeoffs are hard & pervasive
- Deforestation is driven by export-oriented agriculture, land tenure insecurity
- Reforestation often driven by commercial opportunities (e.g. increasing value of forest products), rural outmigration, or adoption of collective land tenure