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Trends in research on forestry decentralization policies

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We identify and describe four strands in the literature on forestry decentralization policies: studies that assess impacts of forestry sector decentralization policies on forests and livelihoods; studies that examine whether forestry decentralization empowers public and democratic local institutions; studies focusing on power and the role of elites in forestry decentralization, and; studies that historicize and contextualize forestry decentralization as reflective of broader societal phenomena. We argue that these strands reflect disciplinary differences in values, epistemologies, and methods preferences, and that they individually provide only partial representations of forestry decentralization policies. Accordingly, we conclude that a comprehensive understanding of these policies cannot rest solely on any of these strands, but should be informed by all of them.

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Introduction

Forestry sector decentralization policies are a widespread phenomenon across the Global South [1]. Officially, these policies have been driven by a belief that situating decision making closer to where forest management and use actually occurs — where its direct effects are felt most immediately — and in the hands of representative local authorities, will result in more ecologically and socially sustainable outcomes [2]. These are broadly the same official rationales underlying the support to various community-based forest management approaches.

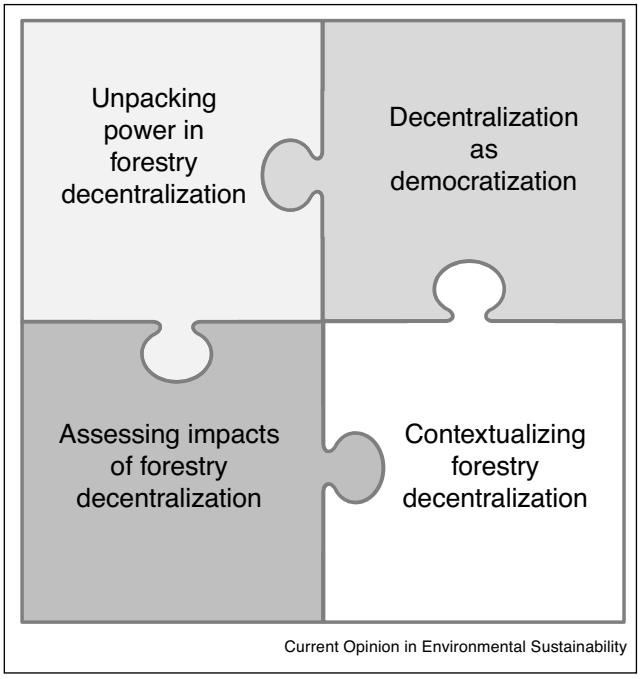
Research on forestry decentralization policies has proliferated and grown in widely different directions through contributions from different disciplines. Therefore, in this paper, we attempt a synthesis of recent contributions to this literature aiming to identify strands within it and illustrate differences, overlaps, and gaps among these. We believe this will assist scholars in situating their own work within this burgeoning literature. We also believe it is relevant to ongoing efforts at forestry decentralization as well as to more recent carbon forestry initiatives that in different ways articulate with and (re)shape existing forestry decentralization policies [3–5].

Our review focuses on research that examines forestry decentralization processes by which decision-making powers over forests are handed down, or devolved, to lower levels in a jurisdictional hierarchy of the state [6]. This implies transfers to subnational bodies, such as provinces, districts, wards, villages, or user groups. In the following we present and discuss four strands within the literature assess how decentralization impacts forests and livelihoods; studies that examine whether decentralization empowers public and democratic local institutions; studies focusing on power and elite interests in decentralization, and; studies that historicize and contextualize decentralization as reflective of broader societal phenomena. We argue that these strands reflect disciplinary differences in values, epistemologies, and methods preferences, and that they present partial representations of forestry decentralization policies (see Figure 1). Although we try to provide both depth and coverage, our review should be seen as representative of studies within the four strands we identify, and not as an attempt at fully covering the existing literature.

Assessing impacts of forestry decentralization

One strand in the literature on decentralized forestry focuses on assessing — or evaluating — the impacts of these policies on livelihoods and forests. Generally, this strand is characterized by less attention to the policy of decentralization and more to outcomes, and to establishing causality between the existence of the policy and the observed outcomes. Thus, studies within this strand tend to treat decentralized forestry policies as an 'either/or' variable, assuming the existence and, importantly, implementation of the policy in areas on the basis of information from official statistics or other secondary sources [7]. However, as demonstrated by the other strands we

Figure 1



An understanding of forestry decentralization policies should build on all the four strands identified in this review, here represented by pieces to a puzzle.

review, forestry decentralization comes in many forms and official statistics and reports are not always reflective of realities on the ground [8]. Interventions designated as decentralized forestry may, for instance, resemble highly centralized management processes [9,10] or Integrated Conservation and Development Projects [11].

This impact-oriented strand comprises a diverse set of studies in terms of research designs and methods. Generally, the substantial findings of studies within this strand illustrate that forestry decentralization is associated with lower rates of deforestation and forest degradation as compared to alternative management strategies [7,12,13•,14], while having mixed livelihood impacts with a clear tendency of adverse effects on poorer and forest-dependent households and individuals [15–17] (see also the 'Unpacking power in forestry decentralization' section).

This strand of literature usually assesses the outcomes of forestry decentralization using simple proxy indicators. For livelihood outcomes, widely used indicators include total income or forest income, which do not capture changes in livelihood risk including food security or longer-term changes in wealth or access to productive assets, for example, fertile land. For forest sustainability outcomes, examples of indicators include species richness and harvest–regrowth ratio assessed through forest inventory [18,19] and changes in crown cover assessed through remote sensing imagery [20•,21]. Such indicators are, however, ambiguous proxies for sustainability of management. One case study illustrated this by showing how local managers harvested more than the regrowth to rejuvenate an old-growth forest that, in the absence of 'overharvesting', would likely lose value due to decay and inhibit the growth of younger trees [22]. Another showed how the closing of a forest canopy was associated with a less diverse ecosystem and inequitable socio-economic outcomes [23]. Both cases illustrate an ambiguous relationship between crown cover/standing tree volume and ecological (and social and economic) sustainability. Similarly, a negative trend in species richness could be the outcome of careful forest management practices aimed at promoting valuable timber tree species. To overcome these challenges, some argue for the use of process tracing to link observed ecological outcomes to the policy through management practices [24,25].

Recent years has seen an increased emphasis within this strand on quasi-experimental research designs, statistical modes of analyses, and associated ideas of validity. These studies seek to analyze larger, and potentially more representative,[5] samples of decentralized forestry units than hitherto seen and have brought renewed attention to the issue of demonstrating causality, attribution of observed changes to a policy as opposed to other factors. Some have even argued that such quasi-experimental research designs are inherently superior in demonstrating causality [20•,26]. Yet, this notion, and the accompanying labeling of these approaches as 'evidence-based', implicitly dismisses the value, and validity, of other approaches. Rather than being merely a question of approach and design, research validity depends primarily on the rigor with which the research is carried out in practice [27]. Thus, no approach is inherently more valid than any other. Importantly, the choice of approach and design determines the type of analysis (statistical, process tracing, among others) and the forms of evidence (quantitative, qualitative) that can be analyzed. Thus, while quasi-experimental studies allow for the inclusion of larger, potentially more representative samples, they are reliant on indicators and proxies that may, or may not, be reflective of local realities [28•].

[5] On the issue of representativeness, we note that a sample — irrespective of how it is drawn (probabilistic, purposefully, conveniently, among others) — is always representative of some population. However, the inclination to see probabilistic sampling as more representative should be tempered by careful attention to the data informing the probabilistic sampling. Thus, a randomly drawn sample is representative of the sample frame (which may or may not correspond to the population of interest). Similarly, the value of the matching approaches commonly used in quasi-experimental research designs to ensure attribution depend crucially on the how well the data informing the matching correspond to local realities.