Research trend: Forest policy and governance – Future analyses in multiple social science disciplines

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ABSTRACT

Around the globe, forests are utilized, managed and conserved in multiple ways. Decisions about forest policies and management are determined by individual and societal groups' interests and values, and have economic, social, and political dimensions. Over the past few decades, a fast growing and diversifying research programme on forest governance, harnessing a number of social science disciplines, has endeavoured to understand these dimensions. In this light, the International Union of Forest Research Organisations (IUFRO) Division 9 Unit 09.05 (Forest Policy and Governance) organised an international scientific conference on "Forest-related policy and governance: Analyses in the environmental social sciences" in late 2016. This conference aimed to be the global scientific hub for forest-related social sciences research, including studies on forest-related empirical fields, both rural and urban. It took stock of the latest scientific advancements in the fields of forest-related policy analyses, as well as wider forest governance studies from various social scientific disciplines. Based on this stock-taking exercise across a number of forest-focused social science disciplines, this paper reviews selected contributions to this conference, which were compiled into this special issue, and identifies research trends and potential fields for future research in the forest-related social sciences.

1. Multidisciplinary analyses on forest governance

Never in our history have forests played such a fundamental role to society as recently. Forests supply us with a broad range of renewable raw materials such as timber, fuelwood, food, and bio-products, and deliver ecological services such as soil and water protection, recreation, air purification, maintenance of wildlife habitat, conservation of biodiversity, carbon storage and climate change mitigation, and much more. Concurrently, the integrity of forest ecosystems have been partially/completely altered and damaged by various human activities as excessive timber exploitation, settlement, infrastructure, croplands and tree plantations, and other disturbances (Hosonuma et al., 2012; Prabowo et al., 2017). Worldwide, we have witnessed the rapid disappearance of natural forests especially in the tropics. Between 2010 and 2015 the world's natural forest area decreased by a net 6.5 million ha per year (FAO, 2016).

A fast growing and diversifying research programme is emerging by harnessing a number of social science disciplines such as: political science, sociology, anthropology, human geography, development, economics, environmental history, and legal studies. This multi-

disciplinary convergence has endeavoured to explain deforestation and forest degradation dynamics. In articulating the problems, each of the disciplines is guided by specific rules of rationality within their specific boundaries (Krott, 2001). Political science is by far the most advanced discipline in explaining forest-related problems, focusing on the complex social relations concerning forest governance, i.e. the increasingly complex coordination, and interdependence among different actors at different political spheres (Nurrochmat et al., 2017), from local to international (Giessen and Buttoud, 2014; Nurrochmat et al., 2012; Maryudi and Sahide, 2017; Sahide et al., 2015). Research in this area has been impressive; forest policy and governance has become a specialized sub-discipline of policy sciences, marked with significant analytical approaches and theoretical advances (de Jong et al., 2012; Kleinschmit et al., 2016).

Complex forest-related problems – encompassing economic, social, and political dimensions – have inspired collaboration between/among disciplines, to formulate viable solutions based on a new understanding of complex situations. In light of this, the International Union of Forest Research Organisations (IUFRO) Division 9 Unit 09.05 (Forest Policy and Governance) organized an international scientific conference on

"*Forest-related policy and governance: Analyses in the environmental social sciences*" in late 2016. Approaches to unite the knowledge include: multidisciplinary, interdisciplinary and transdisciplinary (Krott, 1996, 2001). The conference was deliberately set as a global hub for forest-related social sciences research and multidisciplinary scientific forum, drawing knowledge and advancement on forest policy and governance from different disciplines with clear delineation of what each of them is covering. The point about the multi-disciplinary approaches is to maximize the strengths of different disciplines.

2. Multidisciplinary contributions and future research options on timely issues

The international scientific conference was held at Bogor Agricultural University (Indonesia) on 4–6 October 2016, and was jointly organized by Lukas Giessen (Goettingen University-Germany) and Dodik Nurrochmat (Bogor Agricultural University-Indonesia), in cooperation with IUFRO Division 9 and IUFRO Unit 09.05. This conference took stock of the latest scientific advancements in forest-related governance studies from multiple social science disciplines. It covered theoretical, methodological, and empirical contributions examining diverse sites from urban to rural areas.

Following the successful conference, we invited the presenters to submit the full version of their work for inclusion in this special issue. The 18 most advanced manuscripts had been pre-selected by the editors, and further underwent the regular peer-review processes of the journal. The editors decided to only include 11 papers that display high level of scientific merits. Other good quality papers that remain under revisions are considered for publication in a regular issue of this journal. The selected papers are broadly clustered within the following topics. Each of the clusters is generally structured into 3 parts: the recent scholarship on the topic, the overview of the selected papers, and the potential fields for future research.

2.1. Governance modes and their impacts

A number of governance arrangements, broadly categorised into: "hierarchy", "market"' and "network" (Lowndes and Skelcher, 1998), have been established to foster sustainable management of forests or to tackle specific forest-related challenges. The prominent innovations in the forestry and environment fields include: decentralised community-based management and non-state market-driven forest certification. The different governance innovations, despite the early high praises heaped on them, are yet to produce the comprehensive outcomes as they had been envisioned. In the case of community-based forestry, powerful external actors often misuse them for their self-interests (Krott et al., 2014; Schusser et al., 2016).

In this issue we have three papers relating to governance modes and their deficient impacts. Basnyat et al. (2017) and Baral et al. (2017), analysing community forestry policy in Nepal, reveal that forest authorities use bureaucratic requirements and technical rationales to expand their control over resources and generate economic benefits. Similarly, the high prospect of certification for fostering sustainability is often compromised by the flexible and procedural-focused standards used by certain initiatives. Yovi and Nurrochmat (2017) find that Indonesian mandatory certification schemes are more about administrative obligation rather than performance-based fulfilments.

Future theoretical, methodological, and empirical research on new governance modes may include their interplay, i.e. their potential synergies or contradictions, and the effects of such interplays have on environmental and socio-economic dimensions of forest management. Emerging studies -harnessing different social disciplines – have been dedicated to analyse the linkage between: decentralised community forestry and REDD+ program (Vatn et al., 2017), state and non-state approaches (Cashore and Stone, 2012; Giessen et al., 2016), national and supranational governance (Geitzenauer et al., 2017; McDermott

and Sotirov, 2018). Such linkages, for instance, might be analysed through political lenses, covering the following dimensions (Lange et al., 2013): politics (actors, interests, and power), polity (institutions and norms), and policy (policy objectives and instruments).

2.2. Science-policy interface

A great deal of research has been conducted to provide the scientific basis for wise use and responsible management of forests, but they may not necessarily be ready for integration into policy making processes. In fact, the continuing disconnects between science and politics has become an issue of concern. Government agencies and policy-makers are often reluctant to act based on science-based advises as they are largely driven by the interests of their constituents (Krott, 2005). Their decisions are taken in certain directions in political, social, and economic systems (Maryudi, 2016). At the same time, incorporating scientific findings may well be surpass the capacity of scientific communities as they often lack influence at the policy level (Thompson et al., 2011). This raises the importance of intermediary roles, and their ability to transfer knowledge and mediate interests.

There is a growing body of literature on the integration of scientific knowledge into political decision-making realms (Boecher and Krott, 2016, for a comprehensive approach). In this issue, we have two papers discussing research-integration-utilization analysis. Using South Africa's environment sector as an empirical case, Koch (2017) analyses enabling factors for integrating science into policy making. By undertaking action research to empower forest-dependent and rural communities in New Zealand, Edwards et al. (2017) similarly propose adaptive governance principles.

Potential research areas for the future include "non-neutrality" of scientists, i.e. how scientist roles function in policy processes and how they interact with other actors in order to integrate scientific findings (van den Hove, 2007). In addition, gaps between scientific and policy priorities remain under-investigated. Scientific priorities may need to balance between issue-driven and curiosity-driven science (ibid.). Developing quantitative approaches for investigating science-policy disconnects could also be a potential future research agenda given that such approaches barely exist. In terms of empirical data, furthermore, investigating emerging and cross-cutting issues will enrich the growing body of knowledge on the science-policy interface.

2.3. Deliberative policy processes and democratic governance

The process and approach by which decisions about forests are taken is one of the core themes in forest policy analysis. In light of the perceived ineffectiveness of the hierarchical and centralized approach, the deliberative paradigm has gripped the forestry sector to engage broader participation of public and private stakeholders to reach legitimate decisions and solutions for certain forest-related problems. Deliberative democratic theories underpin the process that emphasises empowerment and meaningful interactions among participants (Innes and Booher, 2004).

In this issue, Mancheva (2017) identifies preconditions required for a deliberative process. She distinguishes between "contextual factors" and key triggers or "drivers" that are required to facilitate and enhance collaboration.

Deliberative policy processes centre around the articulation of diverse values, needs and perceptions over particular problems or challenges. Future research may cover the processes by which disadvantaged groups feel heard and thus determines their ability to express aspirations in decision making processes at different political spheres in various timely forest-related issues such as climate change, forest-poverty links, legality verification and certification, and many others. Recent scientific investigation also focuses on the roles of epistemic communities such as experts and academics that will link well with the issue of science-policy interface, discussed above.