Problem-oriented approaches to the study of social-ecological systems

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Abstract

Studies of environmental governance have shifted dramatically since the 1990’s when recommendations for simple uniform approaches to resolve environmental problems became increasingly tenuous alongside growing recognition of the complex nature of social-ecological systems. Whereas prior research was organized around a single orienting problem, regulating appropriation of natural resources to achieve maximum sustainable yield; current research emphasizes the diversity of problems, goals and their interactions that complicate our understanding of these systems, and the ways in which policies can be designed to increase prospects for broadly successful outcomes. Notwithstanding the challenge of environmental governance writ large; communities and environmental planners are often confronted by particular problems that warrant individual attention. For instance in some systems, environmental policies generate perverse incentives that often undermine the very goals they are meant to achieve; while in others, public goods such as monitoring and maintenance may be inadequately provided to ensure the long-term sustainability of a resource. Although only a part of the complex puzzle, successful diagnosis of governance problems and development of appropriate policy responses greatly enhances prospects for sustainability. This exercise entails identifying the social and ecological properties that characterize particular problems, as well as disentangling the collective action processes and factors involved in the elaboration and implementation of policies that match those problems.

This panel is oriented around 5 problems pertaining to the governance of social-ecological systems; property rights that generate incentives to deplete natural resources, farmer’s decisions to conserve forests, public good provision, rule compliance, and the ways in which policies affect the resilience of social-ecological systems. These papers reveal the diverse range of problems associated with the forest and environmental governance; identify why they emerge, and some consider potential strategies likely to resolve them.

All papers will be done in a speed-talk format. We will plan to leave roughly 10 minutes at the end for discussion. Discussion will aim to bring the topics together to identify commonalities and differences among the 5 presentation. The session will include the following 10 minute presentations:

- Michael Cox and Forrest Fleischmann will discuss the findings of a case study and quantitative analysis regarding the effects of secure private property rights on Northeast American forests;

∗Speaker
• Claudia Rodriguez and Ashwini Chhatre will discuss the findings of a quantitative study regarding voluntary decisions to conserve forests in a Mexican Biosphere reserve;
• Sergio Villamayor will discuss the findings of a quantitative study regarding forest governance activities undertaken by state and community actors in forest commons;
• Graham Epstein will discuss the findings of a quantitative study regarding factors that influence group-level compliance in forest commons; and
• Prateep Nayak will discuss the finding of two case studies where policies were designed to increase social-ecological resilience, but had the opposite effect.

Keywords: social, ecological systems, governance, property, rights, conservation, public goods, compliance, resilience, commons, forests