Pursuit: Testing and extending Ostrom’s frameworks: quantitative synthesis and modeling of social-ecological dynamics

Time of Event:
Monday, April 30, 2018 - 09:00 to Friday, May 4, 2018 - 17:00

"Testing and extending Ostrom’s frameworks: quantitative synthesis and modeling of social-ecological dynamics"

This is a closed meeting for a funded group of visiting scholars.

The influences of governance and institutions on human-nature interactions are central to society's most challenging and complex environmental problems. The Institutional Analysis and Development (IAD) framework developed by Lin Ostrom and her collaborators is a leading and widely adopted approach for thinking about common pool resource (CPR) management and its relation to biodiversity and ecosystem management. Its contributions to a broader theory of sustainability have, however, been limited by its lack of integration with quantitative models. Both the IAD framework and related ideas, such as the concept of polycentric governance, offer only a vague and very general summary of the structures of social-ecological systems (SES), making it impossible to rigorously test hypotheses that relate institutional design to management and policy outcomes. This project explores the idea that institutional structure can be quantified as a continuous variable by locating SESs on axes that describe system controls and regulation as heterarchies: that is, specific combinations of networks and hierarchies. We will use existing data sets, and simulation models of the four fundamental kinds of heterarchy, as the basis for exploring and extending the IAD framework. Quantitative simulations of SES dynamics in systems that are structured in known ways will be used to develop and test a theory of structure-process interactions in social-ecological systems. Such a theory has the potential to provide a mechanistic basis for understanding and modelling complex resource use systems. Our findings will have implications for both the theory and the practice of social-ecological sustainability.

To learn more about this Pursuit, click here [1].

Event type:
Project Meeting
Event Attendance:
Private Working Group

Source URL:

Links
[1]
https://www.sesync.org/project/propose-a-pursuit/testing-and-extending-ostrom%E2%80%99s-frameworks-quantitativ
e-synthesis-and