

Seminar: Juan Rocha - Stockholm Resilience Center, 11am

Presenter:

Juan Rocha, Beijer Institute of Ecological Economics and the Stockholm Resilience Center

Time of Event:

Tuesday, May 2, 2017 - 11:00

Location:

National Socio-Environmental Synthesis Center (SESYNC)

1 Park Place, Suite 300

Annapolis, MD 21401

Cascading effects of critical transitions in social-ecological systems

Seminar presented by [Juan Rocha](#) [1], postdoctoral researcher at the Beijer Institute of Ecological Economics and the Stockholm Resilience Center.

Abstract:

Critical transitions in nature and society are likely to occur more often and severe as humans increase they pressure on the world ecosystems. Yet it is largely unknown how these transitions will interact, whether the occurrence of one will increase the likelihood of another, and whether these potential teleconnections (social and ecological) correlate critical transition in distant places. Here we present a framework for exploring three types of potential cascading effects of critical transitions: forks, domino effects and inconvenient feedbacks. Drivers and feedback mechanisms are reduced to a network form that allow us to explore drivers co-occurrence (forks). Sharing drivers is likely to increase correlation in time or space among critical transitions but not necessarily interdependence. Domino effects occur when the feedback processes of one regime shifts affect the drivers of another, creating a one way dependence. Inconvenient feedbacks were identified by mapping new circular pathways on coupled networks that have not been previously reported. The method serves as a platform for hypothesis exploration of plausible new feedbacks between critical transitions in social-ecological systems; it helps to scope structural interdependence and hence an avenue for future modelling and empirical testing of regime shifts coupling.

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Event type:

Seminar

Event Attendance:

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