Dissecting functionality of multi-level governance arrangements in small-scale fisheries: An example from the Gulf of California, Mexico

The need for effective multi-level governance arrangements is becoming increasingly urgent because of complex functional interdependencies between biophysical and socioeconomic systems. I will present the role of these linkages at the community and state levels in the context of small-scale fisheries governance regimes from the Gulf of California, Mexico. All of this work is in some part based on interdisciplinary collaborations that I engaged in over the last five years. Using structured surveys, in-depth interviews, participant observation, and a Social-ecological systems (SES) framework (Ostrom 2007) as both theoretical and structural foundation for the study, my colleagues and I assessed and compared the capacity of discrete social-ecological regions to achieve environmental sustainability. Results reveal presence of considerable institutional and ecological diversity across these regions, which are ignored under the current state management regime. By adopting a more spatially explicit approach to devising fisheries policies Mexican government could tailor management interventions to specific needs of each region thus increasing the probability of achieving sustainable resource use. More broadly, this study reveals the value and importance of integrating biophysical and social sciences to achieve a richer understanding of coupled human and natural systems.