



Environmental Science Graduate Program Student Seminar Series

Assessing the Alignment of Researcher and Stakeholder Understandings and Expectations in a Participatory Modeling Project

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Abstract:

The interconnections among human and environmental systems as a driver of critical sustainability challenge are receiving attention from the scientific community. To represent this complexity, a growing number of coupled systems models have been developed with the explicit goal of providing guidance to public and private decision-makers. However, many of these models and model results are frequently ignored by policymakers and rarely translated into changes in public opinion or public policies, a problem that Lemos et al. (2012) refer to as the “usability gap”. In order to narrow the usability gap and strengthen linkages between science and policy, the use of more integrative and participatory approaches to research and the development of scientific models has received growing attention.

The involvement of non-academic actors (stakeholders) into the development of models is based on the idea that engaging people with practical and experiential knowledge can help scientists improve their understanding of the system processes and complexity, better represent the feedbacks between natural and social systems, and jointly identify a reasonable set of solutions to a given problem. Also, it is expected to improve the social relevance, trust in, and actionability of model results.

As stakeholder engagement in human-environmental systems modeling becomes more common, understanding the links between researcher and stakeholders’ perceptions about the value of participation is required to ensure productive interactions and successful collaborative projects. In this context, this study examines the initial perceptions of scientists and stakeholders related to their expectations for stakeholder input on models; and the importance of objectives and outcomes of a large collaborative project denominated Dynamic Regional Food, Energy, and Water Systems (DR-FEWS). The purpose of this study is to examine whether the responses of scientists and stakeholders differ or are they very similar. We assume that a better alignment of the perceptions and expectations of scientists and stakeholders through the social learning process should contribute to a greater satisfaction of the participants, enhance the quality of the scientific outcomes, and reduce the usability gap associated with coupled systems modeling projects.