UC DAVIS CENTER FOR ENVIRONMENTAL POLICY AND BEHAVIOR

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The challenge of incorporating natural science findings into policy decision-making stems from the divide between the *ideal* and the *actual* science-policy interface.
BUILDING BETTER ENVIRONMENTAL POLICY

Ideal

Scientists produce new and better data that policy actors apply to improve outcomes.

Stakeholders join together to solve environmental dilemmas, guided by best available data.

People act rationally to maximize profits, utility, or goal attainment. Their choices are guided by a cost-benefit calculus.

Actual

More or better data does not necessarily translate to increased use in policy.

Stakeholders may not collaborate or may not do so successfully.

People often appear to make environmental management choices that do not rationally advance self-interest.
WHAT EXPLAINS THE IDEAL-ACTUAL DIVIDE?

Individual-level factors

- Access to and interpretation of scientific information
- Political ideology
- Beliefs and values
- Response to social pressure

Structural factors

- Written and unwritten “rules of the game”
- Venues wherein decisions are made
- Socioeconomic and demographic attributes of groups/communities
- Structure of social relationships
- Group identities, ideologies, beliefs, and values
HOW DO WE BRIDGE THE DIVIDE?

The CEPB investigates the nature of the *actual* science-policy interface in order to specify the *conditions under which ideal-type outcomes are more likely* and the factors that can be leveraged to encourage these outcomes.
METHODS FOR INVESTIGATING THE SCIENCE-POLICY DIVIDE

Agent-based modeling
Interviews
Participant observation and engagement
Social network analysis
Statistical modeling
Surveys
COASTAL AND MARINE PROJECTS INCLUDE:

• Analysis of stakeholder preferences for linear, top-down master planning versus bottom-up, stakeholder-driven processes when making decisions about establishment of Marine Protected Areas in California (Weible, Sabatier, Lubell).

  • Key finding: Stakeholder preferences for either approach flow from core beliefs about the importance of ideal-type scientific management versus collaborative processes that tap local knowledge.
COASTAL AND MARINE PROJECTS INCLUDE:

• Analysis of the impact of the U.S. EPA’s National Estuary Programs (NEP) on consensus and collaboration among estuary stakeholders (Lubell).

  Key finding: While stakeholders in NEP estuaries exhibit a higher level of consensus about how to deal with management dilemmas, they do not actually exhibit any greater cooperation than stakeholders in non-NEP estuaries.
Analysis of how the increasing use of artificial habitat (condos) for spiny lobsters is affecting social and ecological conditions in the Bahamian spiny lobster fishery (Doerr, Farlin).

Key finding: Beliefs about whether it is socially appropriate to collect lobsters from condos established by another fisherman varies significantly with the fisherman’s home island, resulting in inter-island/inter-group conflict.
• Analysis of how the Honduras-based Spiny Lobster Initiative, a private-public-community collaboration intended to develop common goals and management approaches, is affecting stakeholder interactions over time (Robbins, Lubell).

• **Key finding:** In the first three years of the initiative, it appears to have catalyzed the development of new ties among different, previously unconnected groups of stakeholders.