Boundary Organizations:
Navigating Between Worlds

Rising Voices, NCAR June 29, 2015

Lisa Dilling
Western Water Assessment
Environmental Studies, CIRES, CSTPR
University of Colorado Boulder
First... what do we know about boundaries?

• What types of boundaries can you think of?

• Why do we have boundaries? What role do they serve?

• How are boundaries crossed or bridged? What enables the crossing of boundaries?
Boundaries between science and society

Image: http://undsci.berkeley.edu/article/philosophy
Boundaries between science and society
What are some mechanisms we use to maintain boundaries in science?
A problem with science boundaries

Scientific knowledge

“Reservoir of knowledge”

Decision makers

http://wwa.colorado.edu
The result: Information is often not as useful as it could be!

Not as useful as expected to farmers, water managers and so on because of a variety of reasons:

- Information provided often not what was most needed
- Lack of regional specificity, scale mismatch
- Inaccessible presentation, poor communication
- Not presented with accompanying info. more important to decision-maker, such as market and policy information
- Decision-makers incapable of responding to information--institutional constraints
- Lack of trust in information
- Uneven delivery to affected constituents

...... And so on

Reviewed in Dilling and Lemos 2011
The Cash et al. framework for Knowledge to Action

“efforts to connect knowledge to action are effective only if they are sufficiently salient, credible, AND legitimate with multiple audiences simultaneously”

Cash et al. 2002
Credibility

Meeting scientific standards?

A fair process?

Legitimacy

Relevant?

Salience

Meeting scientific standards?

A fair process?

Legitimacy

Relevant?

Salience
The importance of each element—credibility, salience and legitimacy—will vary depending on the actor and his or her perspective!
Managing the boundary

Scientific knowledge

Decision makers
Managing the boundary: Boundary Organizations

Can be individuals!

Scientific knowledge

Boundary Organizations

Can link multiple boundaries

Decision makers

http://wwa.colorado.edu
**Example: Western Water Assessment RISA**

**Mission:**

*WWA conducts innovative research and engagement aimed at effectively and efficiently incorporating knowledge into decision making, in order to advance the ability of regional and national entities to manage climate impacts.*

- Established in 1999 at University of Colorado-Boulder
- Serves stakeholders in Colorado, Wyoming, and Utah
- Gained particular credibility during focusing event of 2002 drought
- 20+ researchers with expertise in hydrology, climate modeling, policy, and law
- Mission of helping provide decision support information to assist decision makers grappling with impacts of climate variability and change
Principles of boundary organizations

Effective boundary work involves:
1. Creating salient, credible, and legitimate information simultaneously for multiple audiences;
2. Links knowledge and action
3. Bridges boundaries
4. Establish participation from both sides of a boundary, engaging multiple actors across boundaries
5. Coordinating complementary expertises and conceptual frameworks
6. Negotiates between boundaries (e.g., science and policy, across nations, between different knowledges)
7. Establishes dual accountability across the boundary
8. Uses “boundary objects”, which are items that sit between two different social worlds, but can serve as a focal point for common understanding. Examples of "boundary objects": hydrologic, fisheries, climate models, assessment reports.
9. Actively mediate to establish win-win outcomes, reducing the potential tradeoffs and conflicts between increasing salience, credibility, or legitimacy.
10. Translating across boundaries.

Thank you!

- ldilling@colorado.edu
- Questions and Discussion