Incorporating Natural Capital into Climate Adaptation Planning

Lisa Wedding, Eric Hartge, Gregg Verutes, Jesse Reiblich & Jessica Williams
Overcoming Adaptation Barriers with Boundary Organizations

- COS is a boundary organization (www.centerforoceansolutions.org)

- **Our Mission**: Linking science to solutions that address critical ocean challenges in a changing climate
  - Our focus, or “niche”, is in bridging the gap between science and policy
Talk Outline

• “how we work” to bridge the gap between science and policy as a boundary organization

• “what we have found” in our recent climate adaptation science and policy work

• “what we have learned” as a boundary organization working towards overcoming adaptation barriers
Bridging the Gap Between Science and Policy

It’s not just a knowledge gap. It’s also a communications and engagement gap.

Goal - highlight what it takes to bridge the gap and embed science into decision-making
“Boundary organizations are formal organizations designed to exist at the interface of research and policy organizations to facilitate communication and collaboration between them.” (Guston 2001; Parker & Crona 2012)

So, how do we fill this gap? This includes understanding the management context: time scale, policy “windows”, end-user interest, audience need, legal and regulatory authorities, etc. **before** choosing the research question.
we are translating science regarding climate impacts and coastal ecosystem services into land use policy to inform climate adaptation.
Our quarterly E-Newsletters keep an audience of over 1,500 subscribers up-to-date on our latest news, project updates, and emerging solutions.

“Coastal Squeeze”

Surfer’s Beach, San Mateo County

Photo Credit: Eric Hartge
Provide ecosystem service assessment and modeling expertise to California coastal planners that translates the benefits of natural infrastructure into climate adaptation planning contexts.
Through iterative engagements, we help prioritize natural solutions and distill policy relevant information for decisions.
Marin Case Study

Where are opportunities for natural adaptation strategies?

Where are the natural habitats along the coast?

Where are natural strategies most feasible?
Next Stage:
1. Determine traits of coastal settings that make specific adaptation strategies more feasible.
2. Include that logic framework into algorithm for viewer.
Modeling Coastal Vulnerability for Adaptation Planning

**Multi-State**
- Identify and prioritize blue carbon opportunities
- California
- Florida
- Channel Islands NMS

**Federal**
- Transfer approach to National Marine Sanctuaries
- Greater Farallones / Monterey Bay NMS

**International**
- Transfer and scale approach for Pacific Islands
- Indonesia
- Palau
Boundary Stats: Bridging Climate Science with Land-Use Policy

Years → 6 years
Grants → 2
Collaborators → 3
Staff → 22 (over the years)
End-users → 6
Engagement Meetings → ~100
Presentations → ~25
Peer-review → 4, 4 to come
Products → 4 reports;
   1 decision support tool
Boundary Organization - Lessons Learned

• Engagement “early and often” is easier said than done – managers are busy people, so are researchers

• Timing is everything
Conclusion

• Peer-reviewed publications do not, by themselves, result in change; translation and engagement is key

• Understanding the management context and illustrating how science can be applied to existing legal mandates is critical

• Boundary organizations are uniquely well-positioned to develop credible, salient, and legitimate solutions
Thank you!

Lisa Wedding
lwedding@stanford.edu
centerforoceansolutions.org