Threats, Vulnerabilities, Tough Choices... Oh My!

Research and Action for Adaptation Success

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Overview of Presentation

• Rising to the Challenge: California’s Coastal Managers Respond to Climate Change

• The Leaders Ask: What Does Adaptation Success Look Like?

• Some Research to Help Them Succeed
Coastal Adaptation Needs Assessment Survey

- **Participants:**
  - 594 local, state, and federal government staff in CA, NGO staff, private sector consultants, and elected officials whose daily work is already, or could be, affected by climate change impacts
  - Planners, env. specialists, resource managers, engineers etc.

- **25% response rate**

- **N, C, S, SF Bay**
Current Coastal Management: Reality Check & Adaptation Context

• Current coastal management challenges are serious “as is” and worsening.
• Top management challenges will be exacerbated by climate change.
• Current management challenges (all-consuming, contentious) make adaptation planning and decisions difficult.
Current Coastal Management: Reality Check & Adaptation Context

- Attitudes and knowledge about climate change are strongly supportive of adaptation action.
- Attention to adaptation has increased markedly over the past five years.
- Adaptation planning and implementation is still in the very early stages.
- Limited familiarity with innovative adaptation approaches.
Adaptation Leadership in CA

• **Local:** A number of municipal and county governments

• **Regional:**
  – Regional adaptation efforts
  – Alliance of Regional Collaboratives for Climate Adaptation (ARCCA)

• **State:**
  – Ongoing scientific assessments
  – Adaptation Strategy 2009/2013
  – State agencies’ guidance (water, SLR)
  – Governor’s Office of Planning & Research

• **Federal Agencies** via EO 13514

• With key involvement of foundations, NGOs, consultants and scientists
A Key Question for Those Adapting

What does successful adaptation look like?

- **Scientific perspective**: What process and outcome elements could be considered?
- **Practical perspective**: How can communities measure progress towards successful adaptation, both in the near and long-term?
- **Ethical/normative perspective**: Which process and outcome elements should be considered?

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Why Think About Adaptation Success?

• Communication and public engagement
• Coordination and integration
• Careful planning and decision-making
• Justification of adaptation expenditures
• Accountability
• Support for learning and adaptive management

P.S.: Political sensitivities: to define/track or not to define/track
Project Approach: Step-by-step

1. White Paper
   - Scientific literature, guidance documents > publication

2. Workshops
   - Scientific experts
   - Practitioners in each state (incl. prep. interviews)
   - Capstone: Science and practitioners

3. Syntheses
   - Publications, vodcasts, presentation templates, briefings

[Diagrams for California, Oregon, Washington]
Expected Outcomes

• Clear categorization of “desirable” and undesirable” outcomes of coastal climate adaptation actions

• Sophisticated articulation of desirable process characteristics - generically, and for particular stakeholders, which and why

• Guiding principles on how to assess adaptation options as to their traits, desirability, and potential trade-offs

• Practical success metrics (e.g., existing or new “performance measures”, process characteristics)
Dimensions of Adaptation Success

• Adaptation (planning) *process*
• Selection of adaptation *options*
  – Judged against range of fixed criteria
  – Judged in dynamic context (adaptation pathways)
• Adaptation *outcomes*
  – Near-term delivery of adaptation actions
  – Establishing an adaptive management process
  – Desirable outcomes in the future

Note: Evaluation, effectiveness or success – same words – different meanings
– different methods of assessment

1st wave
(1990s-early 2000s)

2nd wave
(since AR4)
Why Things Aren’t So Simple

• Meaning of Adaptation? – Who to involve, which trade-offs
  – “Structural interpretation”
    keep what we’ve got)
  – “Vulnerability interpretation”
    better world for all)
  – “Resilience interpretation”
    more-than-human – term)
Why Things Aren’t So Simple (cont.)

- **Adaptation outcomes**
  - Pragmatic challenges
    - Few projects set clear goals, establish baseline
    - Few projects are far enough along to be assessed
    - Few projects include monitoring and evaluation components
  - Common evaluation challenges
    - Timing of assessment of effectiveness
    - Establishing causality between actions > outcomes
    - Inevitable normative aspects of evaluation
Why Things Aren’t So Simple (cont.)

- Adaptation outcomes (cont.)
  - Climate change adaptation-specific challenges
    - No end point; dynamic; possibility of tipping points
    - Cross-scale and cross-sector interactions
    - Focus on one climate risk or multiple risks (i.e. changing risk profile, net risk)?
    - Uncertainties about future climate, other systems, and future society’s values, risk tolerance
    - Avoidance of “maladaptation” – criteria?
    - Transformational adaptation involves significant change for all and certain loss for someone
California Practitioner Workshop

- 23 adaptation leaders (local, regional, state, federal, tribal, NGO)
- Pre-workshop interviews
- Day-long interactive workshop
  - Case studies
  - Definition, meaning
  - Process (incl. trade-offs)
  - Outcomes (metrics)
- Evaluation survey
Success in Practitioners’ Minds

— “Hahaha. I don’t know...” “You can’t know...” “Good luck! We’re here for you.” “Christmas the rest of my life...”

— Actions – **that something gets done**
  * Getting the next thing accomplished
  * Coordination of the many toward a common goal
  * Plans get passed, then implemented

— Approaches – **how something gets done**
  * Effective communication
  * Reliance on best available science
  * Institutionalization
  * Co-management of resources
  * Project-based integration vs. wider integration
  * Ongoing evaluation of what’s working
  * “Staying within the law” vs. “real policy change”
Success in Practitioners’ Minds (cont.)

- People – who gets it done
  - Accepting of climate change, sense of urgency
  - Willing to lead, willing to support
  - Wise, long-term thinking, responsible, committed, creative
  - Greater knowledge, confidence
  - Respect for tribal ways, heritage, knowledge

- Outcomes – how it will look
  - Being resilient
  - Reduced vulnerabilities
  - Prevent impacts from manifesting
  - Still a good place to live, still able to eat oysters
  - Integrate mitigation and adaptation
  - “Culture of preparedness” and safety along shoreline
  - “Not a seawall from Oregon to Tijuana”
  - Balance of built/naturally functioning shorelines
  - Keep the larger public value
  - Leave the world a better place
Revised Dimensions of Success

Adaptive Capacity
- Establish enabling conditions
- Build up social, technical, human, financial etc. capacities

Adaptation Process
- Conduct the assessment and planning process “right”
- Engage in continual assessment of adaptation needs

Adaptation Decision-Making
- Select a “good” adaptation option
- Make a “good” adaptation decision

Adaptation Implementation
- Successfully implement specific adaptation actions

Adaptation Outcomes
- Find adaptation outcomes to be “good”
- Avoid maladaptation

Adaptation Barriers
- Identify and develop effective strategies to overcome barriers to adaptation (institutional, motivational, political, financial, scientific etc.)
Some Action Research Needs:
Or: How to have answers when we need them

• Unpacking Governance
  – Governance challenges already big: needs and barriers
  – Governance theories need a reality check
  – Democratic governance in state of perpetual emergency?
  – Mainstreaming climate change – yes, but... mainstreaming into what?
  – Increasing flexibility without loss of accountability?
Some Action Research Needs:
Or: How to have answers when we need them

- Communicating Adaptation
  - Manage risk perceptions when climate change comes home?
  - Name the unnamable – losses and taboos?
  - Grow the capacity of leaders to communicate?
  - Moving ahead in a highly polarized and politicized environment?
  - Space for real dialogue in the face of always more immediate pressures?
  - What forms for communication are really useful?
  - Political and social strategies to overcome societal divisions?
Some Action Research Needs:
Or: How to have answers when we need them

• Imagining and Preparing for Transformation
  – What does it mean compared to garden-variety, incremental adaptation?
  – What capacities do we have, and need, to transform?
  – By what processes?
  – How do we deal with our legacies?
  – And how do we begin a conversation on transformation?
Getting Out in Front

Some (gentle) push for scientists:

• Get out there!

• Don’t reinvent the wheel!

• Meet the need, don’t just name it!

• Time **not** invested in collaboration is wasted time.