Contributions of interdisciplinary social science for advancing adaptation research

Shannon Hagerman, PhD
Department of Forest Resources Management
University of British Columbia

a place of mind

Origins and Acknowledgements

- Handbook for adapting aquatic ecosystem management to expected climate change impacts in the PNW USFS region *(in review)*

- UW Climate Impacts Group
- Amy Snover
- USFS PNW Research Station
- Participating aquatics managers across the PNW Region, USFS

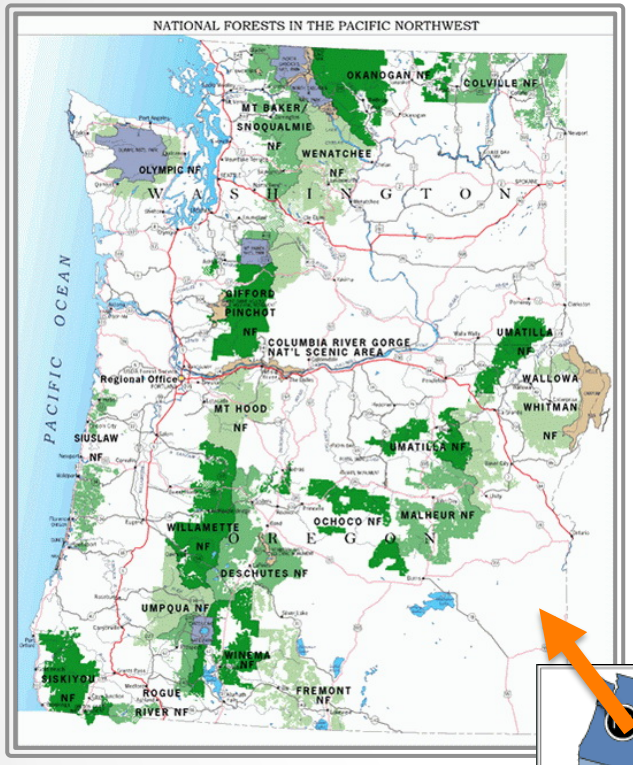
Commonly identified social science contributions

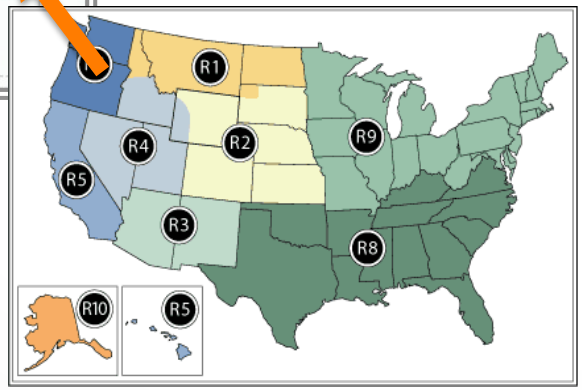
- Perceptions of risk and public understanding of climate science
- Public education and improved communication
- Decision support and navigating trade-offs
- Understanding and overcoming the knowledge-action gap

A broader view of social science contributions

- The role of values and attitudes in shaping plural ideas and preferences for policy
- The role of institutions and governance in translating preferences into management actions
- The role of intangibles: trust, experience, history
- How science is produced in particular social, political and cultural contexts. Who participates in the production of knowledge?
- How does participation shape the reception of findings by different groups?

USFS Pacific Northwest Region (Region 6) in Context





USFS Region 6

- 17 National Forests
- 24 million acres

"Without fully integrating consideration of climate change impacts into planning and actions, the Forest Service can no longer fulfill its mission"

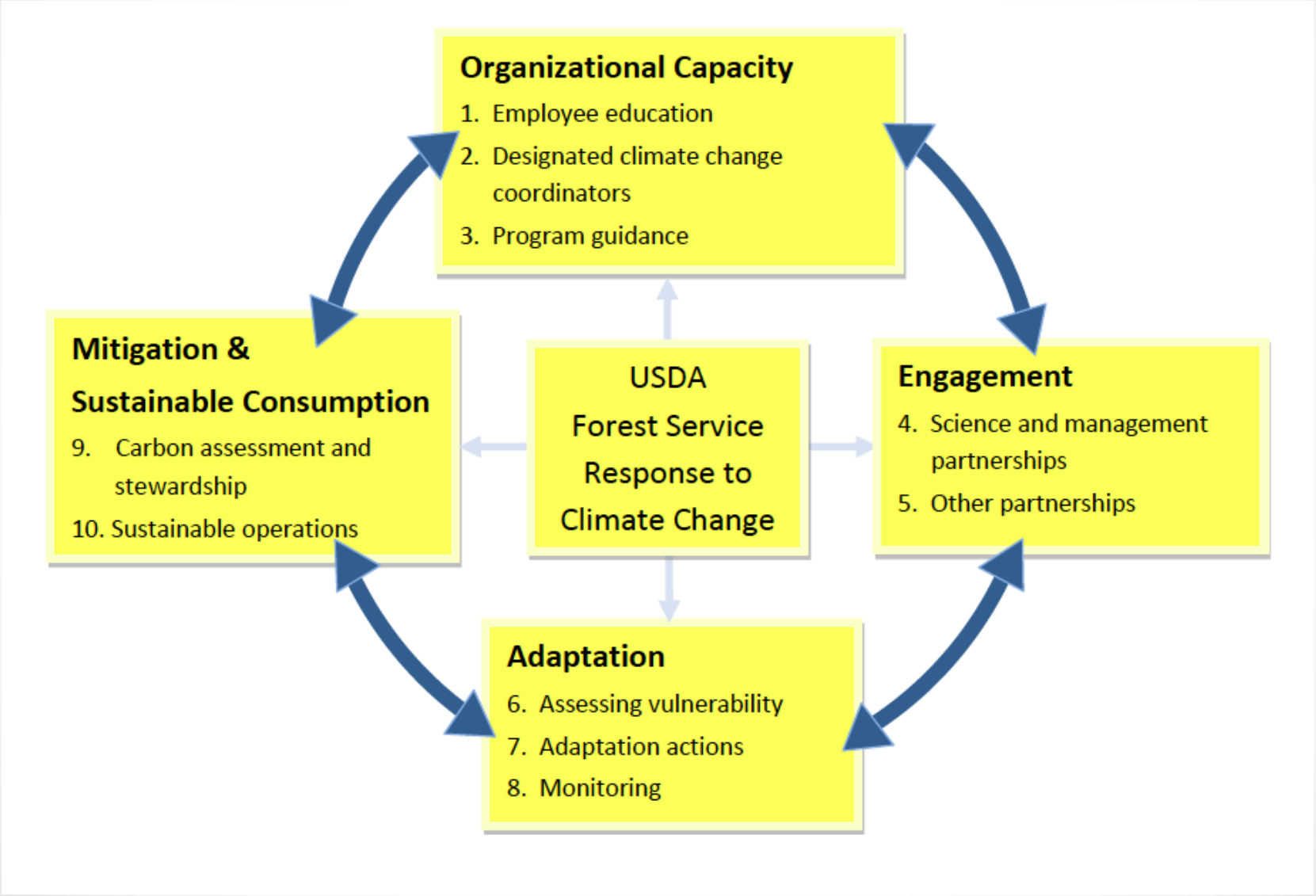
Forest Service Strategic Framework for Responding to Climate Change USDA-USFS p. 2 **2008**

Forest Service Mission

Sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

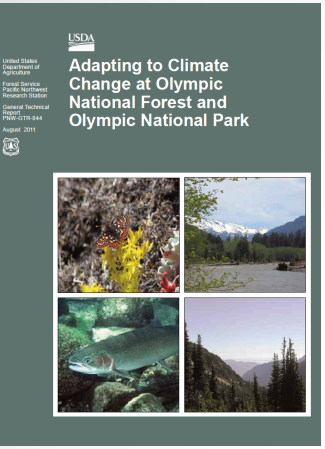
FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

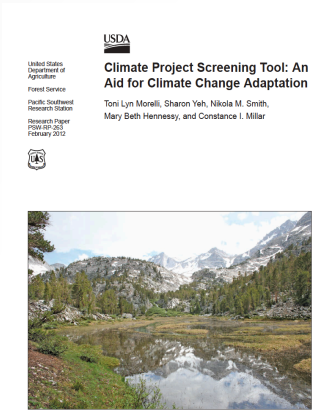
USFS Climate Change Scorecard

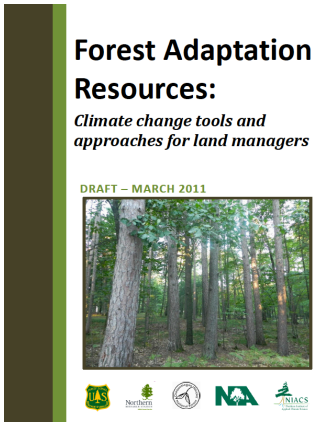


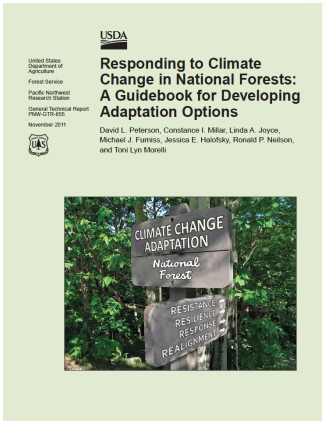
From: Navigating the Climate Performance Scorecard, 2011

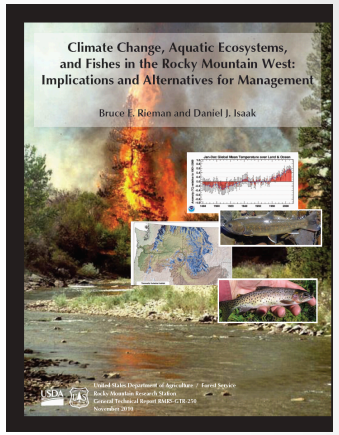
Core focus: What could potentially be done











Bierbaum et al. 2013, Mitigation and Adaptation Strategies for Global Change 18: 361-406

Less understood:

How adaptation occurs in particular social-ecological systems?

Structural/material barriers to adaptation

- **Technical**: access to credible, relevant information at appropriate scales
- **Institutional/organizational:** regulatory, capacity, institutional mandates

+

More elusive, intangible, non-material factors

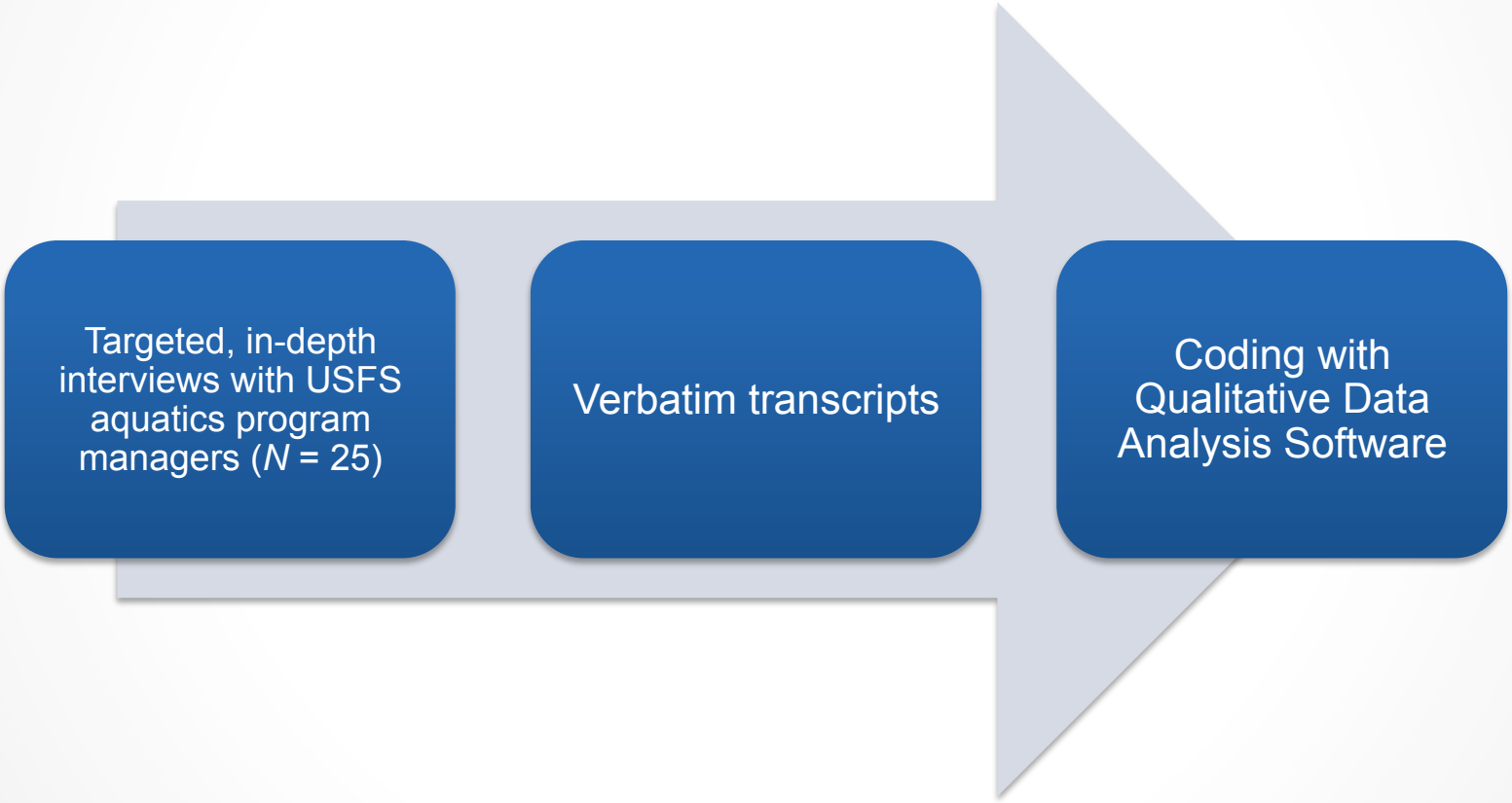
- **Behavioral**: leadership, trust, history, experience, perception, values and norms

Questions

1. How are informational, institutional (capacity, regulatory and jurisdictional) and human behavioral (i.e. attitudes and trust) factors associated with views about, and engagement with adaptation?

2. What strategies might be taken to foster adaptation/ overcome barriers where they are observed?

Empirical material



Findings

Uneven climate response landscape

Engagement with the Scorecard

The usual (barriers) suspects

- *Financial resources*
- *Human resources*
- *Institutional mandates*
- *Regulatory commitments*

Mistrust in the mandate

Attitudes *amplify* institutional inertia

Attitudes *overcome* institutional inertia

Access to information is not perceived as a barrier

Identity and the *production* of local knowledge

Conclusions

1. Little evidence that access to information is perceived as a barrier in this context

2. Institutional barriers prevail across the region

3. Mistrust in the mandate is a key issue for those who express reluctance to engage in adaptation

4. Attitudes are influential *both* in amplifying institutional inertia and overcoming it

(Policy-relevant) lessons learned

- Federal “mandate” has not (yet?) been instrumental in facilitating adaptation across scales
- Adaptation is constrained to some degree by the USFS’s own mandate given mistrust in shifting mandates
- Successful implementation will likely require incorporating adaptation goals into institutional commitments
- Pro-adaptation attitudes of people in leadership positions can transcend structural barriers – to a point
- Importance of supporting development of unit-level, locally-driven knowledge production
-

Enhancing social science contributions to the field of climate adaptation

- A broader conception of “human-dimensions”
- Beyond risk communication, public understanding and bridging the knowledge-action gap
- Empirical examination of a fuller range of social processes that shape decision making and outcomes in particular social-ecological contexts
- Including non-material dimensions (trust, experience and history)

Thank you!

Questions, comments:

Shannon.Hagerman@Ubc.ca