

# **Information Needs and Delivery: Creating an Adaptation Service?**

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# Recipe for an Adaptation Service?

- Ingredients:
  - Process components
    - Translational and decision-support capacity
    - Communities of practice and networks, regional and sectoral coordination of capacity
    - Institutional support and public-private partnerships
    - Adaptive management – assessing progress in science “of” and “for” adaptation, through an iterative framework
    - Monitoring of effectiveness, establishment of metrics, costs vs benefits
    - Communications and engagement capacity
    - A process for establishing baseline conditions at multiple scales, in multiple regions

# Recipe for an Adaptation Service?

- Ingredients:
  - Information components
    - Data management systems, clearinghouses, baseline data
    - Indicators of change and capacity to respond
    - Models and observations
    - Extremes (and surprises) vs trends
    - Managing/embracing uncertainty (scenarios, other tools)
    - Info for multiple timeframes: Seasonal-interannual-decadal-multi-decadal projections of climate (and other?) conditions
    - Info at multiple geographic scales (decision scales?)
    - Systems perspectives and understanding of interactions, cascading effects, etc

# **Priority Challenge:**

## **Costs of Impacts vs Adaptation**

- Need data to support analysis of the costs of impacts over time, the costs of action and the costs of inaction
- Ways of analyzing the distribution of benefits vs the distribution of cost
- Alternative ways of communicating costs to individuals, communities, businesses
- Ways of calculating cascading impacts and co-benefits
- Ways of dealing with discount rates and intergenerational equity
- Ways of considering implications of adaptation and mitigation decisions across multiple time frames

# Other Important Challenges:

- Balancing the needs for strategic investments in fundamental physical science with decision-relevance, engagement and co-production
- Push vs. pull for information
- Equity issues: who builds the safety net for those who can't afford to help themselves?
- Role of the private sector, academia, local, state and federal governments, NGOs
- Where to start – with valued systems and resources that we want to protect? With climate science? With decisions that need to be made?
- How to set priorities in the vast array of needs

# Building the NCA Infrastructure: NCADAC Working Groups



1. Scenarios and Regional Summaries
2. Engagement and Communication
3. Regional Coordination /Sustained Assessment
4. Sectoral Coordination/Sustained Assessment
5. Report Integration Team
6. Adaptation, Mitigation and Decision Support
7. Indicators Development and Evaluation
8. International Implications
9. Sustained Process and Evaluation

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10. Global Change Information System

# NCA Data Needs

- Benchmark mature data sets that will underpin the climate science conclusions
- Projections (including downscaled projections) relating to deliberately-chosen emission scenarios or 'plausible futures'
- Regional and sectoral datasets that relate to impacts (like flood or drought impact info)
- Indicators - some already well established and some based on monitoring 'new' information (e.g. response actions)
- Immature datasets that will not be used to support key conclusions but are nonetheless essential for relevance (e.g. case studies or adaptation information not yet “mainstreamed”)

# Topics-Wednesday

- Barriers to adaptation (and how to overcome them?)
- Public perceptions (risk vs risk perception, motivations for adaptation in an imperfect world?)
- Climate prediction at shorter timescales
- The role of government, especially USGCRP and other federal efforts
- Climate information in support of drought response/preparation (sectoral applications for an adaptation service?)
- Adaptation in the PNW (regional applications of an adaptation service?)



# Topics-Thursday

- Climate services in Europe – an international approach?
- Opportunities for federal agencies to engage in adaptation science
- Actionable science for adaptation
- Role of communication in adaptation