



Water Supply Science and Information Needs Moderator Introduction

Bob Livezey

NOAA/NWS/OCWWS/Climate Services Division

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Climate Science in Support of Decisionmaking
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Objectives

- ***Discuss how well research is meeting the needs of decisionmakers***
- ***Describe development and application of resources to support adaptive management and climate policy development***
- ***Identify program needs and gaps***



Cross-Cutting Questions

- **Effectiveness:** What are the barriers to using decision support resources in decision making, and how can these barriers be overcome? How can we continuously evolve our approach to decision support as we evaluate experiences and learn more?
- **Information needs:** Across the applications covered in your breakout group, are there **unmet high-priority information needs** shared by user groups?
- **Research priorities:** What observations and research are most needed to develop resources for meeting the needs identified in question 2?
- **Communication:** What are the characteristics of effective communication of science to decision makers, and what is needed to better sustain a continuing dialogue? What are examples of successful decision support collaborations that should inform program design?



Speakers

- **Managing Seattle's Water Supply in Step with a Changing Climate**
Daniel Basketfield, Seattle Public Utilities
- **Droughts and Floods: Better Predictions thru Attribution,**
Martin Hoerling, NOAA
- **Climate in Three Dimensions: Integrated Mountain Climate Observations**
Kelly Redmond, Western Regional Climate Center
- **Climate Forecasts and Reservoir Management – Possibilities and Challenges**
**Sankar Arumugam, International Research Institute,
Columbia University**
- **Experiences from the water resources and agricultural sectors during drought: What do users want? What do researchers want? What is needed?**
Robert Webb, NOAA Climate Diagnostics Center



Take Home Messages

- **Our brokerage of climate forecast products needs to be honest and neutral**
- **Product limitations and performance characteristics need to be conveyed transparently to users**
 - *We must first inform ourselves to do this*
- **In developing and promoting applications we must match insight about performance with insight about the users**
- **Failure in the above places both product credibility and users at risk**

(from 15th AMS Conference on Applied Climatology and 3rd Climate Prediction Applications Science Workshop)



User Attributes to Consider



- **Interests and needs**
- **Sophistication**
- **Frequency and consistency of use**
- **Tolerance for error**



Take Home Messages

- **Impact assessment and scenario development must approach climate model output far more critically, conducting expert and thorough historical record validation of all critical aspects of the problem as a first mandatory step.**
 - *Otherwise the assessments or scenarios may be worthless or, worse, misleading.*
- **Model validation needs greater research attention, both to meet user needs above and to sensitize modelers to deficiencies.**
 - *Currently model validation is grossly inadequate.*

(from my poster)