How can we make sense of this workshop?

Climate modeling groups cannot be consultants (but they can be more cognizant of application requirements, data to save, frequency of saves, etc.)

Water managers need to be specific about requirements (and this is starting with "end-to-end" methodology going from climate models to downscaling to hydrology models)

Need interface group (climate services/RISAs/IRI-like) to respond to application requests, work with modeling groups, model outputs, and stakeholders; value-added function is essential to make effective use of climate model information

High resolution vs. downscaling

In the next year, global 50 km model predictions to 2035
~20 km time slice global atmospheric models for any time
period

Downscaling still applicable to smaller spatial scales

Time scales for future climate change information

a.What is the target time frame: 2020, 2030, 2070?
b.What is the target averaging interval for outlooks: 10 years,
20 years, 30 years…

Aspen Canary Initiative as an example of applying climate model data combined with downscaling and small scale snow models; could fund a series of such studies tailored for water management requirements

Uncertainty: Probabilistic climate change information versus simple ranges
A range gives only information from two models (the two on each end of the range)
Probabilities use multi-model output to better quantify uncertainty

An example:
1.Water managers identify critical thresholds in their water systems
2.Define the climate conditions that would produce those critical thresholds
3.Use climate models to calculate the probabilities of reaching those thresholds for different time frames

How do water managers make decisions? (what does it take to take action/spend resources, and how is information from various sources used)

Could there be a probability threshold that would prompt action? (e.g. 40% chance: no action; 60% chance: action?)

Would the ends of a range prompt action? (if one model shows an extreme outcome)