Climate Change & Water Resources Adaptation

Time of Event:
Monday, August 5, 2013 - 09:00 to Tuesday, August 6, 2013 - 17:00

The National Socio-Environmental Synthesis Center (SESYNC)
1 Park Place, Suite 300
Annapolis, MD 21401

"Climate Change & Water Resources Adaptation: Decision Scaling & Integrated Eco-engineering Resilience" Pursuit team meeting

Project Abstract: Climate change is rapidly altering the global water cycle, challenging society’s ability to sustainably manage water both for people (electricity, cities, agriculture) and for aquatic ecosystems and species. One of the most difficult needs for sustainable water management is understanding how to design dams or ecosystem management plans capable of working over many decades, even centuries, particularly when our understanding of future climate is highly uncertain at the scale of individual river basins. Further, regions where rapid new dam development is occurring often that lack a reliable historic record to guide sustainable water choices. The expertise that exists to address these challenges is fragmented between academics and field practitioners and between disciplines such as ecology, engineering, and hydrology.

We plan to develop a novel and timely strategy for sustainable water management by integrating engineering and ecological approaches to climate resilience. We will use “decision scaling,” an approach centered on stakeholder identification of key ecological and hydrological vulnerabilities to future climate shifts and on analysis of risk of exceeding thresholds of water infrastructure failure with evidence of different confidence levels. Integrating ecological and engineering cultures is essential to allow water managers and policy makers to evaluate explicit tradeoffs between economic development and hydro-ecological stewardship in making choices about designing, building, and operating water infrastructure in a genuinely sustainable fashion. We will use this tool to engage global and regional decision makers and institutions (governments agencies, development banks, NGOs) who are actively engaged in long-term sustainable water investment, management, and conservation.

To learn more about this project, click here. [1]

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