

# **Future Directions of Global Hydrological Models and Water Resource Assessment Incorporating Human Activities**

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This talk will outline the strategy adopted by SAHRA (the NSF funded Science and Technology Center on Sustainability of semi-Arid Hydrology and Riparian Areas) for developing multi-disciplinary integrated models that can bridge the gap between “Science” and “Policy/Management Level Decision-Making”. I will discuss two key aspects of this problem, the relationship between Model Complexity/Understandability and Model Credibility, and the role of “Scenario Development” in the generation of policy-relevant model outputs. I will suggest that a key area needing further attention and formal development is the modeling step called the “Conceptual Model” which is used to construct bridges between the Perceptual models carried around by decision makers and the Symbolic/Computational models that are the favored tools of scientists. It is at the Conceptual Model level that information, knowledge and (ultimately) understanding reside, and also where meaningful dialogue occurs.