SESSION: (B4) S2D forecasts for decision making

(B4-07)

Incorporating decadal predictions into water management

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To understand their climate sensitivities, water managers use hydrologic models to translate climate information into parameters that are relevant to their operations and decision-making. Many water managers are familiar with seasonal climate forecasts and long-term climate change projections, and have started to consider this information in their planning and management. Decadal climate predictions are less well-known among water managers, but meet a planning horizon need. Decadal prediction usage can benefit from some of the lessons learned from usage of predictions at other time scales, but are also unique, warranting new study. This presentation will draw upon a recently developed framework that explores how decadal predictions can be used. Specifically, we will use a case study approach in the water sector, whereby decadal predictions are statistically downscaled to be used as inputs to a hydrological model. By comparing current practices for using seasonal forecasts and climate change projections in water management, we will discuss the differences and similarities, needs and benefits, as well as remaining challenges, of incorporating decadal predictions in water management decisions. This work is part of an ongoing National Science Foundation (NSF)-funded project, Understanding Decision-Climate Interactions on Decadal Scales (UDECIDE), that aims to understand the role of decadal climate information for water management decisions.