CHALLENGES OF CHANGE FOR AQUATIC RESOURCE MANAGEMENT

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Abstract

Fisheries biologists in Minnesota are beginning to conduct extensive research to help address key uncertainties that will arise from climate change. In the aquatic realm, we are doing new landscape-level work on key coldwater species that will be imperiled in many lakes. We are also developing a sentinel lake ecosystem monitoring program to help us decipher the tangled signals of current stressors, and thus hopefully help us more clearly resolve the climate change signal. While novel technical research is important to guide climate change adaptation, management agencies will clearly need to deploy social science tools to help us work with key stakeholders so adaptation policies can use the best available science. The social challenges of climate change have the potential to be extreme and emotionally charged, as passionate resource users will be hesitant to accept inevitable system changes (i.e. fish community shifts), and thus may call for managers to deploy measures that are either extremely costly or technically infeasible. We will therefore present our proposed application of structured decision making and adaptive leadership principles to the challenge of climate change adaptation.