Challenges and Lessons Learned Implementing Management Strategy Evaluation

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Salient points and overarching themes from a two part MSE symposium at the 2017 American Fisheries Society meeting are summarized with emphasis on new analytical methods in MSE development along with best practices for improving stakeholder involvement in the MSE process.

Management strategy evaluation (MSE) is a stakeholder-driven process involving closed-loop simulation tools, which allow testing the efficacy of various management options and identification of those that are likely to achieve pre-specified biological and socioeconomic objectives. We summarize salient points and overarching themes from a two part MSE symposium (2017 American Fisheries Society, Tampa Bay, FL) focused on new analytical methods in MSE development along with best practices for improving stakeholder involvement in the MSE process. The symposium included a keynote address by Dr. Sean Cox, 28 presentations, and a discussion panel that included representatives from the local fishing community, non-governmental organizations, academia, regional management councils, and government scientists. The first set of presentations highlighted the advancements and challenges involved in developing and implementing MSEs and covered a range of species and issues including: environmental covariates, time-varying mortality events, spatial structure, optimizing data collection, developing management procedures, and evaluating harvest control rule performance. The second set of presentations highlighted the benefits of including stakeholders and lessons learned on how to improve stakeholder involvement in the MSE process. MSEs are not a one size fits all process and tools must be custom made for each application, thereby allowing for the vagaries of the situation including the needs and wants of stakeholders involved. No matter the context, communication and education is critical to implementing a successful MSE. An important component of communication involves clearly laying out the goals and objectives before modeling is begun along with continued repetition and reminders of these goals throughout the MSE process.