ICES CM 2019 / F

Assessment of alternative management procedures for the US recreational summer flounder fishery

Jason E. McNamee[1], Amanda R. Hart[2], Gavin Fay[2], Kiley J. Dancy[3]
[1] Rhode Island Department of Environmental Management, Division of Marine Fisheries
[2] Department of Fisheries Oceanography, School for Marine Science and Technology, University of Massachusetts Dartmouth
[3] Mid-Atlantic Fishery Management Council

In the US, several interstate fishery management programs make use of conservation equivalency (CE), where actions by individual jurisdictions can differ but are intended to achieve the same conservation outcome. Given the use of CE in recreational summer flounder management, it is important to investigate the efficacy of this annual and ad hoc approach versus alternatives. Current management assumes similarity among years in fishing behavior and summer flounder population dynamics, and ignores many factors, including: implementation error in management, fish population growth, climate driven changes in flounder temporal and spatial distribution, and inter-annual changes in resource availability to anglers. Current methods for developing CE measures are subject to variability and uncertainty, and past performance against management goals has not been good. This project developed a new methodology that could perform better over time by accounting for more of the population dynamics, sets up mechanisms to allow for fairness, equity, and clarity in the specification setting process, and promotes stability by requiring less frequent management changes. Tradeoffs in the current management approach were investigated using Management Strategy Evaluation (MSE) and tested the performance of current and alternative F- and risk-based management approaches for the fishery. Critically, our MSE allowed for error in implementation of management actions, allowing for a more comprehensive characterization of the uncertainty that exists in the management system due to angler responses to regulations. Access to this information will allow managers to create more robust management choices that account for unforeseen and unpredictable changes in the fishery.

Keywords: Management Strategy Evaluation, climate change, recreational fisheries, tradeoffs, management objectives

Contact Author:
Jason E. McNamee
Rhode Island Department of Environmental Management
Division of Marine Fisheries
3 Fort Wetherill Rd
Jamestown, RI 02835
Jason.mcnamee@dem.ri.gov