

Research Priorities and Recommendations to Support Interjurisdictional Fisheries Management

American Eel

The following research recommendations were developed as part of the [2023 American Eel Benchmark Stock Assessment](#). Research recommendations are broken down into future research and data collection and assessment methodology. Research recommendations from ASMFC 2012, 2017 remain important, but the following list is specific to what the SAS thinks could improve the next stock assessment. The SAS recommends an update be considered in five years and a new benchmark be considered in ten years.

Future Research and Data Collection

- Improve upstream and downstream passage for all life stages of American eels.
- Continue to improve the accuracy of commercial catch and effort data through ACCSP and state partners.
- Characterize the length, weight, age, and sex structure of commercially harvested American eels along the Atlantic coast over time.
- Research coastwide prevalence of the swim bladder parasite *Anguillacolla crassus* and its effects on the American eel's growth and maturation, migration to the Sargasso Sea, and spawning potential.
- Improve understanding of the spawning contribution of unexploited portions of the stock (i.e., freshwater areas of coastal US).
- Characterize the length, weight, and sex structure in unharvestable habitats.
- Conduct a tagging study throughout the species range.
- Quantify recreational removals in marine and freshwater habitats and characterize length, weight, and sex structure.
- Evaluate the passage/passage efficiency of American eels through existing fishways at dams/barriers and evaluate barrier physical attributes (height, material) that can be passed by eel without fishways.
- Evaluate the use vs. availability of habitat in the inland portion of the species range, and how habitat availability has changed through time, including opening of habitat from recent dam and barrier removals. This could and should include assisted migration by trucking around dams.
- To the extent that the data allows, account for the proportion of the population (yellow, silver phase) represented by the inland portion of the species range.

- Evaluate the relative impact that commercial harvest has on population status versus the accessibility to inland habitats.

Assessment Methods

- Develop methods to assess spawner escapement and biological information pertinent to silver eels in major river basins.
- Perform a range-wide American eel assessment with various countries and agencies (e.g., Canada DFO, ASMFC, USFWS, Caribbean, US Gulf and inland states).
- Explore methods to characterize data by sex to support a female-only delay-difference model.