

New menhaden study will help identify balance between fishing and preserving Bay forage fish

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Millions of tiny Atlantic menhaden swim in the Chesapeake Bay and are the favorite menu item of prized rockfish. They are also the heart of a major fish oil industry on the East Coast. However, their numbers have been declining.

Thanks to a grant from the Lenfest [Ocean Program](#), renowned fisheries scientists from the University of Maryland Center for Environmental Science will investigate the balance between fishing for menhaden and the value of the [fish](#) in the ecosystem. The goal is to help develop fishing management guidelines to ensure that this tiny but mighty species, whose population is currently at its lowest point in more than 50 years, survives and thrives along with the other Bay creatures that depend on them.

"Management of menhaden has become very controversial because of different views of how we allocate menhaden between commercial and bait fisheries and those left in the ocean to serve as prey for striped bass and other predators," said the study's lead researcher Dr. Tom Miller, professor and director of the Center's Chesapeake Biological Laboratory in Solomons, Maryland. "We're trying to estimate from a scientific viewpoint how much we need to leave for the predators to fulfill other important roles in the ecosystem."

Menhaden are small, [oily fish](#) that migrate up and down the East Coast. They are crucial food source for larger fish such as striped bass and

bluefish, and for marine mammals and [sea birds](#). They are also one of the few fish that feed on phytoplankton, more recognizable as the [algae blooms](#) that occur each summer after storms wash nutrients into the Bay.

The fish also have a high commercial value. More than 300 million pounds are caught every year and processed into meal and oil for livestock food, including food for aquacultured fish, and Omega-3 [fish oil supplements](#) for people, in the largest plant of its kind on the East Coast. A substantial amount of menhaden is also harvested and used for bait in crab and lobster fisheries.

This new study will adopt an ecosystem-based approach to managing Atlantic menhaden. Rather than focusing on how many fish could be sustainably landed by harvesters, ecosystem-based management focuses first on preserving the structure and function of the ecosystem that surrounds and sustains each fish species under management.

"The menhaden fishery could become a poster child for ecosystem-based fisheries management," said co-investigator Dr. Ed Houde, a leading authority on forage fish ecology and ecosystem-based fisheries management. "This study will help us to identify the role of menhaden in the ecosystem, and how many are needed in the water to keep the balance."

Fisheries expert Dr. David Secor, who studies the migrations and habitat ecology of striped bass and other Chesapeake fishes, is also a member of the research team. "We hope to provide a menu of different reference points that would ensure the sustainability of the menhaden population and the health of the ecosystem," said Secor.

Provided by University of Maryland Center for Environmental Science

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