ASMFC Must End Menhaden Overfishing

Atlantic Menhaden: A Critical Link in the Ocean Food Chain

Menhaden have been called "the most important fish in the sea" because of the critical role they play in the marine ecosystem as prey for other fish and wildlife.

Menhaden provide a vital and unique link between primary production and higher organisms. Adult and juvenile menhaden feed by straining plankton—tiny floating plants and animals— from the water. Menhaden convert plankton into a usable form of energy for animals higher in the food web. Based on diet studies, many valuable and highly prized fish species—such as striped bass, bluefish and weakfish—as well as marine mammals, sea turtles, ospreys and loons depend on menhaden as a food source.

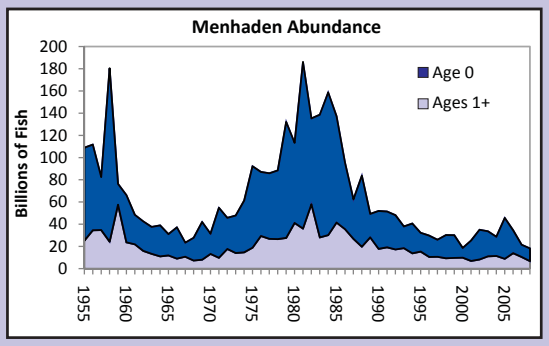
Because each species occupies a crucial niche in the ecosystem, excessive removal of prey species, like menhaden, disrupts an ecosystem's natural balance and sustainability.

The Menhaden Coalition

www.SaveMenhaden.org

Repeated overfishing has caused the Atlantic menhaden population to fall to an all-time, 54-year low.

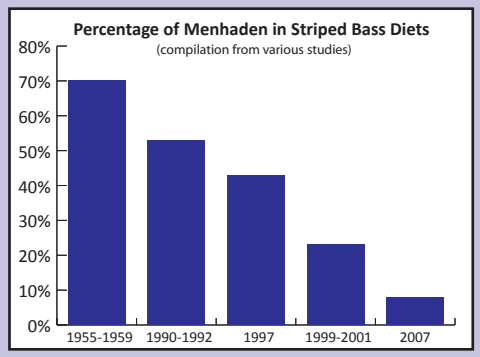
Overfishing of Atlantic menhaden has occurred 32 out of the last 54 years and is still occurring, according to a 2010 stock assessment produced by the Atlantic States Marine Fisheries Commission (ASMFC), the 15-state regulatory body responsible for coordinating and overseeing management of menhaden along the East Coast. The population is now at record low levels.



- The annual removal of adult fish by the fishery is 65% or higher, making it unlikely menhaden will have a chance to spawn more than once.
- The assessment, and a subsequent independent peer review, found that the stock has been reduced to less than 10% of the spawning potential of an unexploited stock.
- Recruitment – the number of juvenile fish produced that survive to enter the adult population - has been poor for twenty years.

(Source: 2010 ASMFC Stock Assessment and Peer Review)

A scarcity of juvenile and adult menhaden puts striped bass and other predators at risk. The following are warning signs that the low numbers are impacting predators:



- Surveys in Chesapeake Bay, the primary menhaden nursery, show menhaden now account for less than 8% of the diet of striped bass. Historically, young menhaden have comprised as much as 70% of the prey consumed by adult stripers.
- Striped bass in the Bay have shown signs of malnourishment with reduced weight-to-length ratios.
- Resident Chesapeake stripers – up to 70% of fish sampled - are infected with mycobacteriosis, a stress-related and typically fatal disease. Poor nutrition increases the severity of infections. Mortality is twice as high in infected bass than in those without the disease.
- Striped bass stock assessments indicate that natural mortality is increasing in Chesapeake Bay, the spawning ground for about 75% of the Atlantic migratory population.
- Weakfish are depleted due to a rise in natural mortality, primarily predation and starvation. Studies indicate low abundance of menhaden has striped bass out-competing weakfish and other predators for prey, as well as feeding on juvenile weakfish.
- Ospreys depend heavily on menhaden. Studies in Virginia have shown that menhaden made up 75% of the diet of osprey nestlings in the 1980s. Today it's only 28%. While the number of nests throughout the bay is up, survival of nestlings is as poor as it was in the DDT era.

(Sources: ChesMMAP, VIMS; University of Maryland CES; Maryland DNR; U.S. Geological Survey; NOAA Oxford Lab; 2008 Review of ASMFC Weakfish Fishery Management Plan; 2009 NOAA Chesapeake Bay Fisheries Science Symposium)

There is no coastwide limit on the amount of menhaden that can be removed from the population by the fishery. In 2010, the industrial reduction fishery, which grinds menhaden into fish meal and oil, harvested over 400 million pounds of menhaden, about half of which was taken from the Chesapeake Bay.

MSP, or Maximum Spawning Potential, And Why It's Important

Percent of maximum spawning potential (%MSP) is used to evaluate the condition of the spawning stock relative to its unexploited state. The current state of Atlantic menhaden – less than 10% MSP – is unusually low, as the 2010 peer review panel noted. This low spawning potential is not surprising given the depleted condition of the adult population, a spawning stock made up mostly of younger, less productive fish, and a fishery that targets this age group. A more conservative target, such as 40%MSP, would significantly increase abundance of menhaden.

[Note: A panel of international scientists recommends a target stock level for forage species *as high as 75 percent* of virgin biomass. Marine Stewardship Council, Report of the Working Group on Low Trophic Level Species, 2010.]

In response to the findings of the 2010 stock assessment and the peer review panel's recommendation that new, more conservative reference points – i.e., population targets and fishing limits – are needed, the ASMFC's Menhaden Management Board has begun the process of changing the way menhaden are managed.

- The Board in May 2010 initiated development of ecologically-based reference points that account for predator demand for menhaden, considering targets and limits used to protect other important forage fish. The earliest the ASMFC's scientific advisors are expected to complete this work is August 2011 but possibly later.
- As an interim action, the Board in August 2010 began drafting an addendum to the Interstate Menhaden Fishery Management Plan that will include a range of new rebuilding targets. The ASMFC is expected to approve the addendum at its March meeting and then send it out for public comment. Under this schedule, the Board would finalize and adopt the addendum at its August meeting for implementation in the 2012 fishing season. If this process is delayed much further, implementation could be pushed back to the 2013 fishing season.
- The rebuilding targets in the addendum, designed to increase the abundance of spawners and the productivity of the stock, are defined in terms of % maximum spawning potential, or MSP. The options being considered for inclusion are 10% MSP (status quo); 15% MSP; 25%; and 40% MSP (see sidebar above).

The ASMFC Menhaden Management Board should be urged to keep to the above timeline and include the full range of %MSP options in the addendum for public hearings and choose the most conservative target (at least 40%MSP) for adoption at its August meeting, since it is widely recognized that forage fish like menhaden should be maintained at higher abundance to provide adequate forage for all components of the ecosystem.

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