



What's New at the Atlantic States Marine Fisheries Commission

Chesapeake Bay Sustainable Fisheries
Goal Implementation Team
Annapolis, Maryland
December 2016

Menhaden in the Wall Street Journal

A2 | Saturday/Sunday, November 12 - 13, 2016

THE WALL STREET JOURNAL

U.S. NEWS

Population Problem for Ocean's Unsung Hero

What is the most important fish in the sea?

The answer is—surprise!—menhaden.

If you're scratching your head over that one, you're

not alone. Like a character actor whose name you can't recall, menhaden provides critical support to the ocean's stars. Whales, tuna, cod and striped bass are among the headliners that nosh on the nutritious morsels.

But the species also plays a meaty, if unheralded, role on land. By weight, it's the largest catch pulled from the Atlantic Ocean. It has earned at least \$300 million in revenues this year for the reduction industry, which turns the fish into animal food, fertilizer and food supplements. And it's at the heart of a debate that is rolling conservationists who want to protect the species and fisheries that want to profit from it.

Trying to sort it out is the Atlantic States Marine Fisheries Commission, which manages two dozen species

groups living within 3 miles of the U.S. coast from Maine to Florida.

"Our big question is how many fish are out there and how many can we take without driving the population to collapse?" said Katie Drew, a senior stock assessment scientist with the marine commission.

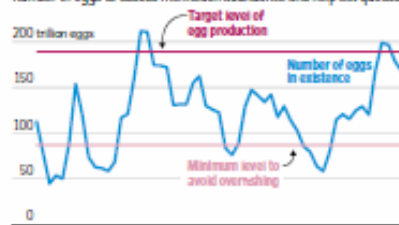
Manure menhaden weigh about a pound each and are commonly known as pogey or bunker. Until recently, there was no coastwide fishing limit on the fish, but in 2013, worried about overfishing, the marine commission implemented a quota of 170,800 metric tons a year, or 20% less than the preceding three-year average.

Last year, the commission raised the quota by 10%. Next year, it will increase it by another 6.5%, to 200,000 metric tons, or about 441 million pounds. And it's likely to review the figure again as it grapples with how to best manage this important fish.

Before setting a quota, the commission evaluates the fish population, which is easier said than done. Experts at the Pew Charitable Trusts compare it to counting

What's the Catch?

The Atlantic States Marine Fisheries Commission has revised catch limits for menhaden, a valuable forage fish, several times to balance conservation and business concerns. Researchers use the estimated number of eggs to assess menhaden abundance and help set quotas.



Note: Based on current benchmarks.

Source: Atlantic States Marine Fisheries Commission THE WALL STREET JOURNAL

trees—except it's midnight, the trees are moving, and they're eating each other.

In its assessments of menhaden, the commission examines the size of the commercial catch and conducts two types of independent surveys. One focuses on fish that are less than a year old to get an idea of how many have been born. The other focuses on fish that are one or more years old to get a sense of how many off-

spring about the population, Dr. Drew said to imagine a survey that yields a sample of 100 menhaden. Fishermen then net 2,000 pounds of the fish. A subsequent survey yields only 50 menhaden.

"So, the fishery took out 2,000 pounds, and the population declined by 50%," Dr. Drew said. "Fish do not just die from fishing, but we can get a handle on that by looking at how long they live, the expected longevity, or how big they are."

With this information, the commission can begin to think about limits.

Like most fish, menhaden are managed as a single species without regard to the predators that rely on them for food, and from that perspective, they do not appear to be overfished. But an alternative, multispecies approach would also estimate the effect of menhaden fishing on other species.

A multispecies model could account for a few important predators, like striped bass, or it could include everything from plankton to whales.

"Menhaden play a really critical role in transferring energy from the lowest end

of the food chain to the largest predators," said Joseph Gordon, Mid-Atlantic Ocean conservation manager for the Pew Charitable Trusts, explaining the appeal of the approach. "Hundreds of thousands of relatively small fish with their mouths agape are just churning through large blooms of plankton. And everywhere they go, they are chased by predators."

The marine commission is building a multispecies model and is soliciting public comments about how to manage menhaden.

"It's easy to say more menhaden in the ocean mean more striped bass, but how much more?" Dr. Drew said, noting some of the issues. "Is it fair for the menhaden industry to take a hit so the population of striped bass goes up?"

If the commission adopts a multispecies approach, it will be a first. "No one in the world has managed a whole species for predators," said Aaron Kornbluth, an environmental scientist with the Pew Charitable Trusts.

And in this spotlight, the humble menhaden might, at last, get the star treatment it deserves.

Overview



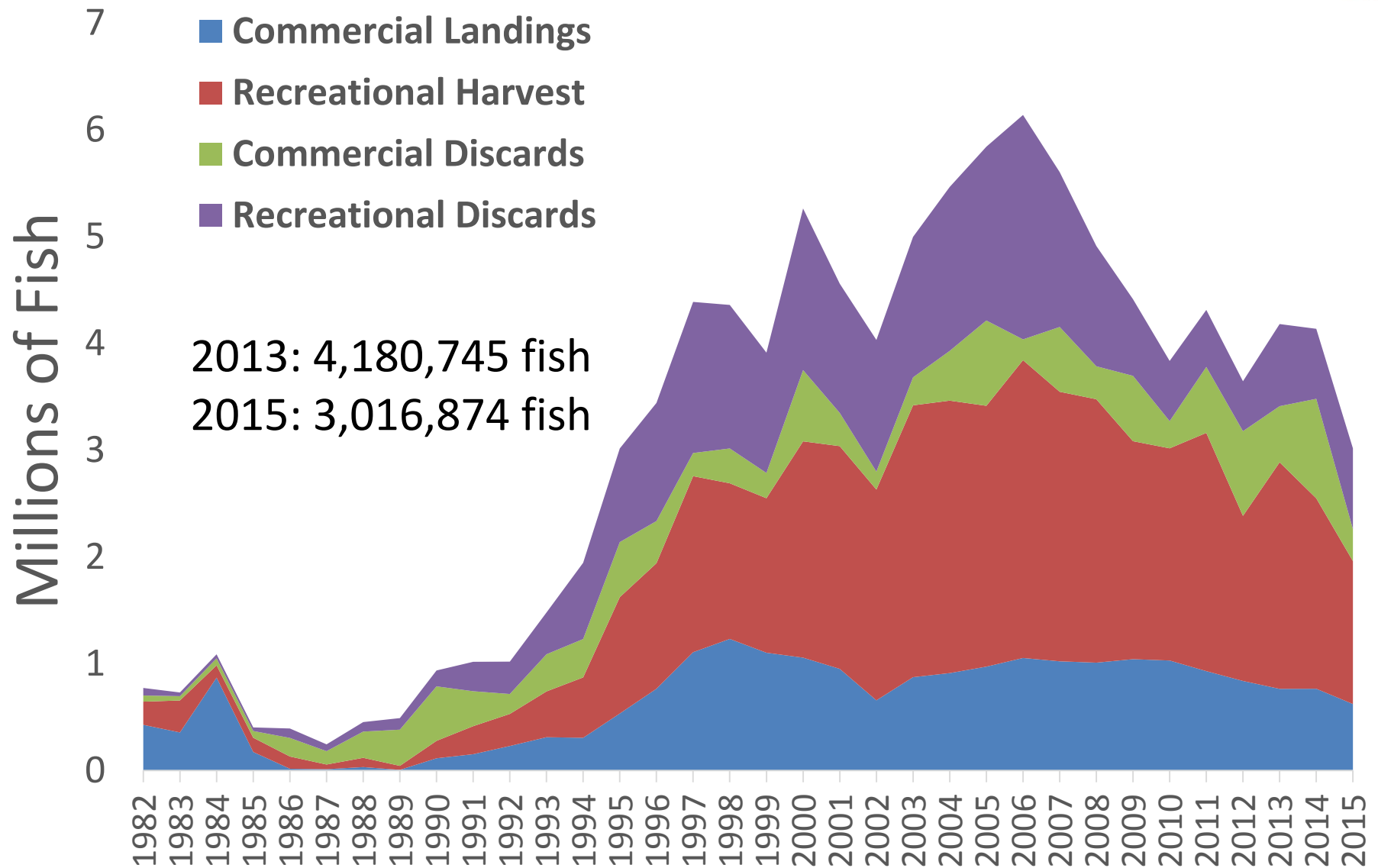
- 1) Striped bass harvest reductions achieved
- 2) Menhaden TAC set for 2017; ERP development
- 3) Stock Assessments on the horizon
- 4) Atlantic Coastal Fish Habitat Partnership

Striped Bass Management



- 2013 assessment: $F > \text{target}$, declining SSB
- FMP Amendment 6, Addendum IV
 - 20% reduction Chesapeake Bay quota
 - 25% reduction coast wide quota
 - 1 fish bag limit
- Implemented January 2015
- Harvest reports show overall reductions achieved
- New benchmark assessment, Fall 2018

Atlantic Striped Bass Removals by Sector

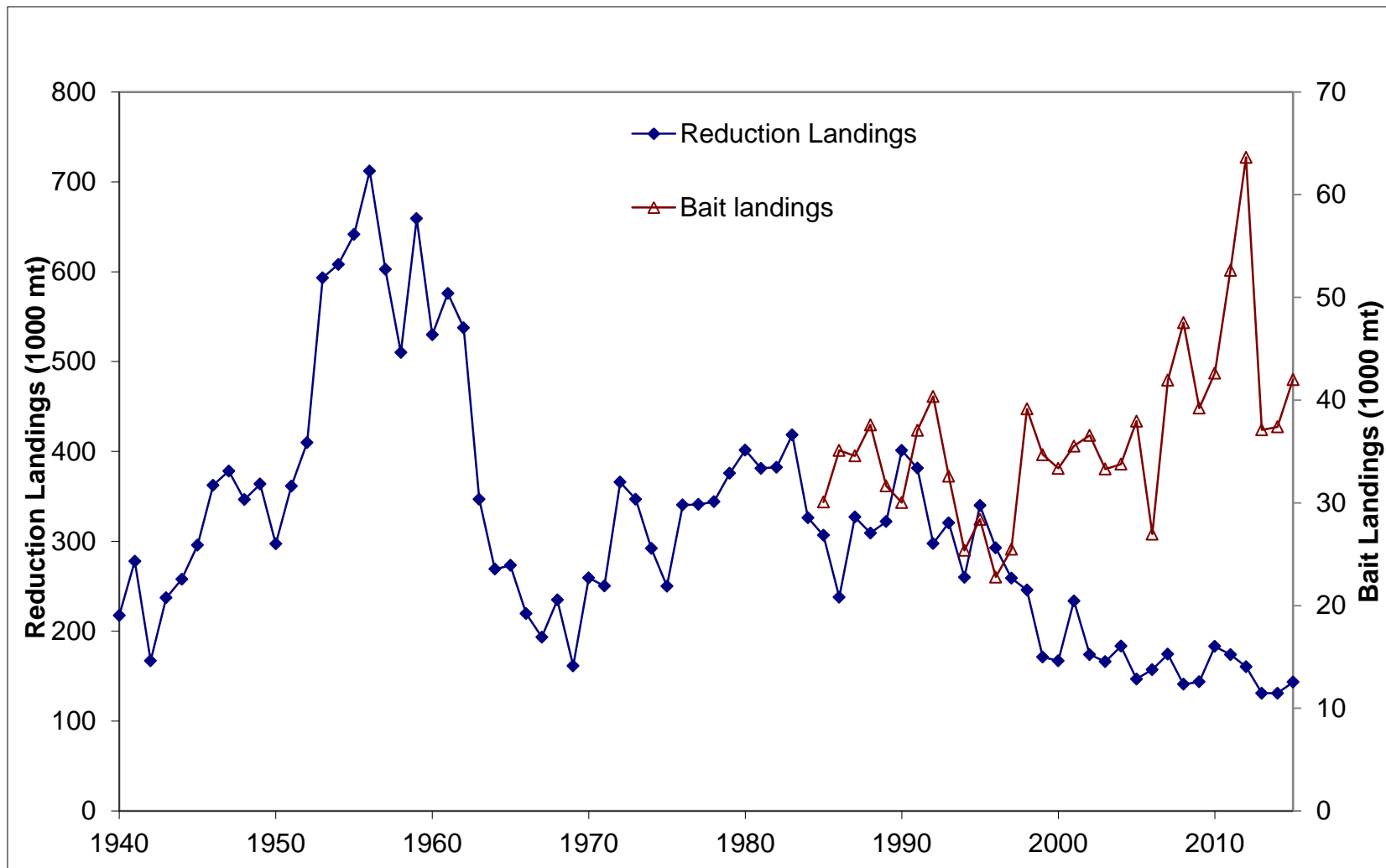


Menhaden Management



- 2017 Total Allowable Catch (TAC) set at 200,000 MT (441 million lbs.), ~6% increase from 2016
- Healthy stock status, strike balance between ecosystem and fishing industry needs
- New socioeconomic study due early 2017, to inform FMP Amendment 3 decisions
- Stock assessment update, August 2017
- Benchmark assessment + ERP models, 2019

Menhaden Landings



Atlantic menhaden landings from the reduction purse seine fishery (1940–2015) and bait fishery (1985–2015)

Cobia Management



- New complementary management by SAFMC and ASMFC
 - State waters harvests increasing in recent years
 - ACL/quota exceeded in 2015
- Fishery Management Plan timeline
 - October 2016: ASMFC South Atlantic Board approved Public Information Document
 - Nov 2016 - Jan 2017: public hearings in VA, NC, SC, FL
 - February 2017: Board reviews public comment and directs FMP development

Stock Assessment Activities



- Spot and croaker assessments, May 2017
 - Recent decreases in harvests and survey indices
 - Shrimp fishery bycatch concerns
 - croaker last assessed 2010, spot first-time assessment



Stock Assessment Activities



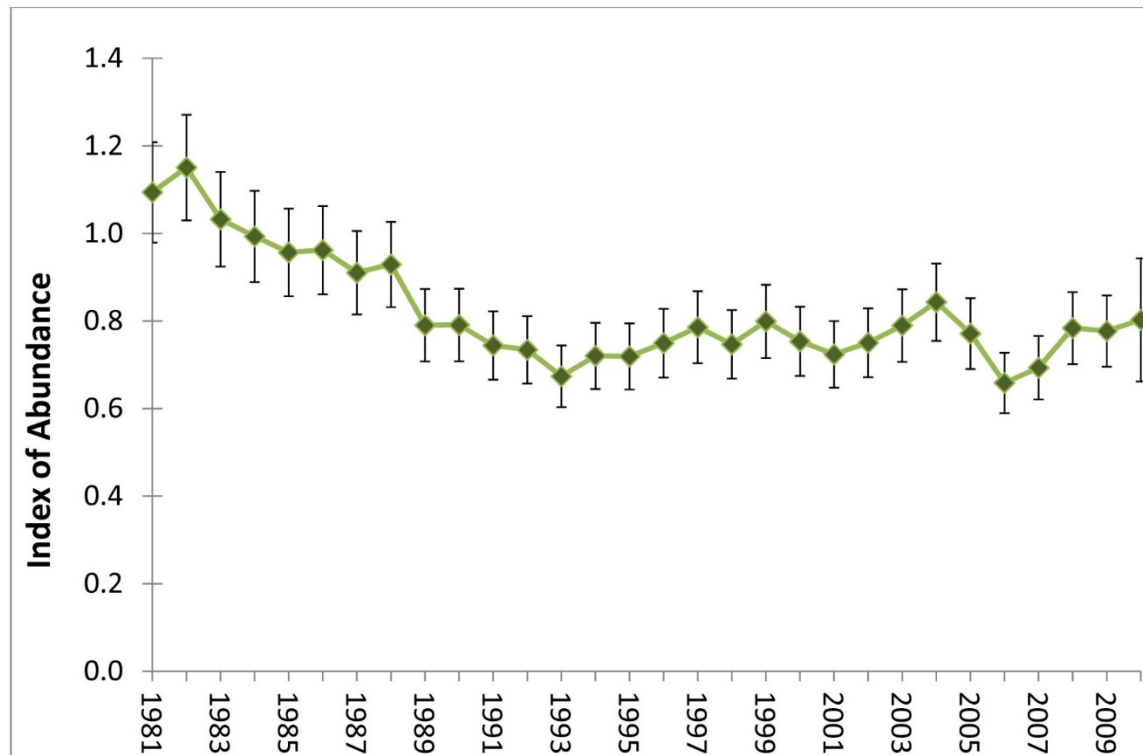
- Atlantic sturgeon assessment, October 2017
 - To inform updated review of 2013 ESA listings
 - Last assessed 1998, stocks overfished



Stock Assessment Activities



- Eel assessment update, October 2017
 - Last assessed 2012, stocks depleted



Index of Abundance for Yellow-phase American Eels along the Atlantic Coast. Source: ASMFC American Eel Benchmark Stock Assessment, 2012

Atlantic Coastal Fish Habitat Partnership



- New 2017-2021 Conservation Strategic Plan
 - Guides on-the-ground habitat restoration priorities (oyster reef, salt marsh, SAV, fish passage) from Maine to Florida
- Mid-Atlantic region priority habitat types
 - Submerged Aquatic Vegetation
 - Marine and Estuarine Shellfish Beds
 - Tidal Vegetation
 - Riverine Bottom
- 15 restoration projects funded since 2010
 - Annual ACFHP-USFWS RFP open July-September

