

The Chesapeake Bay Sustainable Fisheries Goal Implementation Team has recently identified concerns regarding increasing populations of blue and flathead catfish, which are considered to be invasive species, in the freshwater tributaries of the Chesapeake Bay watershed. As a result, the Goal Implementation Team is considering management options to reduce the populations of blue and flathead catfish to levels that will have little to no impact on species that are often considered to be of greater ecological and economic importance as well as species currently undergoing extensive restoration efforts.

What is the Chesapeake Bay Sustainable Fisheries Goal Implementation Team?

Chaired by the director of the National Oceanic and Atmospheric Administration (NOAA) Chesapeake Bay Office, the Chesapeake Bay Sustainable Fisheries Goal Implementation Team (the Team) is an assemblage of state fisheries managers, federal agencies, and other influential enterprises that operate within the Chesapeake Bay watershed. The Team's goal is to improve the management of, or recovery of oyster, blue crab, menhaden, striped bass, American shad, hickory shad, blue back herring, and alewife. The Team focuses on advancing ecosystem-based fisheries management by using science to make informed management decisions that are effective throughout the Chesapeake Bay watershed. Through this approach the Team creates and enacts management strategies that will achieve sustainable fisheries, support recreational and commercial fishing, all while promoting natural ecosystem functions. The Team includes representation from the NOAA Chesapeake Bay Office, Maryland Sea Grant, Virginia Marine Resources Commission, Maryland Department of Natural Resources, Potomac River Fisheries Commission, Atlantic States Marine Fisheries Commission, and District Department of the Environment.

What are invasive species?

According to Executive Order 13112, invasive species are defined as “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.”

Due to the wide-ranging nature of the above definition, a follow-up Invasive Species Definition Clarification and Guidance White Paper was submitted by the Definitions Subcommittee of the national Invasive Species Advisory Committee (ISAC), and approved by the ISAC in 2006. An important point clarified in the document is that:

"An invasive species is a non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human, animal, or plant health. The National Invasive Species Management Plan indicates that NISC will **focus on non-native organisms known to cause or likely to cause negative impacts and that do not provide an equivalent or greater benefit to society**. In the technical sense, the term ‘invasion’ simply denotes the uncontrolled or unintended spread of an organism outside its native range with no specific reference about the environmental or economic consequences of such spread or their relationships to possible societal benefits. **However, the policy context and subsequent**

management decisions necessitate narrowing what is meant and what is not meant by the term *invasive species*. Essentially, we are clarifying what is meant and not meant by "causing harm" by comparing negative effects caused by a non-native organism to its potential societal benefits.

How do these species get from one location to another?

Species are transported by many different methods, some natural, other human assisted. It is believed that the species in question, blue and flathead catfishes, were introduced into non-native ecosystems by one or more of the following methods:

1. Accidental stocking by fisheries management agencies.
2. Intentional stocking by fisheries management agencies.
3. Intentional introduction by anglers.
4. Natural migration (colonization).

Why blue and flathead catfish?

The Chesapeake Bay Sustainable Fisheries Goal Implementation Team has taken interest in blue and flathead catfish for the following reasons:

1. Blue and flathead catfish are new, apex predators.
2. According to United States Fish and Wildlife Service (FWS) studies, catfish can disperse rapidly, becoming a system's top predator.
3. Both species achieve tremendous size (>100lbs) for freshwater fish found in the U.S.
4. According to FWS studies, both species have the potential to constitute a very high percentage of a river system's fish biomass.
5. According to FWS studies, as adults, both species feed primarily on other fish, including anadromous species (i.e. shad and river herring).
6. According to FWS studies, both species have a high tolerance for varying habitat and water conditions.

Why Now?

Fisheries managers have seen increasing catfish populations, as well as increasing numbers of large individuals. These observations and the factors as documented in multiple FWS studies indicate that blue and flathead catfish have the ability to, and potential to adversely affect the populations and recovery efforts of anadromous species, namely American shad, hickory shad, blueback herring, alewife, and white perch. Additionally, stalled recovery efforts leading to further declines in these anadromous species will likely have far reaching and detrimental impacts on the Bay-wide food webs that extend beyond the freshwater tributaries.

Where are the data to support these concerns?

The United States Fish and Wildlife Service has completed multiple studies that included North Carolina, Pennsylvania, Delaware, Virginia, and Maryland, collectively indicating that if

unchecked, introduced catfish may greatly alter the ecosystems in which they were introduced, as well as the surrounding ecosystems that seasonally contribute attractive prey items.

The Challenges

The Sustainable Fisheries Goal Implementation Team fully acknowledges, understands, and internalizes the challenges and competing interests surrounding such a call to action. We also understand that to achieve the goal of Bay-wide sustainable fisheries, we need your input and support. While blue and flathead catfish are fun to catch, palatable, and provide local communities with income, the question must be asked, are these benefits more significant and more impactful than the overall ecosystem-level health and sustainability of the Chesapeake Bay? The Sustainable Fisheries Goal Implementation Team continues to investigate this issue and will objectively collect blue and flathead catfish data in an effort to identify and implement ecosystem-based, scientifically sound management decisions.