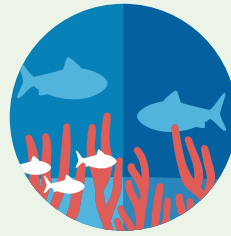


Prey



Bycatch



Habitat



Proceed with caution



Ecosystem

# Waste Not, Want Not

Avoiding bycatch helps fish populations and fishermen

The unintended catch of nontarget fish and other wildlife—which are often discarded dead or dying—is known as bycatch and is a persistent problem for fishery managers. Bycatch represents a massive waste of U.S. ocean resources: Almost a fifth of the total commercial catch is discarded in the United States, totaling about 4.6 million pounds of fish per day.<sup>1</sup>

Many types of fishing gear catch and kill far more ocean wildlife than intended. Fishermen discard this bycatch for multiple reasons: because they need room for higher-value species; because possession is illegal; or because of regulatory restrictions on size or quantity. Besides damaging ocean ecosystems, bycatch compromises economic opportunity. In 2013, NOAA Fisheries scientists estimated that fish discarded due to their size or species cost fisheries \$427 million in lost sales at port, \$4.2 billion in seafood-related sales (e.g., seafood and its packaging), and 64,000 jobs annually.<sup>2</sup>

The Magnuson-Stevens Act requires managers to minimize bycatch to the “extent practicable,” but a less ambiguous standard is needed to create solutions and close loopholes.

## The solution

As part of the reauthorization of the Magnuson-Stevens Act, Congress should strengthen the requirement to reduce bycatch by directing managers to:

- **Avoid bycatch**, rather than simply minimize it when practicable, and minimize mortality of unavoidable bycatch.
- **Assess the effect of bycatch** on efforts to restore depleted fish populations.
- **Apply a consistent definition of bycatch** to include all incidental catch of fish and wildlife, such as seabirds, marine mammals, and unobserved mortality from fishing gear.

## Bycatch: A closer look

### Driving innovation

Managers can find ways to reduce bycatch while allowing fishing to continue. One example is found in the Gulf of Mexico, where a surface longline fishery for yellowfin tuna and swordfish has historically discarded more than half of its catch, mostly dead, including depleted western Atlantic bluefin tuna, sharks, juvenile swordfish, and endangered sea turtles.<sup>3</sup> Fortunately, alternative gear is available and results in far less waste of marine life while allowing fishermen to pursue their target catch. Recent data from the Gulf revealed that alternative gear could economically catch yellowfin, with 94 percent of the catch of all species being retained or released alive, compared with just 64 percent on longlines.<sup>4</sup>

### Avoiding and reducing waste, restoring fish

Despite management designed to rebuild depleted species, some populations are still struggling to recover; bycatch can place additional pressure on the species and hinder their progress. In the South Atlantic United States, populations of popular species such as red snapper, speckled hind, and warsaw grouper remain extremely vulnerable to bycatch mortality in other fisheries.<sup>5</sup> These populations will recover more quickly with management that reduces unintentional waste.

The benefits of avoiding ocean bycatch could also be felt upriver. Significant effort has been made to restore the freshwater habitat of river herring and shad, which migrate upstream from the ocean to spawn. But without protections in the ocean, an entire run of these fish can be wiped out by one pass of an industrial trawler seeking sea herring. To make sure that investments in restoration yield the desired results, the law should require best practices to avoid bycatch of these and other important species in the open ocean.

## Endnotes

- 1 Discard rate from William A. Karp et al., eds., *2011 U.S. National Bycatch Report*, National Marine Fisheries Service (2011), NOAA Tech. Memo. NMFS-F/SPO-117C, [http://www.nmfs.noaa.gov/by\\_catch/BREP2011/2011\\_National\\_Bycatch\\_Report.pdf](http://www.nmfs.noaa.gov/by_catch/BREP2011/2011_National_Bycatch_Report.pdf); and pounds per day calculated using total landings from 2013 (9.9 billion pounds) from Alan Lowther and Michael Liddel, eds., *Fisheries of the United States 2013*, National Marine Fisheries Service (2014), <http://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus13/FUS2013.pdf>.
- 2 Wesley S. Patrick and Lee R. Benaka, "Estimating the Economic Impacts of Bycatch in U.S. Commercial Fisheries," *Marine Policy* 38 (2013): 470–475, doi:10.1016/j.marpol.2012.07.007.
- 3 Kenneth Keene and Lawrence Beerkircher, National Oceanic and Atmospheric Administration, Southeast Fisheries Science Center, pers. comm., Cameron Jaggard, The Pew Charitable Trusts, Aug. 10, 2010.
- 4 David W. Kerstetter et al., "Alternative Gears Pilot Program: Evaluation of Greenstick and Swordfish Buoy Gears in the Gulf of Mexico: 2011–2013," final report, Nova Southeastern University Oceanographic Center (2014).
- 5 Nicholas A. Farmer and Mandy Karnauskas, "Spatial Distribution and Conservation of Speckled Hind and Warsaw Grouper in the Atlantic Ocean Off the Southeastern U.S.," *PLOS ONE* 8 (2013), doi:10.1371/journal.pone.0078682; and SouthEast Data, Assessment and Review, "SEDAR 24 Stock Assessment Report: South Atlantic Red Snapper," Southeast Fisheries Science Center (2010), [http://www.sefsc.noaa.gov/sedar/download/SEDAR%2024\\_SAR\\_October%202010\\_26.pdf?id=DOCUMENT](http://www.sefsc.noaa.gov/sedar/download/SEDAR%2024_SAR_October%202010_26.pdf?id=DOCUMENT).

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