

# **U.S. National Bycatch Report**

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Cover photo credits:

Background: fishing net, NMFS. Left to right: spotted dolphins inside a tuna purse-seine net, NMFS; loggerhead sea turtle escaping a trawl net via a turtle excluder device, NMFS; blue shark caught on longline gear, NMFS.

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Bycatch from a shrimp trawl. © Elliott Norse, Marine Conservation Biology Institute/Marine Photobank.

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## First Edition



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# Preface

Ensuring the sustainability of marine resources for future generations is the primary mission of the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS). Reducing the unintentional capture, or bycatch, of fish, marine mammals, sea turtles, and seabirds is an essential part of this goal and is required under NMFS' guiding legislation. The first step in reducing bycatch is accurate characterization of current bycatch levels; this provides a benchmark for evaluating the effectiveness of our efforts to reduce bycatch. Understanding the amounts and types of bycatch in our nation's fisheries is also an important component of ecosystem-based management, which seeks to account for the complex connections among organisms, including humans and their environment.

The U.S. National Bycatch Report provides the first nationwide compilation by NMFS of estimated bycatch in U.S. commercial fisheries. It expands upon the conservation and management strategies articulated in previous NMFS publications such as *Managing the Nation's Bycatch* (1998) and *Evaluating Bycatch* (2004b), and mandated under the Magnuson-Stevens Act, Marine Mammal Protection Act, and Endangered Species Act. The U.S. National Bycatch Report also provides information on sampling and estimation methods, provides an objective framework for evaluating the quality of bycatch estimates, and establishes performance measures for monitoring improvements to bycatch data quality and estimates over time.

A great deal of work went into compiling the estimates contained herein, as well as in developing new processes for evaluating the quality of bycatch data, describing the impact of bycatch upon stocks and fisheries, and developing recommendations to improve the quality and extent of data collection and the quality of estimation methods. In each of its six regions, NMFS collects data that are used for bycatch estimation. Some of these data come directly from the fishing industry itself, such as fishermen's logbooks; bycatch data are also collected by observer programs. Using this information, in addition to data on commercial and recreational fishery landings, regional assessment scientists generate estimates of bycatch at the fishery and species level. The quality and amount of available data and the methods used to estimate bycatch vary widely among regions, fisheries, and species. Since this project was initiated in 2006, estimates presented are based upon data collected in 2005. We recognize that more recent bycatch estimates are available for many fisheries, and that changes to fisheries management practices have occurred in the interim, potentially affecting bycatch levels presented in this report.

NMFS is committed to compiling updated and new estimates in a timely manner. I am certain that you will find in these pages valuable insights into the nature of bycatch in our nation's fisheries as well as steps that NMFS, together with our partners at the regional Fisheries Management Councils, is taking to improve the quality of bycatch estimates and to reduce bycatch levels. In particular, research in the area of fishing gear technology, development of electronic fishery monitoring techniques, and the implementation of catch shares and other accountability measures, are advancing our goal of meeting our bycatch reduction mandates.

The report includes:

- A complete list of 274 Federal, state, international, and tribal commercial fisheries, identifying management authorities, gear types, target species, and bycatch data sources
- Evaluation of bycatch data sources and estimation methods for 152 Federal commercial fisheries, 46% percent of which were determined to have high-quality bycatch information
- Bycatch estimates for 81 Federal commercial fisheries
- 480 fish, 54 marine mammal, 12 sea turtle, and 28 seabird stock-level bycatch estimates
- An estimated overall national bycatch ratio for fish (bycatch/total catch) of 17%
- Identification of 396 key stocks that will be monitored over time for changes in bycatch levels
- 120 recommendations for improvements to bycatch data collection and estimation for key fisheries.

This is the first in a planned series of national bycatch reports designed to track and report on our efforts to monitor bycatch. The U.S. National Bycatch Report will serve as a cornerstone, aiding NMFS in meeting our bycatch reduction mandates and stewardship obligations by identifying trends in bycatch, guiding policy, and setting priorities for bycatch data collection.

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# Acknowledgments

The U.S. National Bycatch Report was developed over the course of several years under the leadership of Dr. Lisa Desfosse (Director, Southeast Fisheries Science Center Pascagoula Laboratory) and Dr. Bill Karp (Deputy Director, Alaska Fisheries Science Center). Project coordination was provided by Samantha Brooke (Office of Science and Technology).

The methodological approach for the report was developed through numerous workshops and conference calls by the National Bycatch Report Steering Committee; bycatch information was provided by teams of scientists and fisheries managers from each of the NMFS regions. Steering Committee and Regional Team members are listed in Appendix G and F, respectively. Two SeaGrant fellows, Jessica Barkas (2006–07) and Catherine Purcell (2009–10), also provided extensive aid in the development of the report.

A collaborative effort, the U.S. National Bycatch Report is the product of extensive data, information, comments, suggestions, and research provided by colleagues throughout NOAA, both those engaged in the aforementioned Steering Committee and Regional Teams and those who provided additional insight on specific topics. We thank them for their efforts in ensuring the accuracy of the information included herein, as well as for providing insight into national and regional bycatch concerns. Without their support, this report would not have been possible.