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## Re: Comments for NOAA Fisheries' Bycatch Strategy Review

The Pew Charitable Trusts appreciates the opportunity to share our perspectives on U.S. efforts to monitor, assess, and minimize bycatch as a part of NOAA Fisheries' ("the agency") early stages of developing a new National Bycatch Strategy.

Bycatch, which is the indiscriminate or incidental capture of fish and marine life other than those a fishing vessel intends to catch, affects living marine resources worldwide. Bycatch occurs in commercial, recreational, and subsistence fisheries, and is of particular concern if bycatch species are overfished, threatened, or endangered.

Economically, bycatch equates to lost opportunity: 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> In 2013, the agency 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> This not only can preclude more valuable uses of fishery resources, but also can potentially reduce future productivity and yields by killing juvenile fish and mature reproductive fish.

Bycatch can also have significant effects on the structure and function of the ecosystem: important species in the food web can be depleted, leaving dependent predators at risk or important ecological services unfilled; vulnerable species like sea turtles, marine mammals, and sea birds can be driven to unsustainable or endangered levels; and the age structure of species can be rendered unbalanced, with consequences for reproductive rates and outcomes.

In several instances, fishery managers, fishermen, scientists, conservation advocates, and others have worked together to improve bycatch avoidance and reduce the mortality of bycatch in recent years, but there is more work to be done. We are encouraged that the agency is taking a fresh look at the National Bycatch Strategy, and look forward to seeing bycatch

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<sup>1</sup> 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>.

<sup>2</sup> 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

concerns highlighted and improved policies and approaches implemented to reduce bycatch throughout the fishery management system.

At the outset, we note our previous request, dated June 22, for an extension to this one month comment period. Unfortunately, due to overlapping comment periods associated with the proposed revisions to National Standards 1, 3, and 7 guidelines and resulting time constraints, we are offering these broad overview comments, which are not all-inclusive of our concerns or suggestions. We hope to have additional opportunities in the future to weigh in on this new strategy document with more detailed, specific comments.

Despite a nearly twenty year mandate to minimize bycatch and bycatch mortality to the extent practicable in federally managed fisheries, guidelines for implementing National Standard 9,<sup>3</sup> and technical guidance for Standardized Bycatch Reporting Methodology (SBRM),<sup>4</sup> the bycatch requirements in the Magnuson-Stevens Act and other applicable law are still inadequately and unevenly implemented throughout the regions. While progress has been made in a number of fisheries in accounting for and reducing bycatch, the standards and practices for bycatch and mortality minimization vary widely by region and fishery, and many fishery management regions still lack standardized bycatch data collection, monitoring and reporting systems. Although nearly all U.S. fisheries include at least some measures aimed at addressing bycatch, less than half of the nation's commercial fisheries evaluated by NOAA Fisheries in 2011 had high-quality bycatch data and estimation methods capable of evaluating the performance and effectiveness of such management measures over time.<sup>5</sup> In many U.S. fisheries, catch monitoring and accounting is simply not adequate to give a representative sample of the fishing activities of the fleet, resulting in high levels of uncertainty in bycatch estimates and total fishing mortality. The lack of reliable bycatch data in many U.S. fisheries undermines the ability of managers to effectively assess the amount and type of bycatch occurring in a fishery, as the law requires.<sup>6</sup> This also prevents accurate catch accounting from all sources of mortality, jeopardizing the ability of the agency to prevent overfishing, rebuild overfished stocks, implement annual catch limits (ACL) and accountability measures, and achieve optimum yield from each fishery on a continuing basis.

In addition to ensuring that all regions and fishery management plans (FMPs) have adequate bycatch reporting methodologies based on consistent national standards and criteria, NOAA Fisheries must make certain that fisheries regulations addressing bycatch are put in place and working as intended to reduce and minimize bycatch. Conservation and management measures, such as catch limits, bycatch limits, time-area closures, fishing cooperatives, catch share programs, gear modifications and the use of cleaner, lower-impacts gears, can be successful at reducing bycatch and discards when employed in conjunction with effective

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<sup>3</sup> 50 C.F.R. 600.350.

<sup>4</sup> NOAA Fisheries. Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs. 2004. [http://www.nmfs.noaa.gov/by\\_catch/SPO\\_final\\_rev\\_12204.pdf](http://www.nmfs.noaa.gov/by_catch/SPO_final_rev_12204.pdf)

<sup>5</sup> NOAA Fisheries. (2011). National Bycatch Report, First Edition. [http://www.nmfs.noaa.gov/by\\_catch/bycatch\\_nationalreport.htm](http://www.nmfs.noaa.gov/by_catch/bycatch_nationalreport.htm).

<sup>6</sup> 16 U.S.C. 1853(a)(11).

monitoring, reporting, and enforcement systems. Public education and information campaigns aimed at expanding the use of inexpensive technologies such as descending devices can reduce the discard mortality of fish released alive in recreational and commercial fisheries. Targeted cooperative research programs and the Bycatch Reduction and Engineering Program also have great potential to improve bycatch minimization efforts by stimulating the development of creative gear solutions to bycatch that engage industry in R&D, although technological gear fixes alone will not solve most bycatch problems.<sup>7</sup>

Further, in recent years, the agency has clearly indicated a strong interest to move forward with implementing ecosystem-based fisheries management (EBFM) approaches.<sup>8</sup> This requires a shift from thinking about fish populations in isolation, and instead considering the broader picture, which includes interactions between species, their habitat, and the humans that interact with them in management decisions. The agency has called EBFM “central to our mission to sustainably manage fisheries,” identifying it as a science-based management approach that “helps us end overfishing and rebuild stocks for the long term benefit of the nation by helping us respond to, anticipate, and manage impacts to fisheries from various components of the ecosystem.”<sup>9</sup> To implement EBFM, managers will need to maintain healthy levels of forage fish and account for the important role they play for other ocean wildlife, protect and restore important fish habitats, reduce bycatch, evaluate the potential effects of new fisheries before allowing them to commence in order to ensure they will be sustainable at the outset, and create management plans with goals and objectives for the ecosystem, not just one fish stock. Accurate and timely bycatch data is crucial to integrating EBFM into fisheries management, and the agency should look to incorporate these ecosystem-level principles as it revises the National Bycatch Strategy.

**Pew’s recommendations for a new National Bycatch Strategy include the following:**

NOAA Fisheries’ revisions should make clear that bycatch can include all living marine resources, including marine mammals and seabirds. While the Magnuson-Stevens Act has a narrow definition of bycatch, the agency’s other authorities, including those under the Marine Mammal Protection Act<sup>10</sup> and the Endangered Species Act,<sup>11</sup> require a broader and more inclusive definition for a national policy.

The agency should integrate bycatch minimization more fully into fisheries management to bolster the implementation of EBFM throughout U.S. fisheries management. It is vital to understand the interactions of fisheries with all components of the ecosystem to ensure that food web structure and function are not compromised due to fishing activities. This is of

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<sup>7</sup> NOAA Fisheries. (2007). Bycatch in the South Atlantic, Gulf of Mexico and Caribbean, Southeast Bycatch Workshop Proceedings, May 16-18, 2006. <http://sero.nmfs.noaa.gov/sf/bycatch/Proceedings%20March%202021,%202007.pdf>.

<sup>8</sup> NOAA Fisheries. Ecosystem-Based Fisheries Management. <http://www.st.nmfs.noaa.gov/ecosystems/ebfm/index>

<sup>9</sup> NOAA Fisheries. Status of Stocks 2014.

<sup>10</sup> E.g. 16 U.S.C. 1387(a)(1).

<sup>11</sup> E.g. 16 U.S.C. 1538(a)(1).

particular importance as stressors like pollution and climate change increasingly affect the ocean.

NOAA Fisheries and the Councils should establish the necessary fishery monitoring, catch accounting, and reporting requirements needed to accurately and reliably assess the amount and type of bycatch occurring in all U.S. fisheries. As noted previously, some regions do not have a SBRM. Many fisheries lack adequate or statistically representative monitoring elements in their FMPs. Congress required SBRM to be a component of all FMPs in the 1996 Sustainable Fisheries Act.<sup>12</sup> Eighteen years later, the agency should ensure that the basic requirements of the Magnuson-Stevens Act are met.

The agency should significantly expand and improve activities to monitor bycatch. This includes additional at-sea observer coverage in commercial fisheries and the for-hire sector of recreational fisheries, establishment of electronic monitoring and electronic reporting systems where possible to help supplement at-sea observer data, and better assessment of private angler bycatch interactions and discard mortalities. The agency's efforts to assess bycatch are significantly hindered by uneven, inadequate, and statistically-irrelevant data.

The agency should clearly advocate the need for additional investments to provide for higher levels of observer coverage and better accounting of bycatch. This could include expanded opportunities for industry cost share or cost recovery. The agency should partner with outside private or public groups to increase opportunities for bycatch data monitoring and assessment. Further, it should ensure that the resources currently available are being used to meet regional needs and produce statistically-relevant data.

The agency should improve its data management by integrating existing information streams and databases together, and making this information available to managers, researchers, and the public. Timely, accurate, and transparent data are crucial to ensuring successful bycatch accounting. The agency should ensure that Councils are clearly and transparently incorporating bycatch data in the fishery management process through explicit inclusion in FMPs, Fishery Ecosystem Plans (FEPs), Stock Assessment and Fishery Evaluation (SAFE) reports, and other appropriate management documents.

NOAA Fisheries should ensure that specific standards and policies for implementing the legislative mandates in the Magnuson-Stevens Act to minimize bycatch are clearly communicated to the Councils, and that Councils implement the recommended strategies. These could include separate ACLs for discards and bycatch, timed-area closures, and incentives (both negative and positive) for bycatch reduction.

The agency should recommend Councils examine the effects of bycatch on the health of fish populations that are in rebuilding plans, particularly those that are failing to rebuild on schedule.

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<sup>12</sup> 16 U.S.C. 1853(a)(11).

The agency should work to improve its outreach and education on bycatch, particularly by engaging with regional partners and affiliated groups such as the National Sea Grant College Program. This includes not only basic education about what bycatch is and how bycatch can affect a fishery or species, but significant outreach on why catch accounting is important and how incorporating best practices can reduce bycatch and minimize bycatch mortality. This should work in tandem with the establishment of incentives for reducing bycatch.

The agency has many venues for supporting independent or cooperative research programs to improve bycatch avoidance, including the Bycatch Engineering Program and initiatives like FishSmart. The agency should encourage projects that develop new or alternative gear types that minimize interactions with bycatch species. It should also support projects that independently analyze bycatch rates in fisheries and survivability outcomes for species. In particular, better accounting of recreational discards should be integrated into the Marine Recreational Information Program (MRIP).

NOAA Fisheries should make every effort to interface efficiently with appropriate state agencies to coordinate bycatch monitoring and reduction. As each state controls its own coastal waters (up to 3 to 9 nm out) and has their own fishery/natural resource agencies, it is imperative that the agency act more directly with the states, in addition to regional bodies, to ensure that state-level bycatch measures are enforceable and function. For instance, this would be important for reducing bycatch of sharks and other species that are important components of coastal and marine ecosystems.

Because of the drastic decline of all large coastal and pelagic sharks, it is imperative that shark bycatch should be minimized and that the mortality of bycaught sharks be avoided. Sharks caught as bycatch should be released alive wherever possible. Any retention of shark bycatch or targeted take should be permitted only when scientific advice has confirmed a limit to ensure its sustainability.

As part of its work in international fisheries management, the agency should identify fisheries with species that should no longer be managed as bycatch and instead should be deemed targeted resources and managed as such. With the emergence of multi-species fisheries and bycatch retention policies being implemented in some places around the world – particularly for highly migratory and transboundary species – it is important that management can adapt to ensure the best conservation and management measures are put in place. A team of relevant experts could be convened to determine what level of retention is appropriate to be managed as bycatch and what level should be managed as targeted catch. In limited access fisheries, bycatch retention has implications for determining who, exactly, is targeting any particular resource. This is of particular importance for species managed at the international level, where changes to management structures can be quite slow.

Examples of highly migratory/transboundary living marine resources that are incidentally caught but retained in high numbers include istiophorid billfishes and several species of pelagic

sharks captured in tuna/swordfish longline fisheries (which in some cases use wire leaders in a clear attempt to retain this bycatch) and juvenile bigeye tuna caught in skipjack purse seine fisheries (and retained for use in chunk light tuna canning operations). Managers, international negotiators, and U.S. stakeholders involved in these fisheries would all benefit from a clear analysis of which species are being targeted and whether or not species historically considered bycatch are more accurately one of two or more targeted species in a multi-species fishery. The establishment of an expert panel with a mandate for making these sorts of discriminations would be a valuable addition in the new National Bycatch Strategy.

In conclusion, we thank you again for this opportunity to contribute to the scoping period of a new National Bycatch Strategy. We are encouraged that the agency is updating this policy and will fine-tune or recommit to actions that minimize bycatch. We look forward to contributing additional comments as the agency's effort in this area progresses.

Sincerely,

A handwritten signature in black ink that reads "Ted Morton". The signature is written in a cursive, flowing style.

Ted Morton  
Director  
U.S. Oceans - Federal  
The Pew Charitable Trusts