NOAA Fisheries
Office of Sustainable Fisheries
1315 East-West Highway
Silver Spring, MD 20910

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Submitted electronically to: noaa.release.mortality@noaa.gov
RE: Fish Release Mortality Science Action Plan

To Whom it May Concern,

On behalf of The Pew Charitable Trusts (Pew), please accept these comments on NOAA Fisheries' Draft Action Plan for Fish Release Mortality Science (Plan). We commend the agency for addressing this key issue in fisheries science and management and appreciate the opportunity to provide feedback on the Plan.

Pew concurs that better science is needed to estimate and account for fish that are caught incidentally, released and subsequently die. It is important not just for assessing and managing fish populations, but can also lead to reduced release mortality through better fishing practices, catch-and-release methods, and well-designed management. In certain cases, it could lead to higher quotas or less restrictive management because discard mortality accounts for a substantial proportion of overall mortality for some southeast region fisheries, which have both recreational and commercial components.

The purpose and goals of the Plan establish a good overall framework for gathering and utilizing release mortality science, and appropriately, the primary goal is reducing release mortality. The set of objectives and strategies for prioritizing and obtaining this information is also constructive. A good example is Objective 3.1, which addresses the effects on release mortality rates from descending devices. This is an important and timely subject area on which additional research is needed, particularly for bottom reef fish (*i.e.*, snappers and groupers) in the southeast U.S. However, we recommend expanding the plan to include several additional objectives and strategies in order to determine how to reduce discard mortality. Specifically, we recommend:

1) Expanding objectives to include obtaining release mortality data on all managed species rather than focusing on just a few.

2) Engaging fishermen to improve discard data and release mortality estimates.

3) Expanding the Plan and the application of the simple multi-attribute rating technique (SMART)[1] tool to include multi-species and ecosystem-based approaches.

4) Refining development and application of the "smart" tool to better account for fisheries overlap and to address data-limited species.

We discuss each recommendation in more detail below.

Expanding objectives to include obtaining release mortality data on all managed species

The Magnuson Stevens Fisheries Conservation and Management Act (MSA) requires all federally managed fish to have annual catch limits.[2] The technical guidance on implementing these catch limits states that all sources of mortality, including those from fish discarded dead, are to be included in annual catch limits (ACL).[3] Dead discards are included as part of the overall mortality in stock assessments for some highly targeted species, but assessments are not conducted annually nor for all managed species. In most cases in the Southeast U.S., assessments are conducted every three to five years on the major species.

Improving discard data for all species is fundamental to reducing release mortality. Unfortunately, the Plan largely ignores that improved data on released catch is imperative for meeting the requirement to set ACLs that include dead discard data for all managed species. Dead discard estimates should be factored into all ACLs and monitored on an ongoing basis.

One of the reasons that dead discards are not routinely factored into all ACLs and accountability measures (AM) is that self-reported discard data has a high level of uncertainty, and discard mortality rates are not directly estimated for many species. Improving discard data is fundamental to achieving Goals #2 (facilitate the development of improved fish mortality rate estimates) and #3 (support research that leads to reduced release mortality).

Most reporting programs in the southeast region lack strong validation methods for self-reported data such as bycatch. Enhanced release mortality rate estimates through better data and research for all species, not just for the most frequently caught fisheries, will also help achieve Goal #4 (ensure improved rate estimates effectively incorporated). Thus, we recommend adding specific objectives and strategies to the Plan to obtain more statistically valid discard data for all managed species through existing and new data collection and fisheries monitoring programs for both the recreational and commercial fisheries.

Engaging fisherman to improve discard data and release mortality estimates

The Plan could be bolstered by addressing ways to improve discard data collection and release mortality by directly engaging fishing participants through cooperative research, citizen science

[1] Simple multi-attribute rating technique (SMART) tool used to prioritize and rank species in most need of improved release mortality research.
[2] MSA ref 16 U.S.C. § 1853(a)(15)
[3] NS1 ref 50 C.F.R. 600.310(f)

and observer programs. Including fishermen more directly in obtaining release data is important for building credibility and acceptance of the science and research that underpin management decisions. It also could greatly expand and enhance the data collected in a cost-effective manner. Strategies on how to better engage fishermen and anglers could include:

- Incorporating fishermen/anglers in the regional development and application of the "SMART" tool under Objective 1.1 and detailed in Appendix 2.
- Ensuring existing and new fishery dependent and reporting programs under Objective 2.1 include information important to better estimate and incorporate release mortality (*e.g*., reasons for releasing fish, depth of capture, release methodology, and disposition of released fish).
- Developing and implementing statistically relevant observer coverage levels across all applicable fisheries (Objective 2.3). This could be supplemented by electronic monitoring when research and science improves.
- Identifying the use and expansion of cooperative research programs to obtain information on descending devices (Objective 3.1), in tagging studies (Objectives 3.2 and 3.3), and in existing NMFS grants programs (Objective 3.3).
- As part of Objective 3.1, include a focus on gaining a better understanding of fishermen usage and perceptions of descending devices and release practices.
- Adding a new objective under Goal #3 that seeks to better understand through research how discards and release mortality affect angler fishing behavior in general.
- Adding a new objective under Goal #3 that specifically addresses obtaining and improving release data through electronic monitoring and reporting.

Expanding the Plan and the application of the SMART tool to include multi-species and ecosystem-based approaches

The Plan and the SMART tool in particular are largely, if not entirely, based on a single-species management approach. However, better accounting for bycatch and discard mortality of species is an important part of a more comprehensive approach to managing fisheries that looks broadly at ecosystem and human interactions. The agency is currently developing a policy promoting the application of ecosystem-based fisheries management (EBFM) throughout agency and Council management activities.[4] While Pew is submitting separate comments on that policy, we encourage reviewing the Plan with that EBFM policy in mind.

Tackling release mortality as a multi-species issue is necessary to achieve the goal of reducing discard mortality through better data and science. Oftentimes, release mortality is induced, but is not sufficiently accounted for, in the single-species approach to management. In the Southeast U.S. particularly, there is significant overlap in the prosecution of numerous primary-target fisheries. For instance, recreational anglers may target specific snapper or grouper species (or

[4] NOAA Fisheries. Ecosystem-Based Fisheries Management Policy. Sept 9, 2015 discussion draft. https://www.st.nmfs.noaa.gov/Assets/ecosystems/ebfm/Draft_EBFM_Policy_9.9.2015_for_release.pdf

other bottom reef fish) where other species are caught. In many cases, recreational seasons for popular species are staggered. This forces fishermen to release fish that are not specifically targeted or legal to be retained at that time. The Plan could address this issue in several ways:

- Include species overlap and fisheries interaction as a category (or two) in the SMART tool (Appendix 2, Objective 1.1). This could be addressed in the regional application of the tool as modified by regional experts and fishermen.
- Ensure data collection and fisheries monitoring programs obtain data from all species, not just managed or individual species (Objective 2.1). We recommend it include data collected by individual states, particularly those that receive NOAA Fisheries funds or are included in stock assessments of federally managed species (Objective 3.3).
- Design research programs and scientific analysis that can be incorporated into a multi-species or ecosystem-based approach for more comprehensive management decision-making. For instance, collecting and incorporating data sufficient for multi-species management strategy evaluations could be included as a new objective under Goal #4.

Refining development and application of the "SMART" Tool to better account for fisheries overlap and to address data-limited species

Overall, the SMART tool as described in Appendix 2 seems to objectively prioritize species for release mortality research needs. However, the true applicability of the tool is questionable. For example, the preliminary application of the tool for Gulf of Mexico species (Figure 5, Appendix 2) ranks red snapper as the highest priority species for improved research mortality, which happens to be the species for which the most release mortality research has been conducted in the region. Rather than identifying and filling important gaps, the SMART tool is directing more research to an already well-studied species. This is an indication that the system of criteria, scoring, and weighting is insufficient or needs fine-tuning. Greater involvement by local experts, such as Scientific and Statistical Committees, and fishermen could calibrate the SMART tool to meet regional needs.

As mentioned above, the SMART tool focuses predominantly on a single-species application. Ideally, species overlap and fisheries interaction would be explicitly included as a separate criterion, in addition to the five described[5], where local scientific experts and fishermen could help develop those parameters for regional application. Likewise, regional experts and fishermen should help revise the suite of criteria and how each are scored and weighted for more refined application at the regional level.

Additionally, the SMART tool, like most of this Plan, focuses on individual, "data rich" species (*i.e.*, those with stock assessments). The SMART tool and Plan should be inclusive of all species -- particularly "data poor" species, which by definition have deficient levels of data and perhaps the greatest need for research and better data. This is particularly true for the Caribbean region where nearly all species are even more data-poor than fisheries in other regions. This SMART

[5] The five criteria suggested for the SMART tool include: 1) restricted or rare, 2) vulnerability, 3) economic impact, 4) political sensitivity and stakeholder engagement, and 5) discard ratio.

tool would likely not be useful at prioritizing research needs for Caribbean species, and perhaps data poor species in other regions, unless it is revised to accommodate them. Stock assessment methods for data-poor species are being tested in the Caribbean[6] (SEDAR 46) and in the Gulf of Mexico[7], where discard and release mortality data should be an important component. Even data-poor species under federal management are required to have ACLs that incorporate all sources of fishing mortality, including discards. The SMART tool and this Plan should also accommodate those species.

Conclusion

Overall, we support the framework outlined in the Draft Action Plan for obtaining and incorporating better data and science of release mortality and the application of the SMART tool to help prioritize needed research. However, some shortfalls in the Plan and in the SMART tool could be addressed with revisions aimed at improving release mortality science. We recognize and share the strong desire to enhance data and science, particularly on discards and release mortality. Through targeted research and better application of that science, discard mortality could be reduced across interrelated fisheries in a more comprehensive and ecosystem-based approach. Incorporating and utilizing expertise from fishing participants can provide insights and benefits to developing research and should be strongly considered in the implementation of science projects.

Thank you for the opportunity to provide comments on the Draft Action Plan for Release Mortality Science. We look forward to working with NOAA Fisheries, and regional managers, scientists, and stakeholders to improve science and reduce release mortality.

Sincerely,

Holly Bins
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The Pew Charitable Trusts

[6] SEDAR 46. U.S. Caribbean Data Limited Species Assessment. http://sedarweb.org/sedar-46
[7] Gulf of Mexico SEDAR Schedule, September 2, 2015. Tab I-4, Gulf of Mexico Fishery Management Council briefing book, October 2015.