



NOAA FISHERIES Science and Technology

NOAA's National Marine Fisheries Service (NMFS) is finalizing a white paper that will review NMFS-funded release mortality initiatives by region; identify and prioritize data gaps; and identify components of a national post-release mortality science strategy. The paper also will include a discussion of best practices and techniques for release mortality research.

Highlights

- Since 2000, NMFS has invested over \$9 million in recreational and commercial release mortality research.
- The white paper identifies the development of baseline release mortality information, including an understanding of underlying factors and their interactions, as a top data gap.
- Other data gaps include the need to measure release mortality in fishery, as opposed to lab, conditions, and to develop short- and long-term proxies for mortality.
- The white paper identifies 7 high-priority criteria that should help direct scientists and managers in focusing release mortality resources on particular species.

Fisheries Release Mortality: Identifying, Prioritizing, and Resolving Data Gaps



Black sea bass exhibiting signs of barotrauma. Photo courtesy of Paul Ruderhausen, North Carolina State University.

Recreational and commercial fisheries face continued effort restrictions due to high fishing mortality and slow stock rebuilding processes. NMFS is committed to rebuilding overfished fish stocks. Regional fishery management councils have implemented short fishing seasons, closed areas, species-specific non-retention measures, and size limits in response to overfished declarations. Under these restrictive management systems, release mortality and barotrauma can impede the rebuilding of overfished stocks. Fishermen and managers have developed and promulgated best practices designed to reduce post-release mortality, for example, through the FishSmart website (www.fishsmart.org).

Fishermen and managers now are wondering what changes in management, especially related to quota-setting and fishery restrictions, should occur if best practices and technologies are being used to reduce post-release mortality and the effects of barotrauma. If more fish released or discarded in recreational and commercial fisheries are likely to survive, then long-standing release mortality assumptions used for fisheries stock assessments may need to be re-examined. Ultimately, fishermen expect that they should be allowed increased access to fish if their fishing practices lead to an improvement in survival rates for discarded or released fish.

In 2013, the NMFS Recreational Fisheries Engagement Initiative provided resources to the NMFS Office of Science and Technology to develop a white paper summarizing NMFS-funded release mortality research and identifying release mortality data gaps. The development process for this white paper included a September 2013 workshop of scientists from within and outside of NMFS, which was designed to provide background information for this white paper. The white paper will be published as a NOAA Technical Memorandum in May 2014.