

Review of the Marine Recreational Information Program (2017)

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In 2006, the National Research Council provided a critical review of the Marine Recreational Fisheries Statistics Survey (MRFSS). Since then, NMFS has worked to address the recommendations from the 2006 report in developing surveys for the new Marine Recreational Information Program (MRIP). The report referenced here is the result of a study requested by NMFS for an evaluation of the new survey program.

Recreational fishing is a favorite pastime in the United States. Although each angler may take only a small number of fish, collectively recreational fishing can have a significant impact on fish populations. The National Marine Fisheries Service of the National Oceanic and Atmospheric Administration is responsible for collecting data on fishing catch from saltwater anglers to ensure that fish populations are not over exploited. However, collection of data is difficult because there are many people in many places fishing recreationally and there is no consolidated source equivalent to the landings data collected for commercial fisheries. Hence, advanced survey methodology and complex statistical analyses are needed to assess the impact of recreational fishing on the nation's fish stocks.

Work to redesign the National Marine Fisheries Service's recreational fishing survey program (now referred to as the Marine Recreational Information Program or MRIP) has yielded impressive progress over the past decade in providing more reliable catch data to fishery managers. Major improvements in the statistical soundness of the survey designs were achieved by reducing sources of bias and increasing sampling efficiency, although additional challenges remain for the survey program. The following findings represent a small subset of the findings and recommendations provided in the report. The pdf of the full report is available for free download at: www.nap.edu.

KEY FINDINGS

Improvements in Survey Design and Implementation

Estimating Fishing Effort. With the advent of cellular telephones whose area codes and prefixes do not necessarily indicate where a person lives, random-digit-dialing of phone numbers has become an inefficient way to reach anglers, and caller I.D. has increased nonresponse levels. The methodologies associated with the new MRIP Fishing Effort Survey, including the address-

based sampling mail survey design, are major improvements over the random dialing approach used in the previous Coastal Household Telephone Survey. MRIP's innovative use of the National Saltwater Angler Registry has further increased the efficiency of this method.

Estimating Fish Catch per Trip. The new Access Point Angler Intercept Survey (APAIS), used to determine the composition and quantity of fish caught, has a rigorous statistical design compared with the earlier Marine Recreational Fisheries Statistics Survey (MRFSS) intercept survey. Many improvements have been incorporated in APAIS including interviewing during nighttime, as well during the day, and using a probability-based approach for selecting the time and site.

Electronic Reporting (e.g., smart phones, tablets, and other electronic data-capture platforms). MRIP has made progress evaluating and testing the use of new technologies as a way to implement electronic reporting, avoid or decrease data transcription errors, and increase the timeliness and reliability of recreational fisheries data collection. However, for some applications, incorporating electronic reporting will make it more challenging to obtain statistically accurate survey results. Because the pace of incorporating these new technologies has been perceived as frustratingly slow by some anglers, MRIP should develop a strategy to better articulate and communicate the complexities, costs, and timelines associated with using these technologies.

Coordination across Multiple Jurisdictions. To collect recreational fisheries data that meet required standards for assessment and management in the nation's complex, multi-jurisdictional system, MRIP surveys are conducted in cooperation with a variety of regional and state agencies as well as other institutional partners. MRIP has been responsive to regional and state needs -- the program has evolved to become a compilation of regionally based data collection programs that is better prepared to address region- and state- specific data needs.

Remaining Challenges

Fishing at Private Sites. The APAIS covers public access sites, but in some regions a significant number of anglers may use docks or access sites on private property. To compensate for the anglers who aren't surveyed at public sites, MRIP uses a ratio estimator to adjust for the under-coverage. However, the validity of the ratio estimator relies on the as yet untested assumption that private sites will yield results similar to the public-access sites.

Discard mortality. Not all fish that are caught are brought back to the dock; some are released, but the number and fate of these discarded fish is not well understood. The lack of validation of discard estimates contributes significantly to uncertainty in assessing the impact of discard mortality on stock productivity estimates and management of stock removals.

In-Season Monitoring. In some cases, states have difficulty in addressing in-season monitoring for compliance with Annual Catch Limits (ACLs). NMFS should evaluate whether the design of MRIP is compatible with the needs of in-season management of annual catch limits. If these needs are incompatible, the evaluation should determine an alternative method for in-season management.

Communications. MRIP has made significant advances in providing information through the MRIP website and in communications with some of the MRIP data-collection partners such as the marine fishery commissions and state fishery agencies. Outreach to anglers is handled principally through partnerships, with states and regions in the lead. Although this is a reasonable approach for developing a rapport with anglers and other stakeholders, MRIP should play a leading role in providing the vision and implementation strategies for their partners in the states and regions.

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