

Recreational Fisheries Management: The (Intentionally?) Forgotten Tool

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Saltwater fisheries are never easy to manage.

Even in the case of the most studied species, there are always some questions about the size of the population, the number of new fish being recruited into the population to replace those that are removed, the magnitude and duration of typical, temporary swings in abundance and the longer-term impacts of a changing climate on the marine environment.

Most of those issues fall under the general category of “**scientific uncertainty**,” being matters that are generally connected to the biology of the fish and the productivity of marine habitats. Although fisheries scientists may not be able to quantify them exactly, they recognize that such uncertainties exist, and try to quantify and account for them when they set the **acceptable biological catch (ABC)** and **annual catch limit (ACL)** for each managed species.

Out of all saltwater fisheries, recreational fisheries are particularly hard to manage because they are affected by a different set of unknowns.

While commercial landings are reported in near real time, and largely ground-truthed by the records of the fish docks and wholesalers that purchase the fishermen’s product, recreational landings can only be estimated through the **Marine Recreational Information Program (MRIP)** which, although reasonably accurate when estimates are used on a regional or coastwide basis, is prone to provide less precise results when data is restricted to a limited time or area, or relates to a species of fish that is only infrequently caught by anglers.

Since the effectiveness of recreational fishing regulations depends on the accuracy of the data that they’re based on, MRIP’s estimates add a degree of uncertainty to recreational fisheries management that doesn’t arise in commercial fisheries.

Even more uncertainty is added because such regulations assume that future angler behavior will be similar to what it was in the past. That is a very dubious assumption. Weather, the relative availability of the regulated species compared to other fish, fuel prices, and even COVID-19, can and do impact how many people go fishing each season, how many trips those anglers make, and what they choose to fish for.

Add to that the unknown number of recreational fishermen who don’t abide by the regulations, and instead take home undersized, over-limit, or out-of-season fish, and even illegally sell their supposedly “*recreationally-caught*” striped bass, bluefin tuna, etc. to unethical shops and restaurants, and uncertainty grows again.

All of those things fall under the category of “**management uncertainty**,” which is supposedly one of the things that fisheries managers are supposed to consider when drafting each year’s regulations. However, unlike scientific uncertainty, management uncertainty is rarely part of the conversation when such rules are established.

That doesn’t appear to be what the National Marine Fisheries Service intended when it published Guidelines for regulations that would comply with National Standard 1, which requires

managers to prevent overfishing and constrain harvest to optimum yield, in the Federal Register.

Those Guidelines note that, “*Management uncertainty* refers to uncertainty in the ability of managers to constrain catch so that the ACL is not exceeded, and the uncertainty in quantifying the true catch amounts (*i.e.*, estimation errors). The sources of management uncertainty could include: Late catch reporting; misreporting; underreporting of catches; lack of sufficient inseason management, including inseason closure authority; or other factors.”

The Guidelines then go on to say that, “[Annual catch targets], or the functional equivalent, are recommended in the system of [accountability measures] so that the ACL is not exceeded. An [annual catch target] is an amount of annual catch of a stock or stock complex that is the management target of a fishery, and accounts for management uncertainty in controlling the catch at or below the ACL.”

They then note that, when setting annual catch limits, “If an Annual Catch Target (ACT), or functional equivalent, is not used [to account for management uncertainty], management uncertainty should be accounted for in the ACL.”

It all sounds good and logical in theory, and would seemingly make a lot of things simpler in practice.

For example, the Mid-Atlantic Fishery Management Council is now looking at what it calls a “recreational reform” initiative, which is intended to reduce or eliminate some chronic issues in recreational fishery management, including how to address the known imprecision (“percent standard error”) in MRIP estimates, how to deal with “outlier” estimates in the recreational data which almost certainly are inaccurate reflections of catch and landings, whether and how to best project annual landings from preliminary estimates, and other, similar issues related to recreational fisheries data and resulting regulations.

They’re important issues. When catch and landings data shifts from year to year, even if those shifts are within the known margin for error of such data, regulations often change in response, becoming more restrictive in some years, less restrictive in others, with no apparent pattern and based on no change in resource abundance that can be clearly noted by anglers.

Such constantly changing rules can whipsaw anglers and angling-related businesses, making it difficult or impossible to plan for the future, sometimes causing hardship, and often creating distrust in the management system.

However, as all of those issues constitute some sort of management uncertainty, it’s not clear why a multi-year reform initiative should be needed to address the problem, when the desired regulatory stability, along with adequate protections for managed fish stocks, may be achieved much more simply by accounting for such uncertainty in an annual catch target.

Yet the Mid-Atlantic Council’s recreational reform initiative is, in the overall scheme of things, a relatively minor example of ignoring the benefits of an annual catch target. **(to page 9)**