

Management Structures and Approaches in the South Atlantic and Their Relationship to Recreational Data Quality and Availability

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The South Atlantic Fishery Management Council faces significant challenges in regards to data quality and availability when it comes to managing recreational fisheries in our area of jurisdiction. There are large recreational fisheries in the south Atlantic and the data available to properly manage these fisheries ranges from good to virtually non-existent. In the Snapper Grouper Fishery Management Plan alone there are 73 species in the Fishery Management Unit. There are currently seven amendments under development for the snapper/grouper FMP. All of these activities require quality and timely data. I want to focus on one of these amendments – our Comprehensive Annual Catch Limit Amendment – to illustrate some of the data problems we are facing and some of the approaches being considered to address these problems.

One thing that I want to emphasize is that this amendment is evolving as we speak and what I tell you about an approach today may change the next time our council or Scientific and Statistical Committee meets.

One of the approaches that we are looking at in the comprehensive ACL amendment is reducing the number of species in the fishery management unit. Many of these species are represented by small catches and have not had a stock assessment. Our current preferred alternative would remove species based on one of three criteria- 1) 80% or more of their landings occur in state waters (except hogfish); 2) combined state and federal landings are less than 20,000 pounds annually (except cubera snapper, Warsaw grouper, lesser amberjack, and speckled hind); and 3) species which are managed under the Florida Marine Life Rule.

In addition to removing species from the FMU, we are looking at establishing species groups in this amendment because of the difficulty in tracking numerous individual quotas. We are also considering a species group approach in order to meet the statutory deadline for completing the amendment and to deal with some of the data quality and timeliness problems. Under this approach, species groups would be established for

non-assessed species using associations based on life history, catch statistics from logbooks, observer data, private/charter boat surveys, and fishery-independent MARMAP data. A group ACL would then be set for each of these species groups.

The South Atlantic Council is establishing sector-specific Annual Catch Limits in this amendment using a commercial sector and a recreational sector approach. The council had discussed further dividing the recreational sector into a for-hire sector and a private recreational angler sector but we are currently not going down this road.

The council intends to specify Annual Catch Targets for the recreational sector. Options being considered are 85% of the ACL, 75% of the ACL, and a percentage of the ACL derived from the Percent Standard Error of the MRIP catch estimate. In this option, $ACT = ACL \times (\text{the greater value of } 1 - PSE \text{ or } 0.5)$. Annual Catch Target values would be used to establish management measures. Setting the management measures based on an ACT that is lower than the ACL is expected to reduce the chance that observed catches in a year will exceed the ACL.

The Council has had extensive discussions over the last several years regarding data uncertainty and availability. A primary concern is that uncertainty in catch estimates will significantly impact the comparison of current stock conditions to the management benchmark of ACL and the biological benchmarks of OFL and ABC. Addressing this uncertainty is one of the biggest challenges before the Council. This is largely because recreational fisheries comprise a considerable portion of the South Atlantic fisheries as I indicated earlier, and many managed species have high uncertainty and high annual variability in catch estimates. Therefore, the Council is concerned that severe management actions could be triggered based on measurement error and not on real fishery problems.

The Council is looking at ways of addressing this variability issue. Initially, a 3-year running average of catches was considered for comparison to benchmark levels. There is some concern that this approach could result in undesirable consecutive determinations that landings exceed ACL if a single year of high catch occurs, as that year would have an influence on the average over the next 3 years. Likewise, a year of unusually low catch could

force the average low value over several years, potentially masking the overall risk of exceeding ACL. The Council believes that some type of smoothing technique would be useful in comparing the ACL and current catches, but the 3-year running average approach may not be appropriate when the wide annual variability in estimates for many managed species is considered. During our council meeting last week, the Council devised an alternative approach for addressing uncertainty in recreational catch estimates that incorporates confidence bounds and applies a two step process to ensure action is not triggered due to variable data. The first step is to determine if an overage has occurred, by comparing the lower confidence bound of the annual catch estimate to the ACL. If this value exceeds the ACL, than a “modified mean” catch estimate, defined as the mean of the prior five years with the lowest and highest values dropped, is calculated to determine whether the possible overage is due to a single large spike in estimates or whether there is evidence of a more sustained trend. The Council supports the idea of using some sort of a multi-year comparison approach to account for expected year to year variability in recreational catch estimates. At this time a preferred technique has not emerged but this issue is continuing to be looked at by our Scientific and Statistical Committee and our Council staff.

The Council has several Accountability Measures that will be applied if the Annual Catch Limits are exceeded. First, the Regional Administrator will publish a notice to reduce the ACL in the following fishing year by the amount of the overage. He can also publish a notice to reduce the length of the following fishing season by the amount necessary to ensure landings do not exceed the ACL. Other options include closing the recreational fishery when an ACL is met or projected to be met and reducing the bag limit in the following year. All of these options will be influenced by the uncertainty and timeliness in the recreational catch estimates.

It is recognized that delays in receiving catch information could lead to unexpected and additional overages, especially if catches suddenly increase during a wave. Lags in recreational data availability, from both MRIP and the Southeast head boat survey, could result in increased penalties to subsequent years' catches in such circumstances. One way the Council has partly addressed this lag is to enable the Regional Administrator to close fisheries and adjust seasons directly, without specific council action, when catches are projected to exceed Annual Catch Limits.

Improving recreational fisheries management in the South Atlantic Region will require addressing the Southeast Head Boat Survey. The Council faces significant data lags in the head boat component of the recreational fishery, as data is typically not available until 4-6 months after year's end. Moreover, mid-year data are not available from the head boat survey at this time. This is a considerable data availability problem, as some head boat catches are large for several of the species managed by the Council. The Southeast Fisheries Science Center is currently working on methodology to provide mid-year estimates from the head boat survey which will improve the timeliness of these important data.

In summary, it appears that in terms of comparing and contrasting the management approaches and structures utilized by the Mid-Atlantic Council and the South Atlantic Council, there are a lot of similarities. In the area of accountability, both councils are using a similar approach and applying sector-specific Annual Catch Limits. Both councils are interested in smoothing the data variability and addressing year-to-year variability while their approaches differ in that the South Atlantic has concerns about using a three-year running average. Both councils approach management uncertainty by applying a reduction from the annual catch limit to the annual catch target. And lastly, in the area of accountability measures both councils utilize annual catch targets, in-season closures, and post-season measures including the deduction of overages in catches from the next fishing year and adjusting the fishing season and/or bag limits. One apparent difference in regards to accountability measures is that the South Atlantic Council authorizes the NMFS Regional Administrator to enact post season accountability measures.