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South Atlantic Fishery Management Council

Southeast Regional Perspectives on Magnuson-Stevens Act Reauthorization

Before

U.S. Senate Committee on Commerce, Science and Transportation

Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard

Chairman Begich, members of the Subcommittee, thank you for the opportunity to appear before you today to discuss the South Atlantic perspective regarding the Reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA or Act). My name is Ben Hartig; I am the commercial representative from the State of Florida and current Chairman of the South Atlantic Council. I am also a full time commercial fisherman, fishing off the Southeast coast of Florida for over 36 years. We have addressed the questions posed and have provided the information Chairman Rockefeller requested in our written testimony.

I would like to take this opportunity to thank both the House and Senate for dedicating time and resources for the exhaustive review regarding the successes and challenges of the 2006 MSA Reauthorization. I felt strongly enough about the severe economic consequences experienced by both recreational and commercial fishermen in the South Atlantic that I attended both of the fishermen's rallies that occurred several years ago. My hope was that a fair hearing of the problems experienced by fishermen due to the 2006 Reauthorization would be held. While the timeliness can be questioned, the number of hearings, the caliber and diversity of the witnesses and the commissioning of the National Research Council (NRC) study has exceeded my expectations.

It is important to realize that not all of the successes in the South Atlantic in ending overfishing and rebuilding stocks should be attributed to the 2006 Reauthorization; some of our successful rebuilding efforts that are paying dividends today were implemented prior to the reauthorization's legal mandates (e.g., black sea bass, king mackerel, Spanish mackerel). However, there is no question that the current Reauthorization is working for the fish. Overfishing has ceased for most of our assessed species; stocks are ahead of or meeting their rebuilding timeframes in most cases and fishermen are seeing population increases in size and abundance for some species that have not been observed in a decade or more. Red snapper is a prime example yet the fishery is still essentially closed. We were only able to allow two 3-day seasons last year and 1 3-day season this year for the recreational sector while the commercial fishery was limited to 50 and 75 pound bycatch trip limits with low commercial Annual Catch Levels (ACLs), that closed harvest when the allocation was met. Even though the seasons were short, a significant portion of the landings of both recreational and commercial fisheries was sampled by an unprecedented state, federal and public cooperative effort. Those efforts are vitally important for the next stock assessment.

The South Atlantic Council has identified five areas we propose be addressed in the current reauthorization:

1) Flexibility in ending Overfishing.
2) Flexibility in Rebuilding Overfished Stocks.
3) Define Overfishing on the Basis of the Recruitment Overfishing Level and not MSY.
4) Restrictions on Applying Harvest Moratoriums.
5) Maximum Sustainable Yield (MSY) Specification for Stock Complexes.

We've established that the 2006 Reauthorization is working for the fish, but what about the fishermen? Consideration of the "human element" of fisheries management has all but disappeared since the 2006 Reauthorization and must be reintroduced back into the management process. One example is that National Standard 1 (NS 1) trumps National Standard 8 (NS 8), and social and economic considerations are no longer allowed in the context on ending overfishing and rebuilding timelines. Qualitative changes in stock abundance are no longer relevant, anecdotal observations from fishermen no longer considered and the Council has been completely removed from the Allowable Biological Catch (ABC) selection process once the ABC control rule is established. *{ NS 1: Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry. NS 8: Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities}.*

Some balance needs to be restored between the needs of the fish and the needs of the fishermen. In the South Atlantic, it is not the rebuilding timelines that are causing the problems but the requirement to end overfishing immediately and the Fmsy basis of the overfishing definition. The Act should be amended to allow the Council latitude to phase in the reductions to end overfishing over a longer timeframe and to recognize that overfishing has multiple biological definitions. Our South Carolina State Representative, Mel Bell offered a great medical analogy that speaks to this issue: "The current system is designed in such a way that if we were talking about a prescribed treatment for a patient diagnosed with a serious disease the focus now seems to be on the timing of recovery regardless of any serious side effects of the treatment. If the patient can be placed on a demonstrable road to recovery in such a way that minimizes or balances potential dangerous side effects, costs and risks, that would make more sense. It's a matter of balancing the need for specific timing in the declaration of recovery/cure and the possibility of some very serious complications from the chosen prescribed treatment and recovery rate. The mandate should be to get on and stay on the road to recovery rather than to insist that it must be completed in "X" years for every fishery in need".

The South Atlantic Council has actually used the approach of phasing in reductions necessary to end overfishing over a three year period for two of our important species black sea bass and snowy grouper. Both species were assessed this year. Black sea bass is completely rebuilt within the rebuilding schedule and the ABC was doubled; for snowy grouper overfishing is no longer occurring and while still

overfished, it is 10 years ahead of its rebuilding schedule. The phasing in of catch restrictions allowed fishermen time to adjust their business plans to the catch reductions reducing the social and economic impacts that occur with the current situation of ending overfishing immediately. The South Atlantic Council believes that this is strong evidence to support the consideration of longer timeframes to end overfishing. It is important to note that the phase-in periods used in these examples included significant reductions in harvest and fishing mortality; the delay was simply in achieving a mortality rate below the Fmsy level, the overfishing definition prescribed by the MSA. On the basis of other important biological measures, such as recruitment overfishing and measures of spawning potential, there was considerably less delay in ending overfishing.

That raises the question of just what is meant by overfishing. In reality there are various definitions of overfishing. For example, recruitment and growth overfishing are basic measures that can be readily estimated for most stocks. Of these, recruitment overfishing is the most damaging to sustainability, as exceeding this level jeopardizes the ability of a stock to replace itself. At the other extreme is growth overfishing, where there is no risk to sustainability but a loss of potential harvest to the users. Maximum Sustainable Yield combines concepts of both the basics of recruitment and growth overfishing, and usually lies somewhere between these extremes. Unfortunately, Maximum Sustainable Yield is very difficult to estimate for fish populations. Another issue with MSY lies in the way constituents typically perceive overfishing. Non-scientists tend to recognize overfishing in the recruitment sense, since when they encounter fewer fish they recognize a problem in the population. They will often support some level of regulation to reverse such situations, but have difficulty understanding the need for the more severe regulations necessary to end MSY-based overfishing.

Overfishing based on MSY standards has been and continues to be a problem in the South Atlantic for a number of reasons. Early assessments for snapper/grouper species were much simpler and less scientifically rigorous than statistical catch at age models currently used. As a result, they could not provide estimates of MSY so alternatives were chosen for evaluating overfishing. These alternatives were typically based on preventing recruitment overfishing to ensure sustainability. The new generation of stock assessment scientists or “mathemagicians”, which I do not use as a disparaging term but a compliment, are able to do so much more with so little data. This has resulted in estimates of MSY for more stocks, but in many cases these MSY levels allow much less fishing pressure than the earlier measures. In addition, while we have received results from stock assessments including analysis with less than optimal data, there are costs associated with those results in the form of “data uncertainty”. This has to be quantified in the assessment and the impacts come in the form of lower catch estimates and it is the fishermen that pay a high price for not having adequate data. Virtually every first-time assessment done by these new analysts for species in the snapper/grouper complex indicates overfishing is occurring or approaching overfishing, or the stock is overfished or both stock conditions exist.

An example of a recent first time assessment is blueline tilefish. The results from that assessment indicate that overfishing is occurring and the stock is precariously close to becoming overfished. To end overfishing immediately the Council needs to reduce landings by 68% based on the current Act. That’s a tough pill for our recreational and commercial fishermen to swallow. The social and economic impacts

could be substantially reduced by allowing overfishing reductions to be phased in over a longer time period. The Council is planning on using emergency action to implement the necessary reductions at the December meeting.

Another problem the Council faced in the past was setting quotas in declining fisheries. The Council would set an ABC from a simplistic assessment expecting the stock to rebuild. By the time the stock was assessed again the landings continued to decline and a new lower quota was implemented. Chasing declining fisheries was a problem until the new generation of stock assessment scientists arrived with the implementation of the Southeast Data and Assessment Review in 2002. This is a stock assessment process developed to improve the quality and reliability of stock assessments in the Southeast. The Council has been diligent in implementing scientific stock assessment recommendations over the years and in the case of greater amberjack enacted more restrictive regulations than the assessment indicated were needed based on fishermen's perspectives of stock condition. The regulations worked and by the time the greater amberjack stock was assessed for the first time by the new generation of stock assessment scientists the fishery was in a sustainable condition.

Data/Research/Assessment Process

The 2006 MSA Reauthorization was predicated on having the necessary data, research and assessment processes in place and operating. This is simply not the case in the Southeast:

- ACL monitoring – still having difficulty tracking commercial landings in a timely manner and recreational landings continue to be a challenge. This results in continued ACL overages.
- Biological samples – insufficient fish sampled for length, otoliths for aging and reproductive condition. Staff resources to read otoliths and process the reproductive samples are severely limited. This results in more uncertainty in stock assessment results.
- Assessments –not enough stock assessments in a timely manner. This results in delays to increases and/or decreases that may be necessary in management limits and regulations.

A potential solution to ACL monitoring would be to fully implement ACCSP Quota Monitoring in the Southeast based on state landings as is done from North Carolina northwards. Additional funding should be provided to the states to collect biological samples and improve their monitoring of commercial and recreational landings.

Flexibility in Rebuilding Overfished Stocks

- Current rebuilding requirements include an arbitrary time period of 10 years and a science-based alternative incorporating productivity.
- Nonsensical outcomes result when stocks approach the mandatory 10-year limit under the unrealistic moratorium terms. A moratorium is required if a stock can rebuild in 10 years with no fishing. If the same stock were just a little worse off to start, such that it would take 11 years to rebuild with a moratorium, that rebuilding time would become 11 years plus a generation. Thus,

if a stock gets a little worse off before the need for rebuilding is recognized, the rebuilding plan can be much more liberal and tolerable to fishermen.

- The 10-year rebuilding timeframe does not treat all stocks with varying life histories fairly and adequately. Short-lived stocks can experience several generations in that time, while long-lived stocks may only experience a small portion of a generation.
- Single stock moratoriums in a multi-stock fishery are impractical, unrealistic and result in unnecessary impacts on healthy stocks in the complex.

The South Atlantic Council recommends that the rebuilding time requirement be simplified, by eliminating the arbitrary 10 year requirement and using the current biologically based rebuilding period alternative of Fishing Mortality (F)=0 + 1 generation time for all situations.

FMSY is a Good Target but a Bad Limit

Fmsy is defined as the fishing mortality rate that would, in theory, give the Maximum Sustainable Yield (MSY) from a particular stock year after year.

- Estimating maximum sustainable yield, and the exploitation rate that provides it, is difficult
- The true danger to a fish stock comes when exploitation exceeds the recruitment overfishing level. (Recruitment overfishing is the rate of fishing above which the recruitment to the exploitable stock becomes significantly reduced. It is characterized by a greatly reduced spawning stock, a decreasing proportion of older fish in the catch, and generally very low recruitment year after year.)
- Fishermen perceive or relate to overfishing at the recruitment overfishing level, and are often willing to give up some yield of one stock to preserve access to a broader, multi-species resource. Problems arise, however, when they are forced to endure the very low exploitation rates that are often necessary to achieve MSY on long-lived, slow-growing stocks.
- Stocks rebuild when fishing mortality is reduced below the recruitment overfishing level and recruitment improves even if the exploitation rate is above Fmsy.
- It is unlikely that each stock in a complex can be at MSY simultaneously, despite the best intentions of fishery managers. Even if that were possible, we simply do not know what that MSY level would be. Our best assessments struggle to provide robust estimates of MSY for a single species, but much less so when the interactions between species are considered and addressed.
- The South Atlantic Council's solution would be to amend the Act to set Maximum Fishing Mortality Threshold at the recruitment overfishing level.
- This will allow managers to balance foregone yield (growth overfishing) against social, economic and ecosystem concerns when establishing exploitation targets and preventing overfishing.

Impose Restrictions on Applying Harvest Moratoriums

- Single-species moratoriums in a multi-species complex are impractical, unrealistic and result in unnecessary impacts on healthy stocks (e.g., high level of discards).

- Implementing measures to immediately end overfishing on a single component stock of a complex has undesirable adverse impacts on other species in the complex.
- Moratoriums should be limited to extreme cases where a fishery has not responded to management, and should not be considered in the first effort to recover a newly recognized overfished stock.
- Complete harvest moratoriums should not be implemented if resources are not available to monitor the population when fishery- dependent data are lost due to regulations.
- Due to a lack of adequate fishery- independent monitoring and fishery observer coverage, the South Atlantic Council is faced with no means to remove harvest moratoriums on 4 stocks that cannot be assessed because those harvest moratoriums eliminated the only available data source.

Red snapper is a case where an existing rebuilding plan demonstrated evidence of stock improvement under existing regulations. In fact, recreational and commercial fishermen were experiencing increases in size and abundance that had not been seen in a decade or more. The 2010 assessment verified, in part, the observations of the fishermen that a large year class had entered the fishery. That large year class was the direct result of management regulations that had been in place prior to the moratorium. While those prior regulations were not enough to end overfishing as based on MSY, they were obviously adequate to allow the stock to 'turn the corner' toward recovery, show a gradual increase in spawner abundance, and produce the best year class on record. Although the 2010 assessment alleviate the need for the Council to close large areas to all fishing, it still indicated a very low catch level was needed to end overfishing immediately. Management evaluations indicated that the very low allowable catch would be consumed by the discard losses of red snapper encountered as bycatch as fishermen pursued other species in the complex. Consequently the Council had no choice but to impose a harvest moratorium on red snapper. It has been impossible to convince fishermen that a moratorium was needed when they were experiencing the best red snapper fishing in decades. Particularly, it was difficult to convince them of the inadequacy of the previous regulations that were, to them, responsible for the improvements in stock abundance readily apparent to all. Those regulations reduced fishing mortality, likely ended recruitment overfishing, but fell short of preventing MSY-based overfishing, at least based on the current estimates of abundance and productivity.

Due to this separation between what fishermen are seeing and the regulations the Council is forced to implement in an effort to apply MSY concepts to a poorly sampled multi-species complex, the Council has lost all credibility in a large portion of its jurisdiction. That credibility was hard won and had come primarily from examples in king and Spanish mackerel management. In the mid- 1980s the Council had faced similar circumstances with regard to the king and Spanish mackerel fisheries. These fisheries represent the largest single species landings that the Council manages (Spanish and king mackerel ABCs 6.063 and 10.46 million pounds, respectively). Prior to the 1980's, king and Spanish mackerel catches were essentially unregulated. The fishery was sustainable throughout most of its history (there are commercial landings going back to the late 1800s for Spanish mackerel) primarily, as a commercial gillnet fishery with a substantial recreational component. Due to their migratory nature, both king and Spanish mackerel are available during some portion of the year to all fishermen in the South Atlantic. In

the summer they can be found as far north as Maine and support important fisheries north of the Council's jurisdiction.

Introduction of airplane reconnaissance and large power-assisted run-around gillnets in the commercial sector in 1970s took advantage of the tight over-wintering schooling behavior exhibited off Florida and greatly increased catches. Harvests by both recreational and commercial fisheries in the 1970s and early 1980s exceeded reproductive capacity and led to overfishing. The South Atlantic Council developed a plan to end overfishing and federal regulations were implemented in 1983 to control harvest and rebuild depleted stocks of both king and Spanish mackerel. Management measures developed by the Council for Atlantic migratory group king and Spanish mackerel were very successful in rebuilding stocks, while at the same time the mackerel fisheries remained viable for both recreational and commercial fishermen. Both of these stocks were rebuilt within one generation and neither fishery was placed under a moratorium. The commercial fisheries were closed when the restrictive quotas were met and the recreational fishery remained open under restrictive bag limits. Current assessments indicate both stocks remain healthy and the Spanish mackerel biomass is substantially above MSY.

The mackerel management history indicates that the current red snapper moratorium could and should have been avoided. Some may argue that red snapper is a reef fish and not comparable biologically to the mackerels, when in fact their biological characteristics are very similar. Mackerel are fast growing and mature early. We have documented 4-year old red snapper weighing 17 pounds, which is actually faster growing than the mackerels, and red snapper are mature at age 2, somewhat faster than king and about the same as Spanish mackerel. The significant difference between red snapper and mackerels is the maximum age; red snapper can live into their 50s while most mackerels live half as long.

Prior to the 2006 MSA Reauthorization, the Council could have developed regulations to phase out overfishing over several years, similar to what was done for black sea bass and snowy grouper, by imposing significant reductions in mortality to end recruitment overfishing and continue rebuilding, and in doing so balance the needs of the stock with those of the fishery. It is no longer possible to end recruitment overfishing and allow stocks to begin recovery, while possibly allowing some growth overfishing to continue as a means to potentially offset severe social and economic consequences. As previously mentioned, public faith in the Council process has declined considerably as the red snapper closure has dragged on, and confidence in the management system remains low today.

There is also the question of missed opportunities that sometimes arise when severe management restrictions are needed. Instead of a moratorium the Council, before the 2006 Reauthorization, could have implemented the significant reductions in mortality to end recruitment overfishing and continue rebuilding, designated an MPA in the heart of the red snapper fishery as an insurance policy that would have protected a portion of that large year class as well contributing the same protections to a myriad of other species, and closed the fishery during the spawning months as red snapper form significant spawning aggregations. Those options would have been much more palatable to the public in the context of a complete closure. Furthermore, the fishery-dependent data stream critical to the last assessment would have continued allowing the next assessment to be done 2-3 years earlier than

waiting on the new fishery- independent survey to be developed and have a time series long enough to discern population differences.

Allow MSY Specification for Stock Complexes

- Mixed-species fisheries cannot be adequately managed by simplistic application of single-stock principles such as MSY.
- Stocks in a complex will vary in abundance over time and it is impossible for all to be at high abundances at the same time.
- We lack both the ecosystem and fishery data necessary to attempt to estimate multi-species MSY levels for species complexes.
- Desired fishery yield should be specified for overall complexes, while allowing individual stocks within the complex to experience normal variability in abundance from year to year.
- The South Atlantic Council asks that the challenges of managing multi-species fisheries be acknowledged, and that the Act remove the expectation that all stocks can be managed at MSY at the same time.

Do not Require ACLs for Unassessed Stocks

- Basing ACLs for unassessed stocks on a quantitative portion of historical landings under the guise of the precautionary principle results in bogus ACLs with scant scientific basis.
- ACLs derived from catch may be artificially low, decreasing fishery yield, or too high, posing risk to the stock.

Neither scientists nor managers can make informed recommendations without legitimate assessments because historical landings are uninformative for estimating stock abundance.

Challenges

The Snapper/Grouper fishery in the South Atlantic poses the most significant challenges for the Council. The Coastal Migratory Pelagic Fisheries have been on autopilot since the late 1990s (king mackerel showing lower recruitment recently but the assessment begins in December of this year) and the dolphin and wahoo fisheries are cruising along without any major concerns. But the dolphin (Mahi Mahi) fishery has raised discussion in the context of fisheries that exist almost as annual crops but not quite. Ninety-seven percent of the dolphin are caught at age 1 and they only live to 4 years of age. If there could be some clarification if a species with these biological traits could be considered an annual crop that would be helpful.

The Snapper/Grouper fishery is composed of 60 species with varying life history characteristics, catchability and depth preferences.

Examples of stated problems from independent reviewers as part of the NOAA Data Review of the SEFSC

Data currently used in assessments, for most of our assessed species, are deficient in both quality and quantity for producing robust assessments. One of the reviewers from the Data Review for Gulf, South

Atlantic and Caribbean Councils conducted by the Southeast Fisheries Center (SEFSC) this past summer indicated that: "In general, sample sizes for age information, in both commercial and recreational fisheries, in all southeast regions, are smaller than what would be optimal for age-structured assessments of even the primary species. In some cases, they are truly limiting the SEFSC's ability to conduct age-based assessments. One major concern that needs to be addressed is the minimum sample sizes needed to represent the age distribution in the catch in a statistically reasonable manner." Confounding this problem, the SEFSC simply does not have enough personnel to process age samples and in some instances hard parts used in age determination are subsampled and the remainder archived for possibly future analysis. "The Center's ability to process biological samples is on really tenuous grounds, and in some cases it is a lack of personnel that prevents the processing of archived and even contemporary samples. Processing of biological samples is an essential function for stock assessments, and these positions need to be secure to insure the availability of qualified staff (Reviewer #2, Data Review, SEFSC)."

SEFSC Facing Many Challenges

1) Two SEFSC Laboratories are successful at aging some species, however, species-specific aging workshops are needed to increase accuracy and precision for estimated ages.
2) Age validation studies are needed.
3) Current staffing levels are insufficient to meet workload demands.
4) Dependency on extramural grant funding creates high turnover rates and valuable time is spent retraining new employees.
5) Need for increased reproductive sampling across the Center's entire jurisdiction.

Challenges in the Recreational Fishery

1) Coarse spatial resolution of the data.
2) Large uncertainty in the estimates of effort.
3) Lack of biological samples (length, weight and especially hard parts for aging).
4) Uncertainty in discard estimates.
5) Complete lack of biological data for discards
6) Not all discards are related to minimum size.

The recreational fishery can account for 50% or more of the total landings and discards for many reef species, and recreational discards may be 2 to 3 times the landings for some fisheries.

Fishery-Independent Data in the South Atlantic

The paucity of the fishery-independent data, especially in the South Atlantic and Caribbean was a frequent theme throughout the Data Review meeting.

The precision and accuracy of stock assessment results are greatly improved with the inclusion of reliable fishery-independent indices of abundance. Generating such indices should be a major focus for efforts designed to improve data collection and quality for stock assessments. A well-designed coast-

wide fishery-independent survey could provide indices of abundance, age and length information, and updated life history information while also informing selectivity, spatial effort and movement of stocks (Reviewer #3). For the surveys currently conducted, small sample sizes and high variability in the surveys are currently causing large problems for stock assessments (Reviewer # 3).

Four of the 6 Southeast Area Monitoring and Assessment Program (SEAMAP) surveys in the South Atlantic do not target federally managed species and are not used in any assessments (reviewer #3) However, this year's Spanish mackerel assessment used an index from SEAMAP.

The MARMAP and Southeast Fisheries Information System (SEFIS) fishery-independent sampling use fish traps for their primary sampling methodology. There are limitations to trap surveys that have not been addressed: differential catchability at size and age, ontogenetic movements as some species move to deeper water environments where traps are rarely fished, a large number of South Atlantic reef species that are not trappable on a regular basis, and traps that cannot be deployed in high velocity currents that exist in much of the South Atlantic. The commercial and recreational fisheries are hook and line fisheries, and recreational and commercial fishermen have concerns about the validity of trap catches versus hook and line. An example of this is illustrated by several cooperative research programs being conducted for red snapper where hook and line gear is being used as the mode of sampling. Most of the day trips in that survey caught more red snapper than the MARMAP trap survey caught in its 30 years of sampling.

Conclusion

The South Atlantic Council has faced significant challenges implementing the statutory mandates resulting from the 2006 MSA Reauthorization, particularly, in ending overfishing immediately. The 2006 Reauthorization is predicated on the assumption that each Council has the necessary data to meet the statutory requirements. That is clearly not the case for the Southeastern Councils in general and the South Atlantic specifically. We have implemented substantial reductions in ACLs for some species and essentially closed the most important fishery, red snapper, along the east-central Florida through Georgia based on ending overfishing. This has come at a high cost to recreational and commercial fishermen and the business related infrastructure that they support. Based on management successes in the past, the Council believes that there is ample evidence to support extending the timeframe to end overfishing without impacting rebuilding schedules. The original Magnuson-Stevens Act was founded on the regional differences among the Council jurisdictions. The "one size fits all" approach in the 2006 Reauthorization has violated that regional component. We respectfully ask that you give due consideration to our requests so that all fishermen in the South Atlantic will benefit from your decisions.

Thank you for allowing me to appear before you on behalf of the Council.