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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
U.S. DEPARTMENT OF COMMERCE  
OVERSIGHT HEARING ON**

**FISHING=JOBS:  
HOW STRENGTHENING AMERICA'S FISHERIES  
STRENGTHENS OUR ECONOMY**

**BEFORE THE  
COMMITTEE ON NATURAL RESOURCES  
UNITED STATES HOUSE OF REPRESENTATIVES**

**AUGUST 25, 2012**

**Introduction**

Good afternoon, Mr. Chairman and Members of the Committee. I appreciate the opportunity to speak with you today about how strengthening America's fisheries strengthens the economy. My name is Dr. Richard Merrick and I am the Director of Scientific Programs and Chief Science Advisor for the National Marine Fisheries Service (NMFS) within the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA). Thank you very much for the opportunity to come before you today.

NMFS' mission is stewardship of living marine resources for the benefit of the nation through science-based conservation and management, while simultaneously promoting the health of marine ecosystems. Today, I will discuss how our fisheries science is conducted and how this science underpins and provides for good management here in the Gulf of Mexico. I will also describe some of the recent advances we have made in our science.

Effective fisheries management is based on science. National Standard 2 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) mandates that all fisheries conservation and management measures must be based upon "the best scientific information available" (16 U.S.C. 1851(a)(2)). While there are challenges in securing accurate, precise, and timely data for stock assessments, on balance, science-based management has consistently proven to provide better resource management than decisions made without this advice.

Sustainability of our Nation's fisheries requires continual monitoring of fisheries and fish stocks. NMFS continues to make substantial progress toward improving the quality of the science available to effectively manage commercial and recreational fisheries, benefiting coastal communities and the U.S. economy both today and for generations to come.

NMFS is an international leader in fishery science, rebuilding overfished stocks, and preventing overfishing. Today, we know more about our fish stocks than ever before, and it is vital that our science not regress, as this would inevitably lead to declines in our stocks and a loss in the economic and social values they provide.

### **Robust Science is the Foundation for Management**

Some 230 finfish and shellfish stocks comprise the bulk of landings and value for U.S. fisheries. NOAA monitors the status of these stocks in several ways, with a key indicator being the quality of the stock assessment advice provided to fisheries managers. To sustainably manage these stocks, we need to know how big that stock is, and what proportion of it can be harvested without impacting its long-term productivity. Stock assessments are conducted for this purpose, and in a typical year, we provide around 90 new stock assessments to managers.

NMFS supports the development of fish stock assessments through several budget lines, including Expand Annual Stock Assessments, Survey and Monitoring, Fisheries Statistics, Fishery Information Networks, and Observer Programs. NMFS also utilizes NOAA's Office of Marine and Aviation Operation's Fishery Survey Vessels as a primary platform for many of its stock assessment data collection activities. The President's FY 2013 request for NOAA includes robust funding to support stock assessments. Specifically, NOAA's FY 2013 request would increase the Expand Annual Stock Assessment budget by another \$5 million, increase the Survey and Monitoring budget line by \$2.3 million (to historical levels of \$24.3 million), increase the Observer Programs budget by \$2.9 million, and maintain funding from other contributing budget lines. This combined funding level would allow NMFS to continue to increase the number of stocks with assessments which are of adequate precision to identify the status of the stock and to set fishery quotas.

The stock assessment process includes both data collection and the analysis of that data by fishery scientists. Data for fishery science is based generally on three sets of data:

1. Fishery catch from monitoring commercial and recreational fisheries,
2. Fish abundance from scientific surveys, and
3. Fish biology from a variety of sources including cooperative research.

By tracking these three data series over time and incorporating these data into stock assessment models, scientists can estimate the current range and abundance of stocks, calculate maximum sustainable yield, determine whether overfishing has been occurring or whether the stock has declined into an overfished state, and can project a sustainable level of catch. The latter provides the foundation for setting annual catch limits in accordance with law.

### **Fishery Catch**

#### *Commercial Fisheries*

NMFS is continually striving to improve and augment its processes, methods and programs for commercial fishery data collection and analysis. For example, in the Gulf of Mexico, commercial landings data are collected in cooperation with the five Gulf States and the Gulf States Marine Fisheries Commission, and are used to track progress toward reaching the Annual Catch Limits of managed stocks. By shifting from paper dealer reports, submitted semimonthly, to electronic dealer reporting, submitted weekly, more timely data are generated to more accurately project when a fishery will reach the Annual Catch Limit. This will enable commercial fishermen to more efficiently plan their fishing activities, and reduce the risks of exceeding an Annual Catch Limit.

In addition, NMFS has relied heavily on its partnerships with the states and the interstate marine fisheries commissions to conduct efficient and cost-effective monitoring of commercial landings and recreational catches. The federally-funded Fisheries Information Networks have provided a means through which NMFS has been able to work collaboratively with its partners to design and implement well-integrated data collection programs that meet the management needs of both state and federally-managed fisheries. Cooperative regional programs such as the Gulf Fisheries Information Network have worked effectively to eliminate unnecessary overlaps, standardize data elements and collection methods, and improve the timeliness of data processing, statistical analysis, and dissemination of catch statistics to all partners.

### *Recreational Fisheries*

The Gulf of Mexico and South Atlantic regions may be the most important areas in the country for incorporation of recreational fisheries into fish stock assessments. These data are collected as part of NMFS' Marine Recreational Information Program. NMFS is developing and testing new survey methodologies to improve the accuracy, geographic resolution, and timeliness of recreational fishing catch and effort data, which are based on the findings and recommendations of the National Research Council's 2006 review of the Marine Recreational Fishing Statistical Survey. NOAA's FY 2012 enacted budget includes \$10 million to continue implementing improvements developed through the Marine Recreational Information Program. The President's budget request for FY 2013 is level with FY 2012 for this program.

NMFS previously developed recreational fishery catch estimates for the Gulf and Atlantic coasts via three ongoing surveys. The coastal household telephone survey generated information on angler trips. The access point angler intercept survey provided data on catch per trip. The results of these two surveys were combined to generate catch estimates for shore and private boat angling modes. The for-hire survey and the access point angler intercept survey were utilized to provide estimates for the for-hire (charter and head boat) mode. Under the Marine Recreational Information Program, revised methods were developed that are being incorporated to substantially reduce sources of error and improve the accuracy of effort and catch estimates based on a combination of telephone, mail, and access point surveys.

The Marine Recreational Information Program has also been working with our state partners, including Florida and Louisiana, to develop and test new methods that utilize angler registries to survey anglers for production of trip estimates. Following completion of major pilot efforts under way in CY 2012 and CY 2013, a new survey design to replace the coastal household telephone

survey will be selected and implemented for the Atlantic and Gulf coasts. The Marine Recreational Information Program and our partners are also developing and testing a number of other possible improvements to the current suite of surveys, including:

- Pilot projects to move toward electronic reporting and improved sampling for validation of the Southeast Headboat Survey;
- Development of a sample design to subdivide Florida into sub-state geographic regions;
- Pilot testing of a logbook reporting with dockside validation for the Gulf of Mexico Charterboat fishery;
- Methods to produce preliminary estimates more frequently than bi-monthly, and to evaluate the tradeoffs among timeliness, precision of estimates and cost.

In addition to these improvements, NMFS also initiated expansion of recreational data collection in response to the Deepwater Horizon oil spill. NMFS provided funds to our state partners to enable them to significantly increase sampling via the for-hire survey in the Gulf of Mexico from May 2010 to June 2011. The increased sampling effort, and resultant improved precision of the charter boat trip estimates, enabled NMFS and our partners to produce and publish weekly trip estimates to be used for near real-time tracking of the fishery. Weekly tracking of changes was useful for documenting and assessing economic impacts associated with the Deepwater Horizon oil spill. In addition, weekly estimates of for hire fishing trips was compared to past fishing rates based on past experience, and differences were used to evaluate the potential for changes to fishery management actions.

### Fish Abundance

Long-term monitoring of fish abundance provides an indicator of the status of the stock over time, and as such are invaluable inputs to stock assessments. The importance of such time series has been driven home by recent environmental perturbations. Hurricane Katrina, the oil spill in 2010, historic floods in the Mississippi River basin in 2011, and the severe drought of this year all have influenced commercially and recreationally important species and their habitats in the Gulf of Mexico.

The Supplemental Appropriations Act, 2010 (P.L. 111-212, 124 Stat. 2338) provided \$10 million to conduct additional fish surveys in the Gulf of Mexico to help capture changes in living marine resource populations relative to the Deepwater Horizon oil spill. A majority of those funds were used to contract commercial and recreational vessels for use as research platforms to enhance fishery-independent data collections. With these funds we were able to add a total of 846 days at sea to our base level of effort of 60 days at sea. Nearly 1,200 additional bottom longline stations were added and comparisons of these data to vertical long line samples were made possible. Over 5,000 red snapper otoliths (ear bones used to age fish) were collected and processed, compared to the more typical level of about 300 samples. These data will be instrumental in the red snapper benchmark stock assessment currently underway.

NMFS expects to develop new and innovative approaches to surveying fish stocks in hard to survey areas, which are common in the Gulf of Mexico. We are funding a multi-year research project with an academic partner to explore the use of towed camera arrays for use in surveying

reef fishes in the Gulf of Mexico. If feasible, shifting to this approach would dramatically increase the effectiveness and efficiency of our reef fish surveys – meaning more science for the dollar. We are also providing support for capitalizing on the advanced multibeam hydroacoustic capabilities of the NOAA Ship *Pisces*, enabling us to characterize fisheries habitat while simultaneously sampling the water column.

### Stock Assessments

All of the data discussed thus far provide the inputs for stock assessments. Passage of the Magnuson-Stevens Fishery Reauthorization Act in 2006 resulted in requirements for timely stock assessments, to ensure overfishing has ended, set Annual Catch Limits and to track progress toward rebuilding overfished stocks. In FY 2010, the NMFS' Southeast Fisheries Science Center received funds to bring on seven additional stock assessment scientists to help meet this need. Five of the new scientists have been assigned to work primarily on Gulf of Mexico species. With these new scientists, we expect to double our stock assessment output in the Southeast from an average of about five stocks per year to approximately ten Gulf of Mexico stocks per year by 2015.

The Southeast Data, Assessment and Review process is being streamlined to increase throughput. Modifications to the process are being made in a way that balances the desire for both speed and transparency. Increases in our throughput of stock assessments will better enable the Gulf of Mexico, South Atlantic, and Caribbean Fishery Management Councils to measure the effectiveness of their management decisions and refine their strategies based on this feedback to the economic benefit of the region.

### Science-Based Management of Red Snapper

Fishery management in the Southeast Region is unique because of the large number of species managed, the multispecies nature of fisheries, the wide range of gear types used, and the variable objectives of user groups. In recent years, NMFS has provided focused funding to build stock assessment capacity in the Southeast. The goal of this effort is to support the Gulf of Mexico, South Atlantic, and Caribbean Fishery Management Councils as they work to meet the new statutory requirements of the Magnuson-Stevens Reauthorization Act. We have implemented annual catch limits proposed by the three regional councils for all species, where required, as well as rebuilding plans and management measures to end overfishing and rebuild overfished stocks.

We recognize the impacts catch reductions required to end overfishing are having, and we are working hard to minimize adverse economic impacts on fishermen and fishing communities throughout this recovery period. Gulf of Mexico red snapper management has posed one of our greatest challenges. The Magnuson-Stevens Act requires that we specify separate commercial and recreational quotas for red snapper and that we close each fishery when it takes its quota. For many years, the commercial red snapper fishery was subjected to increasingly shorter seasons because the capacity of the fishery to catch the quota was much larger than needed. Prior to 2007, the commercial red snapper season had been reduced to about 88 days, on average, and we

implemented the first individual fishing quota program in the Gulf of Mexico at industry's request to end the race for fish and improve fleet profitability.

The difficult catch reductions that commercial and recreational fishermen have endured to end overfishing are now beginning to pay off. Our most recent red snapper stock assessment update (2009) indicated overfishing of red snapper ended in 2009. Since then, we have been able to provide commercial and recreational catch increases each year, and fishermen on the west coast of Florida have been afforded new opportunities to target this popular species as it has expanded to its historic range. But we still have a great deal of work remaining to effectively manage the recovery of this resource. While recreational fishermen recognize and appreciate that higher catch rates and larger fish are substantially improving the quality of their fishing experience, they are frustrated and dissatisfied with the progressively shorter fishing seasons required to constrain them to their quota.

NOAA Fisheries is actively working with the Council on ways to adjust the recreational red snapper season within the legal constraints of the Magnuson-Stevens Act to better meet the needs of fishermen. We provided a supplemental recreational red snapper season in the fall of 2010 after the large-scale closure we implemented in response to the Deepwater Horizon event prevented the recreational sector from taking its entire quota. Also, we extended the length of the recreational red snapper fishing season this year after determining that a series of bad weather events likely caused fishing effort to be lower than expected. We continue to look for these types of opportunities to adapt and improve our management approach.

We are now in a position to provide significantly improved assessment advice on red snapper based on the enhanced sampling effort that was begun in FY 2010 and the new cadre of stock assessment scientists provided to the Southeast through supplemental NMFS funding. This assessment will begin with a data workshop in August 2012 where data collected by NOAA and our state and academic partners are reviewed to formulate the strategy for the stock assessment. This will be followed by a benchmark stock assessment model (January-February 2013), and an independent peer review of the assessment's results (April-May 2013). The stock assessment is expected to be delivered to the Gulf of Mexico Fishery Management Council in the late spring of 2013 for incorporation into the quota setting process for the next fishing year.

### **General Views on Proposed Legislation**

In previous hearings before this Committee, the Department of Commerce has commented on proposed legislation that would amend the Magnuson-Stevens Act. We would like to take this opportunity to reiterate a couple of key concerns with respect to Annual Catch Limits (ACLs) and stock assessments:

It is critical that we maintain progress towards meeting the mandate of the Magnuson-Stevens Act to end overfishing and, as necessary, rebuild stocks. ACLs are an effective tool in improving the sustainability of fisheries around the Nation, and NOAA has concerns with legislation that would create exemptions or otherwise weaken provisions regarding ACLs. Uncertainty in the stock assessments upon which ACLs are based should not be used as a basis for exempting

fisheries from ACLs. Such actions risk depleting fisheries and making fishermen worse off than under the current, science-based management system.

In an increasingly constrained fiscal environment, legislation should not mandate duplicative or otherwise unnecessary actions. Additional stages of review for certain types of fisheries data, or repeating data collection and stock assessment efforts when there are already sound peer reviewed processes in place are examples of actions that will divert resources to a select few fisheries at the expense of others with little additional benefit. Moreover, legislation should be cost-effective and consistent with the President's Budget. NMFS welcomes the opportunity to work closely with Congress, the regional fishery management councils, and the recreational and commercial fishing industries, to use the best available science to seek opportunities for efficiency and improved management in order to end overfishing and rebuild stocks.

### **Conclusion**

Sound, science-based management is central to rebuilding the Gulf of Mexico fishery resources to levels that support stable jobs and a healthy economy in the region. We remain committed to improving the quality and timeliness of the data and scientific advice used to support management decisions here in the Gulf of Mexico, in collaboration with our many partners in the fishing industry, states agencies and academic institutions. Thank you again for the opportunity to discuss NMFS's fishery science. We are available to answer any questions you may have.