

**REAUTHORIZATION OF THE MAGNUSON-STEVENS
FISHERY CONSERVATION AND MANAGEMENT ACT:
NOAA AND COUNCIL PERSPECTIVES (PART 1)**

HEARING

BEFORE THE

SUBCOMMITTEE ON OCEANS, ATMOSPHERE,
FISHERIES, AND COAST GUARD

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

AUGUST 1, 2017

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

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**REAUTHORIZATION OF THE
MAGNUSON-STEVENSON FISHERY
CONSERVATION AND MANAGEMENT ACT:
NOAA AND COUNCIL PERSPECTIVES (PART 1)**

TUESDAY, AUGUST 1, 2017

U.S. SENATE,
SUBCOMMITTEE ON OCEANS, ATMOSPHERE, FISHERIES,
AND COAST GUARD,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:00 a.m. in room SR-253, Russell Senate Office Building, Hon. Dan Sullivan, Chairman of the Subcommittee, presiding.

Present: Senators Sullivan [presiding], Peters, Nelson, Wicker, Inhofe, Blumenthal, Markey, and Booker.

**OPENING STATEMENT OF HON. DAN SULLIVAN,
U.S. SENATOR FROM ALASKA**

Senator SULLIVAN. Good morning. The Subcommittee on Oceans, Atmosphere, Fisheries, and the Coast Guard will now come to order.

Today's hearing is the first in a series with the long overdue issue of the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act, known as the MSA, and to examine this law's impact on managing our nation's fisheries, its successes to date, and possible areas of improvement. The Committee has already announced a field hearing in Alaska later this month, and I look forward to hearing from stakeholders at additional hearings throughout the country this fall.

I would like to first welcome both of our witnesses, Dr. John Quinn, the Chair of the Council Coordination Committee, the CCC; and Mr. Chris Oliver, NOAA's Assistant Administrator for Fisheries, also known as the NMFS Administrator.

The last reauthorization of the MSA was 11 years ago when it created the CCC. The CCC convenes the leadership of the eight Regional Fishery Management Councils to discuss areas of common interests, and I'm pleased to have Dr. Quinn here today to discuss consensus views of the eight Councils on the MSA reauthorization.

I am also pleased to introduce Chris Oliver, the first ever Alaskan to permanently hold the position of the Assistant Administrator for Fisheries before becoming Director of NMFS. Chris spent 27 years working at the North Pacific Fisheries Management Coun-

cil, the last 17 as its Executive Director. As an Alaskan, I can tell you we are thrilled to have you in this very important position.

Based on his work in the Gulf of Mexico at the beginning of his career and his extensive experience overseeing the largest and best managed fishery in the country, I have confidence that under his leadership, Alaska and America's interests will be well represented, and the concerns and perspectives of commercial, charter, and recreational fishermen alike will be valued at NMFS.

For so many Alaskans and their families, and so many throughout the country, fishing is a way of life. As I've mentioned at this Committee many times, our fisheries are by far the largest in the Nation. I like to say Alaska is the superpower of seafood, constituting over 50, almost close to 60 percent of all domestic landings in the country and tens of thousands of jobs. In many communities, our fisheries are the backbone of their economy. It's my intention to ensure that the next MSA reauthorization guarantees continued strong coastal communities not only in Alaska, but throughout the country.

As Congress considers whether or not the MSA is in need of changes, it is important that we simply not rest on previous gains. In the last time since the MSA was authorized, technology has rapidly advanced, yet legislation able to support that technology has not. Specifically as it relates to data collection, stock assessments, and other analytical tools to help improve the accuracy of fish stock information, better understanding the health of the stocks and how technology can assist in that regard, as well as reducing administrative burdens on our fishing industry are topics ripe for discussion and possible elements of a reauthorization.

In addition, as we continue to responsibly manage the fishery resources across the United States, we must ensure that our Nation's fisheries management system supports a stable food supply, recreational opportunities, and plentiful fishing and processing jobs that provide for vibrant coastal communities.

With that, I want to thank our witnesses again for being here.

I now recognize the Ranking Member for any opening statement he may have.

Senator Peters.

**STATEMENT OF HON. GARY PETERS,
U.S. SENATOR FROM MICHIGAN**

Senator PETERS. Well, thank you, Mr. Chairman.

And thanks to our witnesses for being here this morning to discuss the important issue of reauthorizing the Magnuson-Stevens Act. As you know, the original 1976 Act helped reduce exploitive fishing by foreign fleets in U.S. waters and protect our country's important fishery resources.

Since that time, we have come to understand the importance of sustainably managing our fisheries and preserving these incredibly important natural resources. The most recent authorizations have successfully rebuilt several fish populations to healthy, sustainable levels, to the benefit of coastal communities. But we still have overfishing and overfished populations, and we should always seek out ways to improve the management systems that we create. The

need to determine what is working, what needs improvement, and ways to improve fishery management is why we are all here today.

I regret that I can't spend as much time at this hearing this morning as I would like due to a scheduling conflict, but that's why we have a hearing record, and I look forward to learning what our expert witnesses have to share with us.

Michigan, like much of the rest of the country, is full of hunters and anglers. Every year, nearly 1.8 million anglers fish on the Great Lakes, and there are roughly 1,900 charter boats operating there. This activity is estimated to have a \$7 billion impact on the surrounding economy, and directly supports about 50,000 jobs. While we Michiganders are typically targeting walleye, trout, perch, and muskies where we live, there are many of us who travel to states like Florida and Alaska to enjoy saltwater fishing opportunities. Michigan also has a very robust marine product manufacturing industry that depends on vibrant coastal communities and well-managed Federal fisheries.

And, finally, Michigan, like much of the rest of the country, is full of seafood lovers. We want to be assured that the finfish and shellfish that we purchase at markets and in restaurants, much of which comes from states like Alaska and Florida or is imported from other countries, is responsibly harvested.

So how we manage our Federal fisheries matters to the folks in Michigan. What we do about the scourge of illegal unreported or unregulated fishing occurring in the waters of other countries and on the high seas also matters a great deal to us.

Conserving these resources through sustainable management so that they can continue to support the businesses and communities that rely on them matters to folks in Michigan. Key to sustainable management is making sure that we are using a science-driven process. Fisheries management is complex and needs to account for the interactions between different species, between species, and their habitat. Understanding those many interactions takes a lot of study and an awful lot of data, which requires a lot of monitoring.

It is important to look for ways to leverage developments in technology and science to do the critical job of managing our Federal fisheries better. Only by gathering and utilizing all of the environmental information necessary can we understand the ocean and the coastal ecosystems that provide us with this important and delicious natural resource.

Mr. Chairman, I also want to mention that while I understand that most freshwater fishery issues are not within the purview of this Committee, I have introduced a bill called the Great Lakes Fishery Research Authorization Act of 2017. This legislation, which was referred to the Committee on Environment and Public Works will solidify the scientific basis upon which fisheries in the Great Lakes are managed by augmenting current data-gathering methods and utilizing new cutting edge technologies. It's my hope that as part of this important MSA reauthorization process, we might have some cross-pollination of ideas and approaches to conservation and management between Great Lakes fisheries and Federal saltwater fisheries.

Thank you, Mr. Chairman.

[The prepared statement of Senator Peters follows:]

PREPARED STATEMENT OF HON. GARY PETERS, U.S. SENATOR FROM MICHIGAN

Thank you, Mr. Chairman, and thanks to our witnesses for being here this morning to discuss the important issue of reauthorizing the Magnuson-Stevens Act. The original 1976 Act helped reduce exploitative fishing by foreign fleets in U.S. waters and protect our country's important fishery resources.

Since that time, we have come to understand the importance of sustainably managing our fisheries and preserving these natural resources. The most recent authorizations have successfully rebuilt several fish populations to healthy, sustainable levels to the benefit of coastal communities.

But, we still have overfishing, overfished populations, and we should always seek out ways to improve the management systems we create. That need to determine what is working, what needs improvement, and ways to improve fishery management is why we are here today.

I regret that I can't spend as much time at our hearing this morning as I would like, due to a scheduling conflict. But that's why we have a hearing record and I look forward to learning what our expert witnesses have to share.

Michigan, like much of the rest of the country, is full of hunters and anglers. Every year nearly 1.8 million anglers fish on the Great Lakes, and there are roughly 1,900 charter boats operating there. This activity is estimated to have a \$7 billion impact on the surrounding economy and directly supports around 50,000 jobs.

While we Michiganders are typically targeting walleye, trout, perch, or muskies where we live, there are many of us who travel to states like Florida and Alaska to enjoy saltwater fishing opportunities.

Michigan also has a robust marine product manufacturing industry that depends on vibrant coastal economies and well-managed Federal fisheries.

Finally, Michigan like much of the rest of the country is full of seafood lovers. We Michiganders want to be assured that the finfish and shellfish we purchase at markets and in restaurants—much of which comes from States like Alaska and Florida or is imported from other countries—is responsibly and sustainably harvested.

So how we manage our Federal fisheries matters to Michigan.

What we do about the scourge of illegal, unreported, or unregulated, fishing occurring in the waters of other countries and on the high seas matters to Michigan.

Conserving these resources through sustainable management so they can continue to support the businesses and communities that rely on them, matters to Michigan.

Key to sustainable management is making sure we are using science driven processes. Fisheries management is complex and needs to account for interactions between different species and between species and their habitat.

Understanding those many interactions takes a lot of study and a lot of data which requires a lot of monitoring.

It is important to look for ways to leverage developments in technology and science to do the critical job of managing our Federal fisheries better. Only by gathering and utilizing all the environmental information necessary can we understand the ocean and coastal ecosystems that provide us with this important and delicious natural resource.

Mr. Chairman I also want to mention that, while I understand that most freshwater fishery issues are not within the purview of this committee, I have introduced a bill called the Great Lakes Fishery Research Authorization Act of 2017—S. 859.

This legislation, which was referred to the Committee on Environment and Public Works, will solidify the scientific bases upon which fisheries in the Great Lakes are managed by augmenting current data-gathering methods and utilizing new, cutting-edge technologies.

It is my hope that, as a part of this important MSA reauthorization process, we might have some "cross-pollination" of ideas and approaches to conservation and management between Great Lakes fisheries and Federal saltwater fisheries.

Thank you, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Peters.

And now I ask Senator Nelson, the Ranking Member of the Commerce Committee, if he would like to make an opening statement as well.

**STATEMENT OF HON. BILL NELSON,
U.S. SENATOR FROM FLORIDA**

Senator NELSON. Thank you, Mr. Chairman. Just a couple of comments.

One of the great things about this Committee is the broad jurisdiction that it has in areas that are so important to the country as a whole. Think about this. In the 1970s, there is Senator Magnuson, from Washington; there is Senator Stevens, from Alaska and they knew that there was a problem in New England, in Senator Markey's area, because it was getting overfished. So they decide to do something about it, and that's more than 3 decades ago. We are the beneficiaries of that kind of bipartisan effort.

Clearly, Mr. Chairman, your State of Alaska is one of the most fertile fisheries around. By the way, that's one of the most important reasons we have the U.S. Coast Guard up there. It not only is given the task from the United States Navy of protecting our national security, but it's there to protect that big fishing fleet.

It's interesting that the members of the Committee, we have a number of members that represent landlocked states, don't have a direct outlet to the ocean——

[Voice.]

Senator NELSON. Yes, you are the Great Lakes.

[Laughter.]

Senator NELSON. But yet they participate and understand the importance of the Magnuson-Stevens Act. So thank you for having this hearing. Of course, my state, when it comes to recreational, charter boats, as well as commercial fishing, we're known as the capital of the fishing world. And I can speak for——

Senator SULLIVAN. That sounds more impressive than the superpower of seafood.

[Laughter.]

Senator NELSON. I can speak for Senator Wicker, there is a great deal that comes from the livelihoods of the people along the Gulf, and, of course, when Senator Markey comes back, all up and down the Atlantic, that comes from the commercial fishing.

The Gulf is such an important resource and we know that we have to protect it. Interestingly, the Gulf happens to be, off of Florida, the largest testing and training range for the United States military in the world. So we have, for our national security's sake, reasons to protect that Gulf.

I'll just close by saying that one of the greatest challenges that I saw was when 5 million barrels of oil were spilled in the Gulf, it immediately affected the livelihoods of a lot of people, not only in the fishing industry, but also it cut out an entire season of our tourism industry on the Gulf Coast because people thought that the beaches were covered with oil. It is a unique environment, and this Committee is particularly suited to protect this kind of ocean environment. So I am very grateful that you're bringing up for discussion the Magnuson-Stevens Act.

Thank you, Mr. Chairman.

[The prepared statement of Senator Nelson follows:]

PREPARED STATEMENT OF HON. BILL NELSON, U.S. SENATOR FROM FLORIDA

I want to thank Senator Sullivan and Senator Peters for holding this hearing today—the first of several I believe we have planned on reauthorizing the Magnuson-Stevens Act.

I also want to thank our witnesses for appearing today.

Florida has long been heralded as the fishing capital of the world. With roughly 2,300 miles of shoreline and year-round, fishing-friendly weather, Florida is the source of hundreds of millions of dollars of shrimp, snapper, grouper, spiny lobster, and stone crab on the plates of America's restaurants and households across the country.

As a result of Florida's abundant fishery resources and other attractions, such as its sugar white beaches, theme parks, fantastic hotels, and acclaimed restaurants—it is a vibrant coastal economy second to none.

But Florida might not be the fishing capital of the world today were it not for the success of the Magnuson-Stevens Act.

As we look to reauthorize the Act, I think it is important that Congress take the approach a doctor would take in treating a patient: "First, do no harm."

We must take care not to undo the important improvements that have been made to the Act. It's important to Florida and I know it is equally important to my colleagues' states.

Thank you, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Nelson.

And I want to again welcome our witnesses today. Mr. Chris Oliver, Assistant Administrator for the National Marine Fisheries Service, NMFS. I want to commend and express my appreciation to Secretary Ross for his selection of Chris. I don't think he could have found a more qualified, capable Director.

And Dr. John Quinn, the Chair of the Council Coordination Committee and Northeast Fishery Management Council.

You will each have 5 minutes to deliver an oral statement. A longer written statement will be included in the record if you so desire.

Mr. Oliver, the floor is yours.

**STATEMENT OF CHRIS W. OLIVER, ASSISTANT
ADMINISTRATOR, NATIONAL MARINE FISHERIES SERVICE,
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,
U.S. DEPARTMENT OF COMMERCE**

Mr. OLIVER. Good morning, Chairman Sullivan and members of the Subcommittee. Thank you for the opportunity to testify today. I participated in both the 1996 and 2006 reauthorization processes in my previous role. And while I'm wearing a different hat today, and this administration has yet to take formal positions on specific issues, my fundamental perspectives remain built upon the success of the Act, as evidenced by sustainable management in the North Pacific fisheries and the successes we have achieved in fisheries across the United States.

I would like to describe some of the agency's successes under the Act, but I want to focus on some of the challenges that remain.

Essentially, the Act has been an outstanding success. In partnership with the Councils, Commissions, and other stakeholders, we have effectively ended overfishing in this country and are rebuilding fish stocks across the board, thereby assuring a sustainable supply of seafood for the Nation in the future.

The Magnuson Act created broad goals—the Magnuson-Stevens Act created broad goals for U.S. fishery management in a unique management structure centered around the Regional Councils. I

can personally attest to the value of that system, which encourages a collaborative bottom-up process where input and decisions include fishermen, other fishery stakeholders, affected states, tribes, and the Federal Government.

Working together, fishermen, scientists, and managers have brought back numerous resources in fisheries across our country. I'm especially proud of the accomplishments in Alaska, where our approaches have led them to be widely recognized as one of the most successfully managed fisheries in the world.

Yet we have challenges remaining. As an example, while our West Coast groundfish species have rebuilt several important stocks, in recent years, fishermen are leaving significant portions of the available harvest in the water due to outdated regulations and also to bycatch constraints. We have to find ways to maximize the allowable harvest in all of our fisheries, but importantly, do so within our overall long-term conservation goals. I think this is a case for some of our commercial fisheries and generally for recreational fisheries as well.

Saltwater recreational fishing is among the Nation's favorite pastimes and a major contributor to the economies at all levels. We are pleased to announce that we are partnering with the Atlantic States Marine Fisheries Commission to host a national summit on saltwater recreational fisheries in March 2018. While annual catch limits are a cornerstone of sustainable management, we have to recognize that managing under ACLs and associated accountability measures has been a major change and a new challenge for many fisheries, and that's the case for commercial as well as recreational fisheries, particularly where harvest data can be much more difficult to collect and timely report and where our management goals may differ fundamentally from commercial fisheries.

Additional flexibility in how we apply those accountability measures and annual catch limits, as well as rebuilding schedules, could expand our collective toolbox and our ability to address many of the issues which have been raised in reauthorization discussions. I can assure you we stand ready to assist in any way we can as those approaches are being considered.

America's seafood industry sets a global standard for sustainability; however, the majority of seafood we consume is imported. While there are some opportunities to enhance wild-stock harvests, we believe significant headroom lies in expanded aquaculture production, and we are already making marine aquaculture development a renewed priority within the agency through various operational and budgetary incentives.

Coordination of the regulatory and permitting process is a key area where we can be more effective. With these initiatives and with more efficient regulation of our wild-stock fisheries, we can position the Nation to make inroads on the seafood deficit.

The current Act works very well for most fisheries. However, I believe there are opportunities to provide additional flexibility to allow us to more effectively manage some of those fisheries, particularly those that have different catch accounting challenges or could benefit generally from alternative management approaches. Although challenges remain in some of those fisheries in the near term, overall, the benefits for the resources, the industries it sup-

ports, and our economy in general can be realized as fish populations grow and catch limits increase in the longer term. In that sense, I believe we can have it both ways. I believe that we can maximize opportunities—take opportunities to maximize our domestic harvest potential without compromising the long-term sustainability of the resources we manage. I and NOAA Fisheries are committed to working with Congress throughout this reauthorization process to achieve just that goal.

And that really concludes my opening comments, Mr. Chairman. And, again, I know there will be questions, and I will be happy to try to answer them.

[The prepared statement of Mr. Oliver follows:]

PREPARED STATEMENT OF CHRIS W. OLIVER, ASSISTANT ADMINISTRATOR,
NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Introduction

Good afternoon, Chairman Sullivan, Ranking Member Peters, and Members of the Subcommittee. I appreciate the opportunity to speak with you today about the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). My name is Chris Oliver and I am the Assistant Administrator for the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) in the Department of Commerce. From daily weather forecasts, severe storm warnings, and climate monitoring to fishery management, coastal restoration, and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers, and other decision makers with reliable information they need when they need it.

Today, I will describe the agency's work under the Magnuson-Stevens Act, which sets forth standards for conservation, management, and sustainable use of our Nation's fisheries resources.

Progress under the Magnuson-Stevens Act

The Magnuson-Stevens Act provides the Nation with a very successful fisheries management construct. U.S. fisheries are among the world's largest and most sustainable. For forty years, Magnuson-Stevens has demonstrated that a dynamic science-based management process is fundamental for sustainably managing fisheries. The goal of fisheries management is to achieve fisheries that are environmentally, economically, and recreationally sustainable. In partnership with the regional fishery management councils, interstate fishery commissions, and our stakeholders, and driven by the Magnuson-Stevens Act, the agency has effectively ended overfishing and is rebuilding domestic fish stocks. As of December 31, 2016, 91 percent of stocks for which we have assessments are not subject to overfishing, and 84 percent are not overfished.ⁱ By preventing overfishing and rebuilding stocks, we are strengthening the value of fisheries to the economy and communities that depend on them, and also ensuring a sustainable supply of seafood for the Nation in the future.

Our most recent data show that after adjusting for inflation the landed volume and the value of commercial U.S. wild-caught fisheries remained near record highs. U.S. commercial fishermen landed more than 9.7 billion pounds of seafood valued at \$5.2 billion in 2015.ⁱⁱ The seafood industry—harvesters, seafood processors and dealers, seafood wholesalers and seafood retailers, including imports and multiplier effects—generated an estimated \$208 billion in sales impacts and supported 1.6 million jobs in 2015, the most recent year for which economic impact numbers are available.

Saltwater recreational fishing is among the Nation's favorite pastimes and is a major contributor to the U.S. economy at all levels. In 2015, the Nation's nine mil-

ⁱ See Status of the Stocks 2016. NMFS Office of Sustainable Fisheries, available at: http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/archive/2016/status-of-stocks-2016-web.pdf

ⁱⁱ See NOAA Annual Commercial Fisheries Landings Database, available at <http://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings/index>

lion saltwater recreational anglers took more than 60 million fishing trips and spent \$28.7 billion on fishing trips (\$4.5 billion) and durable fishing related equipment (\$24 billion) while spending time with friends and family. Their expenditures drove \$63 billion in sales impacts, a 5 percent increase from 2014, supported 439,000 jobs, and contributed \$36 billion to the U.S. gross domestic product.ⁱⁱⁱ In partnership with the recreational fishing community, NOAA Fisheries is committed to ensuring abundant and enduring saltwater recreational fishing opportunities now and into the future. To this end, I am pleased to announce that NOAA Fisheries is partnering with the Atlantic States Marine Fisheries Commission to host a national summit on saltwater recreational fisheries in March 2018 to chart a course toward future success.

Marine aquaculture production totaled 90 million pounds valued at \$3.8 million in 2014, with the largest regional producer being the Atlantic, which represents almost 50 percent of the total value.^{iv} Aquaculture production has tremendous untapped potential, and under Secretary Ross' direction NMFS will be working expand aquaculture opportunities.

Marine fish and fisheries—such as tropical tunas in the Western and Central Pacific, salmon in the Pacific Northwest, halibut and groundfish in Alaska, cod in New England and red snapper in the Gulf of Mexico—are vital to the prosperity and cultural identity of coastal communities in the United States. U.S. fisheries play an enormous role in the U.S. economy. In Alaska, where I have lived for the last 27 years, Dutch Harbor leads the Nation for the 19th consecutive year as the port with the highest volume of seafood landed (787 million pounds valued at \$218 million).^v

Around the country, commercial fishing supports fishermen, contributes to coastal communities and businesses, and provides Americans with a valuable source of local, sustainable, and healthy food. Recreational and subsistence fishing provides food for many individuals, families, and communities; is an important family activity; and is a critical economic driver of local and regional economies, as well as a major contributor to the national economy. Subsistence and ceremonial fishing also provides an essential food source and has deep cultural significance for indigenous peoples in the Pacific Islands and Alaska and for many Tribes on the West Coast.

The advancement of our science, management, and enforcement tools has resulted in improved sustainability of fisheries and greater stability for industry. The 2007 Magnuson Stevens Act reauthorization provided more explicitly for market-based fishery management through Limited Access Privilege Programs, and addressed the need to improve the science used to inform fisheries management. Limited Access Privilege Programs, while not appropriate for all fisheries, are an important tool in our collective tool box, and the current Act allows for development of such programs to be tailored to the specific needs of each fishery.

Under the Magnuson-Stevens Act, the U.S. has many other effective tools to apply in marine fisheries management. Yet, as we look to the future, we must continue seeking opportunities to further improve our management system. Our progress has not come without costs, including reductions in near term harvests for both commercial and recreational fisheries in some cases, and challenges remain. Fishermen, fishing communities, and the Councils have had to make difficult decisions and absorb the near-term costs of conservation in exchange for long-term economic and biological sustainability.

Magnuson-Stevens Act Flexibility and Regional Approach

The Magnuson-Stevens Act created broad goals for U.S. fisheries management and a unique, highly participatory management structure centered on the Councils. Given my past work as the Executive Director of the North Pacific Fishery Management Council, I can attest to the value of the regional fishery management council system established through the Magnuson-Stevens Act. This structure encourages a collaborative, “bottom up” process where input and decisions about how to manage U.S. fisheries include fishermen, other fishery stakeholders, affected states, tribal governments, and the Federal Government.

The Councils can choose from a variety of approaches and tools to manage fish stocks and meet the mandates of the Magnuson-Stevens Act—*e.g.*, catch limits, catch shares or other allocation mechanisms, area closures for habitat or protected species considerations, and gear restrictions. These measures are submitted to the Secretary of Commerce for approval and are implemented by NMFS.

ⁱⁱⁱ See Fisheries Economics of the U.S. 2015. NMFS Office of Science & Technology, available at: https://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2015/index

^{iv} See Fisheries of the United States, 2015. NMFS Office of Science & Technology, available at: <http://www.st.nmfs.noaa.gov/commercial-fisheries/fus/fus15/index>

^v See Fisheries of the United States, 2015. NMFS Office of Science & Technology, available at: <http://www.st.nmfs.noaa.gov/commercial-fisheries/fus/fus15/index>

Effects on fishing communities are central to many fishery management decisions. Fishing communities rely on fishing-related jobs, as well as the non-commercial and cultural benefits derived from these resources. Marine fisheries are the lifeblood of many coastal communities around our Nation. Communities, fishermen, processors, and various fishing dependent industries rely not only on today's catch, but also on the predictability of future catches.

The need to provide stable domestic fishing and processing jobs is paramount to fulfilling one of the Magnuson-Stevens Act's goals—to provide the Nation with sources of domestic seafood. This objective has even greater purpose now than when the Act was passed, as today U.S. consumers are seeking—more than ever—options for healthy, safe, sustainable, and local seafood.

Under the standards set in the Magnuson-Stevens Act the Nation has made great strides in maintaining more stocks at biologically sustainable levels, ending overfishing, rebuilding overfished stocks, building a sustainable future for our fishing-dependent communities, and providing more domestic options for U.S. seafood consumers in a market dominated by imports. Thanks in large part to the strengthened Magnuson-Stevens Act and the sacrifices and investment in conservation by fishing communities across the country, the condition of many of our most economically important fish stocks has improved steadily over the past decade.

Regional Successes

There are many examples of what fishermen, scientists, and managers can do by working together to bring back a resource that once was in trouble.

Atlantic sea scallops provide one example of rebuilding success. In the early 1990s, the abundance of Atlantic sea scallops was near record lows and the fishing mortality rate was at a record high. Fishery managers implemented a number of measures to allow the stock to recover, including an innovative area management system. The stock was declared rebuilt in 2001. In real terms, gross revenues in New England increased more than six-fold from \$44 million in 1998 to \$287 million in 2015, making New Bedford the Nation's top port by value of landings since 2000.^{vi}

In the Pacific Islands Region, NMFS, the Western Pacific Fishery Management Council, the State of Hawaii, and fishing communities have ended overfishing of the Hawaiian archipelago's deep-water bottomfish complex—a culturally significant grouping of seven species of snapper and grouper. This has enabled NMFS to increase annual catch limits for these stocks for both commercial and recreational fishermen and ensure these fish are available year-round.

On the West Coast, NMFS and the Pacific Fishery Management Council, the fishing industry, recreational anglers, and other partners have successfully rebuilt a number of once overfished stocks, including coho salmon, lingcod, Pacific whiting, widow rockfish, canary rockfish, and petrale sole. These and other conservation gains, including implementation of the West Coast groundfish trawl rationalization program, enabled NMFS to increase catch limits for abundant West Coast groundfish species that co-occur with groundfish species in rebuilding plans.

In the Southeast Region, NOAA, the Gulf of Mexico and South Atlantic Fishery Management Councils, the fishing industries, recreational anglers and other partners have successfully rebuilt a number of once overfished stocks, including gag, red grouper and king mackerel in the Gulf of Mexico, and black sea bass in the South Atlantic. These and other conservation gains enabled NMFS to increase catch limits for six stocks or stock complexes and eliminate or reduce two fixed seasonal closures.

I'm most proud of the accomplishments in Alaska where our management decisions have led us to be widely recognized as one of the most successfully managed fisheries in the world. In 2015, landings revenue totaled about \$1.7 billion, a 32 percent increase from 2006 (a 25 percent increase in real terms after adjusting for inflation).^{vii}

Remaining Challenges—Looking to the Future

Amid these successes, some critical challenges remain. For example, while our West Coast groundfish fisheries have rebuilt several important stocks, in recent years fishermen are leaving a substantial amount of the available harvest of some groundfish species in the water, due to regulatory or bycatch species constraints. We must find ways to maximize allowable harvests that are still protective of non-target

^{vi} See Fisheries Economics of the U.S. 2015. NMFS Office of Science & Technology, available at: https://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2015/index

^{vii} See Fisheries Economics of the U.S. 2015. NMFS Office of Science & Technology, available at: https://www.st.nmfs.noaa.gov/economics/publications/feus/fisheries_economics_2015/index

species in all of our fisheries. Solving difficult management issues will require us to reexamine our own stock assessment and data collection systems, which we are doing independent of Magnuson-Stevens Act reauthorization, and will require the close cooperation of the states, the regional fisheries management Councils, and all involved stakeholder groups.

Annual catch limits are a cornerstone of sustainable fisheries management around the Nation, but managing fisheries using annual catch limits and accountability measures was a major change

and has been challenging in certain fisheries, particularly recreational fisheries where total harvest data can be much more difficult to collect and timely report than in most commercial fisheries. This is particularly true where data is scarce, which is the case for many of the stocks in the Pacific Islands region and the Caribbean, especially those species being fished in the coral reef ecosystem. I believe there are opportunities to have it both ways—to maximize our domestic harvest potential, without compromising the long-term sustainability of the resources we manage. We are committed to working with Congress throughout the Magnuson-Stevens reauthorization process with regards to annual catch limits, accountability measures, stock rebuilding, or other aspects of our management construct, while still protecting the overall, long-term conservation and sustainability of the Nation's fishery resources.

Stock assessments provide the fundamental information necessary to successfully manage sustainable fisheries. Preservation and enhancement of the science used to inform fisheries management is imperative as we look to the future of U.S. fisheries and the seafood they provide the Nation. NMFS has made a substantial effort to monitor recreational fisheries and incorporate data from these fisheries into stock assessments. We are applying new and improved methods for estimating total catch by the millions of recreational saltwater anglers, but more needs to be done. Strengthening our partnerships with the coastal states, regional fisheries management Councils, and affected stakeholders to conduct efficient and cost-effective monitoring will be an important component of that effort.

As NMFS assesses the most effective and efficient ways to support sustainable fisheries management and fishing communities, there may be a need to refocus limited monetary and staff resources on core, mission critical activities such as basic stock assessment and catch accounting.

We face formidable challenges managing recovering stocks to benefit both commercial and recreational user groups with fundamentally different goals and objectives. Together with our partners, it is essential that we continue to explore innovative management approaches appropriate to solve regional problems with regional management tools. We must remain dedicated to exploring ways to maximize economic opportunities from wild-caught fisheries for commercial and recreational fishermen, processors, and communities. Some improvements in our regulatory processes may be possible, not only in the number of specific regulations we promulgate, but in the more general regulatory processes under which we operate. The Magnuson-Stevens Act intersects with a number of other important statutes including National Environmental Protection Act, the Endangered Species Act, and the Marine Mammal Protection Act, and these various statutes impose important responsibilities upon the agency. There may be opportunities for more efficiency and consistency in how we interact with those other statutes and, to that end, NMFS is currently inviting public comment on the efficacy and effectiveness of the current regulatory process, including the application of Federal regulations under these statutes and to aquaculture.

We also need to expand U.S. seafood production and exports. America's seafood industry is world-renowned and our fisheries set a global gold standard for sustainability. However, the majority of the seafood we consume is imported. Through maintenance or enhancement of wild-stock harvests and expanded aquaculture production, we can position the Nation to make inroads on that seafood trade deficit. We need to stay true to our essential conservation mission, while taking advantage of opportunities to streamline regulatory processes and maximize the National benefit of our fisheries resources.

Conclusion

We all share the common goal of healthy fisheries that can be sustained for future generations. Without clear, science-based rules, fair enforcement, and a shared commitment to sustainable management, short-term pressures can easily undermine progress toward restoring the social, economic, and environmental benefits of a healthy fishery. There are opportunities to provide flexibility in applying annual catch limits and in using sound science and innovative management approaches to rebuild more fish stocks. Although challenges remain in some fisheries, overall, the

benefits for the resource, the industries it supports, and the economy can be seen as fish populations grow and catch limits increase.

To understand where we are, it is important to reflect on where we've been. We have made great progress but our achievements have not come easily, nor will they be sustained without continued attention. This is a critical time in the history of Federal fisheries management, and we must move forward in a strategic way to ensure our Nation's fisheries are able to meet the needs of both current and future generations. We also need to remember that practicality and common sense are important as we engage strategically. We look forward to working with Congress on fisheries management issues in a holistic, comprehensive way that builds on its success and considers the needs of the fish, fishermen, ecosystems, and communities.

Thank you again for the opportunity to discuss the Magnuson-Stevens Act. I am available to answer any questions you may have.

Senator SULLIVAN. Great. Thank you, Director Oliver.
Dr. Quinn.

**STATEMENT OF DR. JOHN M. QUINN, CHAIR,
NEW ENGLAND FISHERY MANAGEMENT COUNCIL**

Dr. QUINN. Thank you very much, Chairman Sullivan and Ranking Member Peters. My name is John Quinn, and I am here to testify on behalf of the Council Coordination Committee.

By way of background, I am the Director of Public Interest Law Programs at the University of Massachusetts School of Law in Dartmouth, which is right next door to the Port of New Bedford, one of the leading fishing ports in the Nation. I've been involved in fisheries issues for the last 30 years as a lawyer, a state legislator, and for the last 5 years, as a member of the New England Fisheries Management Council.

Commercial, recreational, and subsistence fisheries are key contributors to our coastal communities and the Nation's economy. The Councils are the cornerstone of the regional system created by the Act, and as a group, we are strong believers in its benefits.

Today, I will highlight a few of the issues that are detailed in my written statement grouped into three themes: a need for management flexibility, the importance of our public process, and a need for adequate resources.

I'll begin with management flexibility. The wide variety of fisheries in our country means that no single solution to management challenges will work in all cases. Our strategy should be to create a flexible legal framework that allows for a wide range of management solutions. This is particularly true when it comes to promoting sustainable fisheries. To that end, the Act requires that a stock in poor condition must be rebuilt within 10 years. This arbitrary timeline can cause problems. Imagine that every homeowner could only choose a 10-year mortgage when purchasing a home. Well, that would work for some; it would not work for all.

I want to make it clear that we do not seek eliminating rebuilding requirements, but we believe that targeted changes to the law would enable the development of better rebuilding plans. It's not just the Councils that reached this conclusion, the issue was highlighted in a report by the National Research Council in 2014.

There is also a need for flexibility at the tactical level. Councils need to be able to consider a wide variety of management tools without burdensome requirements. ACLs and AMs may not be the best tools to managing all fisheries.

And, finally, most regions have used exempted fishing permits to conduct scientific research that leads to management solutions. Adding new requirements for the EFP process would greatly reduce the ability to get them approved in a timely manner. Fishermen in their communities would suffer as a result.

And as to the public process, clearly, a transparent process is critical to maintaining public trust. This need could be met in a variety of ways, but the defining specific webcast requirements will lead to additional expense and ignore the technical difficulties encountered when holding meetings in isolated fishing ports. All proposed actions are carefully examined before implementation. The requirement for NEPA analysis, however, duplicates those in the Act and other applicable law. We believe that alternative analysis should be done within the framework of the Act rather than NEPA.

With 40 years of experience, the Council has provided a well-known, time-tested forum for resolving fisheries issues. When other statutes are used to develop regulations that limit fishing, that public process is often sidestepped. If all Federal fisheries regulations are promulgated under section 302 of the Act, it would ensure rational management of our fishery resources throughout the range.

And as to resources, in order to effectively manage fisheries, a significant investment is needed at all steps of the process. We currently rely heavily on data and analysis provided by NMFS. Reducing stock assessment funds will reduce harvests by U.S. fishermen, which will increase imports of foreign seafood. Increasing stock assessment funding, including that needed to collect the necessary data, is one of the best investments an administration can make in U.S. fisheries.

Data availability continues to be among the greatest challenges for the management of recreational fisheries. Changes to NOAA's MRIP program have only been partially implemented and have done little to increase the precision of catch estimates. MRIP does not provide the data needed for reliable monitoring of ACLs and AMs. Addressing this problem will require increased sampling rates, which can only occur with increased funding.

While we recognize that strategic planning is necessary, we are concerned that it creates unfunded mandates for the Councils. We should fulfill existing regulatory and management requirements before any new mandates are required.

Finally, I believe it is important to acknowledge the supportive relationship between the Councils and the National Marine Fisheries Service. The regional offices and science centers are critical to our process. It's unfortunate that Mr. Oliver decided to transfer to the second best part of the partnership, but we look forward to working with him in the future.

Again, thank you for the opportunity to address the Committee. And I'm happy to answer any questions.

[The prepared statement of Dr. Quinn follows:]

PREPARED STATEMENT OF DR. JOHN M. QUINN, CHAIR, NEW ENGLAND FISHERY
MANAGEMENT COUNCIL

Chairman Sullivan and Ranking Member Peters, my name is John Quinn and I am here today to testify on behalf of the Council Coordination Committee (CCC),

which is made up of the chairs, vice chairs, and executive directors of the eight Regional Fishery Management Councils that were created under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act or MSA).

By way of background, I am currently the Director of Public Interest Law programs at the University of Massachusetts School of Law, which is located near the port of New Bedford. New Bedford has been the highest grossing port in the United States for 16 consecutive years. I have been involved in fisheries issues for the last 30 years as a lawyer, a state legislator, and, for the last five years, as a member of the New England Fishery Management Council.

Thank you for inviting me here today to speak to the reauthorization of the Magnuson-Stevens Act. Without a doubt, this statute established the United States as the world's premier manager of fisheries resources. One of the major strengths of the Act is its support of a regional approach to fisheries management that is guided by an overarching Federal framework. The eight Regional Fishery Management Councils are the cornerstone of that system.

The Councils fill a unique fishery management role. Our members include representatives from state, federal, and tribal fishery management agencies, as well as appointed members selected for their fisheries knowledge and expertise. We prepare the management plans that guide fishing in Federal waters. The National Marine Fisheries Service (NMFS), on behalf of the Secretary of Commerce, reviews our proposals and implements them if the actions are consistent with the law. While I am the current chair of the New England Fishery Management Council, today I speak to you as the representative of all eight regional councils. We meet regularly as the Council Coordination Committee to discuss cross-regional issues and collaborate with NMFS on strategic planning and policy development.

As a group, we are strong believers in the Magnuson-Stevens Act—and not just because it established the Councils. The outcome of our management success is clear: commercial, recreational, and subsistence fisheries are key contributors to our coastal communities and the Nation's economy. In large measure this is because the Act structured a very successful approach to sustainable fisheries management. Central to the Act are the 10 National Standards that guide our management process. National Standard 1, which is the most important, requires that conservation and management measures shall prevent overfishing while achieving optimum yield from each U.S. fishery.

Let me acknowledge the many successes of the MSA and the Council system. While some stakeholders have expressed frustration with decisions made by individual Councils—and some of those give your offices calls when they don't like Council decisions—I think it is important to note that the MSA actually gives stakeholders seats at the table when fishery management decisions are made. The MSA created these Councils to provide a public forum for fishery management decisions to be made. This public forum allows fishery managers, state officials, fishermen, academics, environmental groups, Federal officials, and other interested parties to have a say in the management of our public resources. The decisions made through this public process are based on the best scientific information available and use stock assessments that have been conducted in a public manner and peer reviewed.

Finally, the decisions made by the Council are then again reviewed by the Secretary of Commerce and published in the Federal Register for an additional public comment period. While this is a time-consuming and sometimes duplicative process, it ensures that decisions are fair, informed, and science-based. The process also is fully transparent.

We should not be content to rest on our laurels. We believe that, going forward, we can improve our efforts. Today I would like to highlight some of the issues that we believe need to be addressed. As will be no surprise, our regional approach to management means that the Councils each face different challenges. Despite these differences, there are a number of areas where our opinions on needed improvements are consistent. I will limit my comments to the consensus statements that all eight Councils support. I've structured my statement around broad issues that have been identified.

Management Flexibility

Rebuilding Plans

One of the important provisions of the MSA is its focus on sustainable fisheries. To that end, in 1996 the Sustainable Fisheries Act amended the MSA and established strict requirements for ending overfishing and rebuilding fish stocks. A key requirement is that, in most cases, a stock must be rebuilt within a fixed time period, usually no more than ten years. Over the last twenty years, significant progress has been made, improving the status of many stocks. But we also have learned that there may be a need to improve the rebuilding provisions of the MSA

so that the Nation fully realizes the benefits of its resources. I want to make it clear that we do not seek to eliminate rebuilding requirements, but we think our experiences can be used to improve the existing provisions.

In general, the CCC believes that the addition of measures that would increase flexibility with respect to stock rebuilding for certain types of fisheries would improve the ability of Councils to achieve management objectives. We acknowledge that rebuilding often comes with necessary and unavoidable social and economic consequences, but targeted changes to the law would enable the development of rebuilding plans that more effectively address the biological imperative to rebuild overfished stocks while mitigating the social and economic impacts. For example, increased flexibility in rebuilding timelines would allow for a better balance between the biology of the fish and the socioeconomic needs of fishermen. A narrow exception for mixed-stock fisheries also could be considered.

We agree that exceptions to rebuilding requirements should be limited in scope and carefully defined. Ideally, such exceptions would be codified in the MSA along with guidance regarding applicable circumstances in National Standard guidelines.

Management of Mixed Stocks

Many fishermen catch a mix of species on a trip. While in some cases selective fishing practices can effectively target some species and reduce the number or amount of non-target species caught, this is not always an adequate solution. Some of the Act's more prescriptive requirements pose particular challenges for the management of mixed stock fisheries and may not integrate well with ecosystem approaches. While the current National Standard guidelines allow for a mixed-stock exception to the requirements to prevent overfishing, the statutory basis for this is unclear and would benefit from clarification in the reauthorized Act. In addition, provisions for mixed-stock fisheries are more consistent with the concepts of ecosystem-based fishery management.

Transboundary Stocks

The addition of language that would allow the Councils to develop annual and in-season quota trading programs for international and national transboundary stocks will improve the ability of the Councils to achieve harvest and management objectives. The CCC also recognizes the potential for increased enforcement from recommendations of the Presidential Task Force Combating Illegal, Unreported, and Unregulated (IUU) Fishing.

Data Limited Fisheries

Further consideration of exemptions or alternatives to the existing Annual Catch Limit (ACL) requirements for data-limited species could improve the Councils' ability to provide stability in setting harvest limits. The ad hoc methods sometimes used to establish ACLs for data-limited species often result in quotas that are less predictable, resulting in a loss of stability and yield in some of our most important fisheries. While ACLs and Accountability Measures (AMs) have been effective management tools for many fisheries, they may not be the best tools for managing incidental or small-scale, data-limited fisheries. In these situations, Councils should have discretion to determine alternative control mechanisms or utilize ecosystem-based fishery management approaches (e.g., seasons, area-based management) for data-limited stocks.

Definition of "Overfished"

At present, when a stock falls below a minimum biomass, it is described as "overfished" and a rebuilding plan is required. While fishing can be the cause of a reduced stock, there may be other reasons as well, such as warming ocean waters or degraded habitat. An alternative term could be useful for describing fisheries that are depleted as a result of non-fishing factors, unknown reasons, or a combination of fishing and other factors. The current MSY-based definition can be problematic when applied to data-limited fisheries or mixed-stock complexes. Furthermore, the term "overfished" can unfairly implicate fishermen for depleted conditions resulting from pollution, coastal development, offshore activities, natural ecosystem fluctuations, and other (perhaps unknown) factors. Not all of the Councils agree that "depleted" is the appropriate term to replace "overfished" since it has specific meanings in a number of other statutes. Care should be taken to avoid conflict or ambiguity if a change in terminology is implemented.

Transparency

Clearly, a transparent public process is critical to maintaining public trust when managing a public resource. This need can be met in a variety of ways, but identifying specific requirements to meet this need can be problematic. Budget problems

are very real, and written transcripts are costly. Video recordings of large meetings may not add substantive content, as they will not capture presentations and motions, which are the most critical visual aspects of meetings. Streaming video also may degrade the quality of webcast audio. While the technology for webcasts is rapidly evolving, live broadcasts generally require strong Internet connections to be effective. In the context of Council meetings, which often are held in remote locations near fishing ports, the Councils have little ability to predict or control the quality and cost of the Internet connection. Consequently, requiring the use of webcasts “to the extent practicable” (rather than in all cases) will allow Councils to achieve greater transparency within budget and operational constraints.

NEPA Compliance

Fishery management involves fairly rapid cycles of adaptive management in which information about changing conditions is addressed through adjustments to the management program and regulations. The necessity for National Environmental Policy Act (NEPA) analysis of these actions results in requirements that duplicate those in the MSA and other applicable law, including additional comment periods that delay implementation of these actions, which were developed through the open and transparent MSA process. Ensuring NEPA compliance for marine fishery management actions has been costly and time-consuming for Council and NMFS staff and has limited the Councils’ abilities to pursue other regulatory activities. In addition, the CCC notes that there have been instances where compliance with NEPA has hindered adequate compliance with the MSA in terms of providing comprehensive analysis to Councils prior to their taking final action due to the difficulty and time required to complete NEPA analyses.

Although the 2007 MSA reauthorization attempted to align the requirements of the two laws more closely through the addition of Section 304(i), the CCC does not believe what has been called for in the Act has been accomplished. There haven’t been any substantive changes in the way NEPA is used to support management actions or in the steps needed to complete those analyses. Clearly, proposed management actions should be thoroughly analyzed before decisions are made. We believe that such analyses should be done within the framework of the MSA rather than NEPA.

Catch Share Programs

Catch share programs allocate part of a harvest to an individual or group of permit holders. Much has been written about their strengths and weaknesses. On the one hand, supporters believe the programs reduce the “race for fish,” creating more rational harvest plans. Opponents argue that they privatize a public resource and lead to consolidation in the fishing industry.

One thing we have learned in forty years of the Council process: fishery management is complex, and no single solution will work in all fisheries. Councils should have the maximum flexibility possible to develop effective management tools, including catch share programs. Adding excessive requirements for conducting a referendum before a catch share program can be adopted is likely to increase the administrative burden for the Councils. It may reduce the Councils’ ability to implement the appropriate management program for their fisheries that could include modification of existing catch share measures or adoption of new catch share measures. Councils should be able to consider the use of all fishery management tools without burdensome requirements.

Collection and Use of Fishery Data

In general, Councils should be granted a reasonable degree of flexibility in the development and implementation of monitoring programs (electronic and otherwise) so that those programs may be tailored appropriately for each fishery and the needs of each region.

Electronic Monitoring

Our ability to manage fisheries effectively depends on having access to timely and accurate data. The development of electronic monitoring technologies and the utilization of other emerging technologies could be beneficial to U.S. fisheries—in terms of data collection and in terms of the potential to reduce the cost to fishermen and governmental entities. However, introducing additional national-level regulations to govern the use of electronic monitoring beyond the current constraints of the Act (e.g., the National Standards) may be counterproductive due to a number of factors, including funding and resource constraints, variability among fisheries, and the rapid evolution of technology. In addition, the costs of new technologies should be taken into account when implementing new programs or technologies.

Recreational Fisheries

Data quality and availability continue to be among the greatest challenges for the management of recreational fisheries. Given the importance of accountability, effective monitoring is critical for the successful management of recreational fisheries. Comprehensive recreational data also contribute to improved stock assessments that benefit all fishery sectors. While NOAA's Marine Recreational Information Program (MRIP) has provided some improved statistical methodologies to reduce sampling bias, the program has been only partially implemented, and it has done little to increase the precision of catch estimates. Addressing this problem will require increased sampling rates, which only can occur with increased funding. The Councils are examining additional technologies that should be encouraged to get better data.

Other Federal Statutes

With forty years of experience, the Councils have extensive expertise in managing Federal fisheries. The Council process, tailored for each region, provides a well-known, effective forum for resolving fisheries issues. When other statutes are used to develop fishery regulations, that public process is often side-stepped. The CCC believes that an amendment to the MSA that ensures all Federal fishery regulations are promulgated under the Council or Secretarial process established under MSA section 302 would ensure rational management of our fishery resources throughout their range. Under the MSA, the Councils are charged with managing, conserving, and utilizing the Nation's fishery resources, as well as protecting essential fishery habitat, minimizing bycatch, and protecting listed species within the United States Exclusive Economic Zone. This is done through a transparent public process that requires decisions be based on the best scientific information available. This time-tested approach has made U.S. fisheries management highly successful and admired throughout the world.

If changes to Council-managed fisheries (for example, changes to the level, timing, method, allowable gear, or areas for harvesting management unit species) are required under other statutory authorities such as the Antiquities Act of 1906, the Endangered Species Act of 1973, the Marine Mammal Protection Act of 1972, or the National Marine Sanctuaries Act of 1972, such restrictions or modifications to those fisheries should be debated and developed under the existing MSA process. In addition, all actions by the Councils are currently subject to review by the Secretary of Commerce to determine consistency with MSA and all other applicable laws. This current review ensures that Council actions—including those that could be made as a result of requirements of other statutes—will continue to be consistent with all relevant laws. Making modifications to fisheries through the MSA process would ensure a transparent, public, and science-based process. When fishery restrictions are put in place through other statutes, frequently the fishing industry and stakeholders are not consulted, analyses of impacts to fishery dependent communities are not considered, and regulations are duplicative, unenforceable, or contradictory.

Climate Change

Fishery resources have evolved to make the best use of their habitats. Fish distribution can depend on many factors, including water temperatures. In many of our regions, warming sea water temperatures are leading to significant changes in the distribution of fish species. For example, in New England we are seeing species of fish in the Gulf of Maine that historically only were harvested off Long Island and New Jersey; at the same time, cold water species like lobster are leaving warming waters to the south. Other changes are occurring as well. Increased acidification of sea water is a threat to many shellfish species, both in nearshore aquaculture and offshore wild-caught fisheries.

The sustainability and performance of our fisheries are at stake, and while fishery managers are unable to address the underlying causes of climate change, they are nonetheless tasked with meeting our conservation and management mandates in a changing environment. These changes will impact entire marine ecosystems, and a single-species management approach likely will not be sufficient to understand and account for these changes. Addressing climate change will require establishing the support to enable fishery managers to develop creative solutions to new challenges.

Fishery managers also will need a strong scientific foundation to support climate-ready fisheries management. Managing climate-ready fisheries is a long-term endeavor that will require investing in the information needed to support informed decision-making, along with a commensurate shift in resources and attention. Successful management already depends on the availability of timely and accurate information at all points in the decision-making process. In a changing environment, this will become even more critical.

Resources

The Councils are concerned that important policy directives issued by the National Marine Fisheries Service (*e.g.*, forage fish, allocation review, and ecosystem-based fishery management) frequently create unfunded mandates. The demands on Councils to fulfill existing regulatory and management requirements are significant, and these should be met before any new tasks are imposed. New mandates can be addressed only if adequate resources are provided.

We also want to make it clear that we rely heavily on data and analyses provided by NMFS. At-sea surveys of fish populations are the 'bread and butter' of the sustainable management that is the hallmark of U.S. fisheries under the MSA. Reducing stock assessment funds will reduce harvests by U.S. fishermen, which will increase imports of foreign seafood. Increasing stock assessment funding is one of the best investments an administration can make in U.S. fisheries.

Exempted Fishing Permits

Exempted fishing permits (EFPs) are an extremely important and useful mechanism to conduct scientific research. For instance, EFPs have been used in different regions of the U.S. to conduct surveys, test monitoring devices under field conditions, investigate invasive species, and develop fishing gear that reduces bycatch, reduces habitat impacts, and reduces impacts on protected species. These studies are frequently done by the fishing community at no cost to the public and have provided enormous benefits for the conservation and management of marine resources and habitats.

The existing regulations already provide a good framework for developing a regional process of issuing and reviewing EFPs. The EFP applications undergo a regional scientific peer review and are evaluated through a public process by the respective Councils. The public and affected states have an opportunity to comment to NMFS and the Councils during this process. Any new requirements for the EFP process, such as additional social and economic analysis or further consultation with the state governors, would greatly reduce the ability to get EFPs developed and approved in a timely manner.

The CCC further believes that multi-year EFPs provide the necessary flexibility to scientifically test gear across different years and seasons. New regulations that limit EFPs to a 12-month period will severely limit the usefulness of the data collected, as well as the type and quality of research that can be done.

General comments

I would like to close with a few general tenets that we think are important.

- Modifications to the Act should be national in scope but with reasonable flexibility to address region-specific issues. Avoid across-the-board mandates that could negatively affect one region to address a problem in another. Modifications to the Act that are specific to one region or one Council undermine the national scope of the Act and should be carefully considered, especially with respect to how these modifications might affect operations in other regions.
- Legislation should allow for flexibility in achieving conservation objectives but be specific enough to avoid lengthy, complex implementing regulations or guidelines.
- Legislation should be in the form of intended outcomes, rather than prescriptive management or scientific parameters.
- Legislation should avoid unrealistic/expensive analytical mandates relative to implementing fishery management actions.
- Legislation should avoid constraints that limit the flexibility of Councils and NMFS to respond to changing climates and shifting ecosystems.
- Avoid unfunded mandates and/or ensure that Councils and NMFS have the resources to respond to provisions of legislation.
- Preservation and enhancement of stock assessments and surveys should be among the highest priorities when considering any changes to the Act.

Finally, I believe it important to acknowledge the supportive relationship between the Councils and the National Marine Fisheries Service. Our management successes would not be possible without our close partnership. The Service is a key participant in the Council process and a key provider of the information we need. The regional offices and science centers are critical to our process. The healthy exchange of ideas and opinions between our groups leads to better solutions. We are thrilled that Mr. Oliver is heading the agency, and we look forward to working with him in his new role.

Thank you for the opportunity to address the Committee.

Senator SULLIVAN. Thank you, Dr. Quinn.

And I like the little rivalry between the witnesses here. That's helpful.

Let me begin by just asking and building on what Senator Nelson said. I think he made an important point about the bipartisan history with regard to the origins of this Act, and that's certainly my goal, as the Chairman, to bring together Members on both sides of the aisle when we're looking at reauthorization of the MSA.

So given that, I would like to ask both of you, starting with Mr. Oliver, what would you see in the MSA, what would you hope to see in MSA reauthorizations, the issues that we think that you think are important to address? And what areas of consensus do you think exist possibly and importantly between commercial interests, recreational interests, conservation groups?

So however you want to answer that question, both of you. I think that's a really key issue to get your views on that kind of high-level, but important, issue to begin with.

Mr. OLIVER. Thank you, Mr. Chairman. I'll take a shot at that. In my previous role, you probably have heard me testify on behalf of the North Pacific Council when I was in that role that the current Act is working very well, and we didn't see the need for substantive changes.

I'm in a new role now, and as I look at the issue more broadly, and I've heard from constituents around the country, I've heard the dialogues that have occurred with regard to some of the ideas that have been submitted or discussed over the past year or two in various reauthorization discussions, and I have come to believe that there is room in many—you know, a lot of the measures in the Act were designed around commercial fisheries, and I think there is possibility that additional flexibilities that are being considered, whether it be with regard to annual catch limits for rebuilding plans, for the accountability measures particularly, that are used to enforce the annual catch limits, and I think this is particularly true in data in fisheries, commercial fisheries, where we don't have quite the stock assessment or data collection catch-counting systems that I'm used to in my previous role, very robust, and very accurate.

Senator SULLIVAN. So you're saying those don't exist evenly throughout the different Councils in different regions?

Mr. OLIVER. I think that's correct, sir, and across different fisheries. I think many of our recreational fisheries are of a nature that they don't lend themselves well to some of those stricter accountability measures. And I think there's probably room for us—the more tools we have in our toolbox, and I think this is—I won't speak for Dr. Quinn, but I know speaking from my own experience—and, again, our administration hasn't taken positions on these specific actions, so I have to be a little careful how I answer without—I've got my—

Senator SULLIVAN. Well, I can ask you in your personal view then.

Mr. OLIVER. In my personal view and my personal experience, I think the more tools that we have, the better job we could do, and many of these fisheries that don't have the robust stock assessment and catch-counting systems, and particularly in recreational fish-

eries, that have a different set of goals and objectives in many cases for management. So I think there's a lot of room for that kind of flexibility that I think is being considered through this reauthorization process.

Senator SULLIVAN. Dr. Quinn, would you like to address that broad topic?

Dr. QUINN. Sure. And I think just by the nature of the hearing, we're here to reauthorize the Magnuson Act, not to repeal it. So much of the aspects of it are working well. We're here to tweak it. And I think a couple of things, just like Mr. Oliver, the issue of data availability and stock assessments, particularly on the recreational side, is something I think we've got a lot of work to do.

Also, this level of uncertainty in the stock assessments is something, and also can be solved or at least shrunk through the purpose of getting more data. So I think data needs are very important, and the uncertainty.

Recreational, I think—you know, the commercial, these ACLs and AMs work for the commercial, not necessarily for the recreational.

Senator SULLIVAN. Let me follow up on that point, Mr. Oliver. How does NMFS view recreational fishing and commercial fishing in terms of their similarities and differences from each other? And, again, are there flexibility provisions that currently exist in the MSA that can address that or do we need to look at that as an area of possible reform?

Mr. OLIVER. I think many of the challenges are similar, but there are some fundamental differences. We recently had revisions to the National Standard 1 Guidelines that have been in place only for a few months, and I think some of the Councils have been able to take advantage of those revisions to the National Standard 1 Guidelines, but I don't think they necessarily fully address some of the problems in some of the regions. And I think those exist for both commercial and recreational fisheries. In many cases, we lack the fundamental information in terms of stock assessment, what's in the water, where, and the ability through real-time accounting to know what's precisely coming out of the water. And some of those are internal challenges that we need to deal with within the existing structure of the Act and within the existing structure of our own regulations. I think some of them could benefit from additional flexibility that might be provided through the reauthorization process.

Senator SULLIVAN. Great. Thank you.

Senator Markey.

**STATEMENT OF HON. EDWARD MARKEY,
U.S. SENATOR FROM MASSACHUSETTS**

Senator MARKEY. Thank you, Mr. Chairman, very much.

Dr. Quinn, thank you for coming down from the Bay State. We very much appreciate it. And we appreciate all your work up chairing the New England Fishery Management Council and the Regional Fishery Management Council Coordinating Committee, and from your research at UMass Dartmouth, you are a master of maritime, Dr. Quinn, and so I thank you for all of your work.

You know as well as anybody knows in our country that NOAA's data shows that climate change will have a profound impact on our oceans and marine life with many species moving north into new areas or into deeper waters. Ocean acidification impedes the development of shellfish. Lobster populations are moving north, while southern species like black sea bass are appearing in greater numbers off the coast of Massachusetts. Ocean acidification would be devastating to shellfisheries like we have in Massachusetts. New Bedford is the highest grossing port in the United States, and 78 percent of landings are scallops. In fact, a NOAA report determined that New Bedford was the port most at risk in the Nation due to ocean acidification from climate change.

What tools do, Dr. Quinn, Regional Councils have to ensure that we can respond to fish stocks that are moving or changing due to climate change?

Dr. QUINN. I first want to add that New Bedford has been the highest grossing port for the last 15 years in a row, so very good news.

I think, unfortunately, we do not have a switch that we can flip and lower the water temperature or decrease the ocean acidification. I think what we can do is continue to collect more and more data that identify trends, as you said, Senator Markey, of fish moving or ocean acidification impacting shellfish beds so that we can monitor this. I think some Councils have a lot of data on this, I think others don't. So I think increasing monitoring is very important for us to plan for the future of climate change.

Senator MARKEY. So do you have the tools, what you need, up in New England in order to do the monitoring adequately?

Dr. QUINN. I think we've got the infrastructure. I think additional monitoring obviously comes with a financial cost to do additional monitoring outside of what we are doing now. So that would certainly be a good tool for us to have to expand the monitoring in the climate change area.

Senator MARKEY. Yes. The Gulf of Maine, where Massachusetts is and where we do our fishing, is the fastest warming body of water on the planet. So this is just warming up very, very fast. And cod need cold water, lobster need cold water. So as this water just heats up ever more rapidly, they're just moving, the lobster and cod, further to the north, and impacting the fishing community.

Dr. QUINN. Absolutely. The southern New England lobster industry has all moved north because of the warming temperatures, and certainly coming up in Massachusetts, fishermen's nets are fishing species that aren't caught up there usually. So it's certainly reflected in the landings.

Senator MARKEY. And ocean acidification does have a profound impact, especially on shellfish. Can you talk a little bit about your feeling about the need for more basic research so that we can understand the impact which ocean acidification is having on the fishing industry?

Dr. QUINN. Sure. Absolutely, we need as much research as possible in the climate change area, in the ocean acidification. We've got some great programs of collaborative research and cooperative research, which industry is involved, and the fishermen doing some of the research. So I think it's important that data, data, data, the

more data we can get on this, the more data we can get on other aspects of this Act are very helpful for planning purposes.

Senator MARKEY. Thank you.

And, Mr. Oliver, on the question of illegal, unreported, unregulated fishing in the United States, NOAA issued its final rule in December 2016. Can you give us a little bit of an update as to the implementation of the rule and what the pace is for its scheduled implementation in January 2018?

Mr. OLIVER. Senator, I apologize if I'm misunderstanding your question. Is this with regard to the seafood import rule or you are speaking on the——

Senator MARKEY. Yes.

Mr. OLIVER. Oh. On the IUU——

Senator MARKEY. The seafood fraud question is what I'm trying to get at, the heart of the seafood fraud issue, and the rules that you are going to put on the base. The traceability rule.

Mr. OLIVER. Oh, the traceability in the seafood import rule. Yes, sir. I'm not an expert on that, I'll be honest with you. I can try to get you more information on exactly where we are with that, but that rule is really meant to balance the playing field, if you will, between imposing requirements that are already imposed on our own fishermen for exporting, to impose that same requirement on imports to simply ensure that those fisheries are adhering to a similar standard. So it's really leveling the playing field, as I best understand it.

But I know there has been a lot of interest in that rule and the additional requirements that it puts on our producers. I know there has been a lot of interest in other aspects of that rule, such as including shrimp, for example, because so many of our imports and our trade deficit based on those imports is from imported foreign shrimp. For a variety of reasons, we were not able to do that. That's something that we're going to be pursuing in the future.

But I don't have any, I guess, more to say on that. If there are more specific questions that you have, I would be glad to follow up with you.

Senator MARKEY. I think for the record, it would be very important for us to understand what NOAA believes the state of play is with regard to illegal fishing, seafood fraud. It does harm to our domestic fishermen in a very significant way. So to the extent to which for the record you can provide that information I think will be helpful to the Councils, but very helpful to this Committee as well.

Mr. OLIVER. Absolutely, sir.

Senator MARKEY. Thank you, Mr. Chairman.

Senator SULLIVAN. Senator Wicker.

STATEMENT OF HON. ROGER F. WICKER, U.S. SENATOR FROM MISSISSIPPI

Senator WICKER. Mr. Oliver, let me pick up on a line of questioning that Chairman Sullivan was pursuing during his time, and that's saltwater recreational fishing. You mentioned on page 2 of your testimony that NOAA Fisheries is going to partner with Atlantic States Marine Fisheries to host a national summit in March of next year on saltwater recreational fisheries.

I've introduced a bill called the Modernizing Recreational Fisheries Management Act, which would amend Magnuson-Stevens to improve management for saltwater recreational fishing. It's cosponsored by Ranking Member Nelson, also by Senators Blunt, Inhofe, Schatz, and Klobuchar, of this Committee.

Will you work with Congress as we explore Magnuson-Stevens' reauthorization in a way that allows its successes to continue while also adapting to fix the problems at hand, especially those with recreational fishing? And I would mention specifically the Marine Recreational Information Program, which our recreational fishermen believe lacks timeliness and accuracy. They believe the program is not designed to monitor short seasons, like red snapper.

And have you looked at my bill? And also have you looked at the idea of innovations such as Mississippi's Tails n' Scales electronic reporting system for red snapper landings by using smartphone snaps? So it's sort of a two-part question that I'll wrap into one there.

Mr. OLIVER. Thank you, Senator, Mr. Sullivan, Senator Sullivan. Yes, thank you for the question. We absolutely want to work within whatever construct you have to improve those types of information. I have become acutely aware in the short month that I've been here of some of the issues surrounding not just red snapper, but certainly a lot of focus on red snapper, particularly with regard to some of our—some less than perfect satisfaction with some of our own stock assessment information, less than perfect satisfaction with our MRIP program.

Senator WICKER. It's a gentle way to say that.

Mr. OLIVER. Yes, sir. And we, of course, we have pending a baseline benchmark stock assessment for red snapper thanks to funding that's been provided. It's going to be a couple years before we get the results of that, but that's going to be an important piece of information.

On the data collection side, what's coming out of the water, I have heard from a number of constituents, from a number of people. I've had discussions amongst my own staff leadership over the past 2 weeks about some of the satisfaction I've heard with the MRIP program and the speed with which it's progressing. That program is a work in progress. And I understand some of the frustrations. I think we have some improvements pending on it, going from the telephone survey to a mail survey will be an improvement.

I've also heard that it's not enough, it's not fast enough, and we're not taking great enough advantage of some of the state data collection programs, as the one you referenced. And a couple of thoughts on that is I have made it a priority based on discussions over the past 2 weeks to prioritize and expedite the certification of those state data programs. We are using data from many of those programs, and a lot of those are supported through the MRIP program. But I have heard loud and clear that we need to expedite the certification of those programs and the use of the data in those programs.

And I personally believe when you look around at the technology we have today, the cell phone, smartphone, technology, that there have to be—we have to find a way to utilize those technologies to

get that information quickly, more quickly, and more accurately. And I know that there have been concerns about using that information as the apples and oranges problem with tying it to data from the MRIP and other programs in terms of stock assessments, but I think we are going to make it a priority to do that.

I also believe that regardless of the implications for stock assessment, if we have a way to get better information today on what fish is coming out of the water, we darn well need to be using that.

And so I absolutely agree with the provisions or the points that you're making. I've had a chance to briefly look at the legislation you've introduced, and I think it's consistent with the—it seems to be consistent with the things we already intend to do, but certainly any help and direction that you want to provide us in that would be most welcome, and we'll work with you, sir.

Senator WICKER. Very good. And my time has expired, so I'll just ask you on the record about something I was going to explore in this hearing, and that's aquaculture in Federal waters. In 2016, there was a final rule. So far, we haven't had any bites on actually applications because of the expensive permitting process and other regulatory challenges.

So, Mr. Chairman, I think I'll just ask Mr. Oliver to comment on the record since we're pressed for time here about why he thinks we haven't had anybody apply now that we have a program for aquaculture. So thank you.

Senator SULLIVAN. Great. If you can take that question for the record for Senator Wicker, we would appreciate that very much.

Senator Inhofe.

**STATEMENT OF HON. JIM INHOFE,
U.S. SENATOR FROM OKLAHOMA**

Senator INHOFE. Thank you, Mr. Chairman. Back when I enjoyed life, I was a building developer——

Senator WICKER. That was yesterday.

Senator INHOFE. That was several years ago——

Senator SULLIVAN. That was today.

Senator INHOFE.—in South Padre Island, Texas. And I know that you're in a different area; however, you're familiar with the different regions. And did I understand in the introduction that we got from our Chairman, Mr. Oliver, that you are from the Gulf area?

Mr. OLIVER. Yes, Mr. Chairman. I grew up in Rockport, Texas, on the Gulf coast, not far from Padre island.

Senator INHOFE. Oh. I see. Yes, I'm very——

Senator SULLIVAN. We claim him as an Alaskan, though.

Senator INHOFE. Yes. Well, no, I claim him as a Texan. How's that?

[Laughter.]

Senator INHOFE. No, it's interesting, you are familiar with the interest that I have in that down there, and it's really just to clear some things up. First of all, down in Texas—and there's a lot of interest, I have to say, in my State of Oklahoma. You know, people, that's the closest coast we go to, and there are a lot of industries that are very active down there. So we're interested in the coast.

They went actually on where you go out, the number of miles you go out that's under state jurisdiction, it was 3 miles, it's now 9 miles. Is that correct?

Mr. OLIVER. Texas is 9-mile territorial sea.

Senator INHOFE. Yes, but at one time was it only 3 miles?

Mr. OLIVER. Not in my lifetime, sir.

Senator INHOFE. I see. OK. Well, my staff is wrong on that then.

My interest is when things that are unforeseen come up, how do you handle that? And do you have the—the jurisdiction that we're talking about right now, both of you are talking about, is that primarily just the Federal jurisdiction we're talking about, or do you also oversee the state jurisdiction, in this case, Texas, but I'm sure it would be true in other states?

Mr. OLIVER. No, sir. Senator, Mr. Chairman, we do not manage inside state territorial waters. We only manage, for example, red snapper outside the state waters. We have to take into account what the states do in their state water seasons in order to—which is why we originally were only able to set a 3-day season in Federal waters for Gulf red snapper in 2017.

Obviously, we've implemented regulations that have changed that and relaxed that for the remainder of the summer. But whether and to what extent we can do that in the future remains to be seen. I think it remains—it depends on pending stock assessments. There's pending litigation on the measures we implemented this year. There is potential legislation that you might introduce that all could affect what we may do and what may be the situation in 2017.

But the short answer to your question is the states essentially manage what happens within their waters, whether it be 3 or 9 miles or otherwise, and we have to react and sort of make up the difference on the Federal side, and that's where that adjustment in Federal seasons comes in, and we obviously—we're not enthusiastic about publishing a 3-day Federal season, but that was where the math left us, sir, originally.

Senator INHOFE. So we actually did have a 3-day season for the entire year?

Mr. OLIVER. For Federal waters, that was the original season for 2017. We have since published a subsequent regulation that is extending that season for some 39 days, I believe now.

Senator INHOFE. 39, yes.

Mr. OLIVER. That is being litigated or challenged, but I don't know what the outcome of that will ultimately be.

Senator INHOFE. Well, it may be litigated or challenged, but they're doing it right now.

Mr. OLIVER. Yes, sir.

Senator INHOFE. And, Dr. Quinn, I know that you're in a different region up there, but the same, a lot of the same, principles apply. When you are making the assessments that Mr. Oliver talked about, you use—there are a lot of sources for that. How much do you depend on in terms of the recreational users reporting data, and how do you see that? The reason I'm asking this is my exposure is to the recreational people. They're the ones that feel like they're always getting the short end of the stick, and I just wanted to see how you view them and their input.

Dr. QUINN. I think the recreational fishermen is very important on the East Coast, in particular, in New England. We use data that they gather in our assessments. Every regional science center has a way to plug in this recreational data into their stock assessments. The question is we've got to make sure that it's high-quality data that we plug in and where it gets plugged into the stock assessment process. So our Council has got a great relationship with our recreational industry, and we'll work with them closely to get additional data.

Senator INHOFE. How do you do this? And again I'm talking about South Padre Island or the south coast of Texas. Every once in a while with no warning, no predictability, we have the thing called the red tide. The red tide comes in, dramatically changes the populations of fish and all of that. How do the unknown factors—how do you address those in making the assessments that are necessary?

Dr. QUINN. You know, over time you'd have—you know, the impact of that is not going to be able to be seen that day, the day the red tide comes in or some catastrophic situation. It's more time series analysis and over the long term see what happens, if there's a trend created that there is going to be a decline in stock. So at the point in time that the red tide comes in, you can't really make the assessment, it's more over the longer term.

Senator INHOFE. Yes. All right. Well, my time is expired, but I'm very interested in this and how this works out in terms of the Federal versus the state. And I appreciate your witness.

Senator SULLIVAN. Thank you, Senator Inhofe.

Senator Blumenthal.

**STATEMENT OF HON. RICHARD BLUMENTHAL,
U.S. SENATOR FROM CONNECTICUT**

Senator BLUMENTHAL. Thank you, Mr. Chairman, and thank you for having this hearing.

Mr. Oliver, welcome. And I want to express my respect for your long history of involvement in this issue, both academically and in public service. I'm sure you've talked to the fishing fleets in New England, the men who go out in the water and who do this incredibly hard work. The fleets of Connecticut and Massachusetts in New England have a proud long storied history as a key element in our economy, and they are angry and frustrated beyond words, at least beyond words that I could repeat in these chambers.

And you've heard the very earthy and direct epithets that are used to describe the system we have now, and in my view, with profound justification because it has failed the fishermen of New England. That fishing fleet is struggling. The effects of climate change have driven the fish that they customarily catch north, and it has driven other fish from southern areas into our area, but the catch limits have not changed. And so what they've seen is that they haul a catch beyond their permissible quota of certain fish, they have to throw them back, there's waste, billions of dollars are trashed in our oceans annually, and meanwhile, fishermen from other southern states come into their waters and catch their fish.

There is something profoundly unfair and intolerable about this situation. And in my view, it violates the present law, the Magnu-

son-Stevens Act, which says, and I quote, "Any management plan shall not discriminate between residents of different states," and must allow quotas that are, "fair and equitable."

You've said in your testimony that we need more flexibility, but the fishing fleets of New England have run out of patience, and I think there's a need for sweeping radical immediate change to accommodate the dwindling and dying industry that is essential to our economy. Would you agree?

Dr. QUINN. I would agree in part. I think—I like to call the New England fishing industry "A Tale of Two Industries." Parts of it, the scallop industry, is booming. It's made New Bedford one of the major ports, and oftentimes many boats from as far down south as North Carolina come and fish out of New Bedford.

On the groundfish side, you're correct. It has been a very struggling industry over time. Some of the catch limits and the ACLs we put in place were based on stock assessments that were performed with industry involved and with the science centers involved. So it's a very difficult challenge for the groundfish fleet and not necessarily for the scallop industry.

Senator BLUMENTHAL. Well, for all industries and for our fishermen, our New England fishermen, the prosperity for the South Carolina or North Carolina fishing industry, we wish them well, but they're not doing us any good, very simply, and that's the anger and frustration that I feel on their behalf, and certainly they feel it even more directly. I've been on the docks and in their towns, and we need better answers for them. Would you agree?

Dr. QUINN. I don't disagree. And I think, you know, the Council process is to collect as much data as we can get to have accurate stock assessments. I think with your State of Connecticut, there has been this northerly move of fishing stock. Lobsters and other species have moved north. So we don't have a simple solution to that water temperature raising or the ocean acidification. What—

Senator BLUMENTHAL. Well, it is due to climate change, I agree, but I also would respectfully suggest that the data is there, the facts are known. There is clearly a need to change this system.

And my time is going to expire. I have a question for Mr. Oliver, but I would again respectfully suggest that the present system is far from satisfactory, it's a downright failure, and I would like to talk to you further about ways we can improve it.

Dr. QUINN. I'd be happy to, Senator.

Senator BLUMENTHAL. Thank you.

Mr. Oliver, my question to you concerns the budget submitted by the President of the United States. We're here today to discuss fisheries and their health, including shellfish. Shellfish have a rich history in Connecticut, rich in our culture and rich in our economy.

And I'm working hard to preserve and sustain opportunities in that sector in our fishing economy. And that's why I am so concerned about President Trump's proposed budget, among other reasons that I'm concerned. That budget slashes funding for programs like Sea Grant and funding for the Milford Lab in Milford, Connecticut, and for the University of Connecticut. They are doing path-breaking research in areas that concern our fishing industry. These Federal research efforts to help grow and expand certain

forms of agriculture, in effect, aquaculture, are very, very promising and important for the entire country.

So as a representative of this administration, how can you justify these proposed cuts in NOAA programs that you are responsible for administering?

Mr. OLIVER. Well, Senator, I don't know that I'm in a position to comment very extensively on the President's budget. I do know that they placed a revised emphasis on the Department of Defense and national security—

Senator BLUMENTHAL. Well, I'm on the Armed Services Committee, sir, and I very much support that emphasis, and it's incorporated in the NDAA, which I have helped to approve through the Armed Services Committee. It will come to the floor of the Senate probably next month. I support it. It was passed unanimously.

But this kind of slashing and trashing of programs that are essential to the programs you administer that are vital to our economic future in aquaculture and agriculture I consider a mockery of the mission of your agency. And if you're not in a position to justify it, who would be?

And I just want to say to you I'm not being personal about it. You are here as a representative of the administration. I know your heart may be in the right place, but I want to know how you can possibly justify it?

Mr. OLIVER. All I can say, sir, is we're going to do our best to operate within the budget that we have. And I know that a lot of the programs that were slated to be cut involve cooperative agreements or past grant funding through the Sea Grant program, for example, and grants to the coastal states. We're going to do our best to make that up internally. I also believe that—

Senator BLUMENTHAL. Are you going to commit to me that you can make up those cuts to the Sea Grant program and the Milford Lab and the University of Connecticut that are essential to those programs?

Mr. OLIVER. I can't commit that we're specifically going to be able to make those up from our baseline budget. I think that we are facing some tough decisions, too. I've said on many occasions that I feel that this agency may be in a position to refocus on some of its very core missions, science missions—

Senator BLUMENTHAL. You would agree with me, though, those are valid and important programs.

Mr. OLIVER. Of course, sir, I really do.

Senator BLUMENTHAL. Well, my time is expired. So I want to continue this questioning with you because if you agree these programs are valid, and there can be no question that they are, I think your agency has a responsibility to fight for them and to make sure they are fully funded.

Thank you, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Blumenthal.

And, you know, with regard to the budget, I think we'll be taking a hard look at some of these programs, and, you know, my own view is some of them are critical, and I'm not sure they're going to survive the cuts, will survive what we in Congress do. I think we're going to add a lot back to the ones that we think are vital. But I know, Mr. Oliver, you're only 4 weeks on the job, so I know

that every element of the budget is probably not at your fingertips, so we recognize that.

Let me—I'm going to ask just a few more questions. We have a distinguished panel here, and I want to take advantage of the opportunity to get your thoughts and views on the record.

Both of you have talked about, and, Dr. Quinn, you talked about it in your testimony, the issue of kind of how we need to look at the NEPA process as it intersects with the MSA authorities.

And, for example, Mr. Oliver, many in the North Pacific have expressed support for NEPA sufficiency process within the MSA to reduce redundancy and programmatic burden. Do you have a personal view on that, or does the agency have a personal view?

And then, related, Dr. Quinn, can you elaborate a little bit more on the CCC concern over the application of NEPA requirements to the analysis of Fishery Management's actions?

These are kind of related questions. You both have highlighted them. And I would like to get your views on them. It's an important issue.

Go ahead, Mr. Oliver. Why don't you begin.

Mr. OLIVER. I'll start, Mr. Chairman, Senator. I have a long history in my previous life dealing with the reconciliation of NEPA and Magnuson. I participated in a working group of the CCC following the 2006 reauthorization where there was a directive provision in the Act for the Secretary working through with CEQ and the Councils to reconcile and streamline and I forget the exact wording of the statute, basically reconcile the intersection of Magnuson and NEPA. And I participated on a working group for a number of years to try to achieve that goal.

And while this current administration that I am now representing does not have a position on this, I can tell you from my experience in that process that we did not, in my opinion, address the Directive in the provision in that Act. We essentially ended up in a place where we largely cemented, if you will, the existing NEPA process. I don't think we—I think that we did not satisfy the provisions that were in that Directive, and I think that leaves us with the potential opportunity to look at that again.

I will say, on the other hand, however, that over the intervening years, we have gotten very good through the Council process and through the agency, the National Marine Fisheries Service, we've gotten very good with our NEPA compliance using NEPA, actually, as the vehicle for our fishery management actions, and we're not losing lawsuits anymore. So we've gotten good at it.

But I personally have always believed that the Magnuson-Stevens Act was the appropriate vehicle for the processing and development and promulgation of fisheries management actions, and I still believe that to be the case.

Senator SULLIVAN. Well, I think it's an area that as we're looking at reauthorization, we should entertain ideas the way that the North Pacific Fisheries Management Council is looking at, as you mentioned previously.

Dr. Quinn, you touched on this in your written testimony. Do you care to elaborate a little bit more?

Dr. QUINN. Sure. I'll add a few things, Mr. Chairman. The CCC believes that following NEPA adds additional complexity to the

process. After the Council takes action all the way to implementation, it lengthens out the process.

In addition, to some degree it confuses the public because you're going down two tracks of public comment. You've got two different statutes with two different sets of timelines, and rather than encourage more participation, it may discourage it. And on occasion, NMFS has used the NEPA process to put maybe an additional alternative in place that was not considered at the Council level.

Oftentimes, the CCC's position is misinterpreted as being opposed to public participation or being opposed to sharing additional information with the public, and I can tell you nothing can be further from the truth. We believe we've got a rigorous process in place in the Magnuson-Stevens Act, full participation by citizens, by groups, and we don't think that we need to follow the NEPA process as well. We believe it's redundant and unnecessary.

Senator SULLIVAN. Well, again, I think that particularly given your role on the CCC, and that that is kind of a broad-based consensus organization among all the Councils, if that is one of the views and an area that we think is ripe for consensus, I think it's something that we should be looking at.

Let me ask a more broad question for you, Mr. Oliver. Given Secretary Ross' focus on growing the domestic fishing industry and fishing production from the United States, which I think all of us welcome, how do you best think NMFS can promote U.S. fisheries?

You and I have talked about the export issue. We were able to get language in the Trade Promotion Authority that for the first time focuses on fishing exports and, you know, unfair subsidies for foreign fleets. What are other things that NMFS can be doing to promote a goal that I think most of us certainly agree with?

Mr. OLIVER. Well, this may sound a little bit repetitive, Senator, to some of my earlier comments. There is some headroom in our domestic harvest potential. I mentioned the West Coast situation where they're leaving fish in the water due to, partly due to, by-catch constraints, choke species, partly due to some lingering regulatory constraints that may or may not be any longer necessary.

I think there are opportunities in some of our data-poor fisheries. When we talked again about flexibility in our annual catch limits and rebuilding schedules and some of the accountability measures, there again particularly for data-poor stocks, I think there are some opportunities for us to maximize that. And, again, I'm a firm believer in science-based overall catch limits. It has been a cornerstone in the North Pacific for 40 years, but I think within that overarching long-term conservation construct, I think there are opportunities.

I think—and, again, in the area of marine aquaculture, I think that's where more headroom is, if you will, in terms of growing our production. And competing more in the world market in terms of this whole import-export unbalance that we're currently on the short end of, I think those are probably a great deal of potential there in the marine aquaculture area.

Senator SULLIVAN. Thank you.

Senator Booker.

**STATEMENT OF HON. CORY BOOKER,
U.S. SENATOR FROM NEW JERSEY**

Senator BOOKER. Thank you, very much, Senator. I'm here not only because of the important issues that we're discussing today, but also to keep you company, sir.

Senator SULLIVAN. Well, I really appreciate that.

[Laughter.]

Senator BOOKER. Thank you very much. I'm here for you. I have your back, sir.

Senator SULLIVAN. I know that.

Senator BOOKER. Gentlemen, thank you very much for being here for this really important issue.

And, Mr. Oliver, you had said something about bycatch restraints that maybe makes me want to jump and have this be my first question. About 10 percent of the world's fish catch is discarded as bycatch, and more than 22 billion pounds of fish a year is what they estimate that is, of just bycatch. This is fish that are not intended to be caught, but end up being killed as a result of our methods.

In recent years in the United States, we've discarded over 600 million pounds of fish annually, and some fisheries discard over 60 percent of their catch as bycatch. I just find those numbers astonishing and even unacceptable and think we could do better than doing that kind of damage to the wildlife in our oceans. And I'm wondering if you'll commit to focusing on the issue of bycatch more so in your new role to see if there is anything that we can do, bring forth any ideas, about strengthening existing bycatch provisions in the Magnuson-Stevens.

Mr. OLIVER. I do. Senator, the bycatch and bycatch reduction has long been a focus and a goal of the agency. It's also a goal that's supported by the Councils and the Council system. Many of the Councils have taken great strides to reduce bycatch. Some of the bycatch is economic discards, that are too small or for whatever reason are thrown over. A lot of the bycatch that occurs are regulatory discards in that there are certain regulations in place that prohibit people from retaining or selling bycatch, and the reason primarily for that is to keep them from targeting it when they are not supposed to be targeting it. And then you get to the question of, well, there's bycatch and then there's waste. And part of the point of your question was waste.

And I know in my own experience in the North Pacific Fisheries, several years ago, we implemented what was originally called a full retention/full utilization requirement for several of our large groundfish trawl fisheries where the premise was you catch it, you keep it, it counts against the quota, and it counts against the quota whether you throw it away or not, but it's still waste. We didn't like the waste of all that fish, and we backed off the 100 percent for a variety of practicality reasons. But the essence of that is we reduced discards through that program by millions of pounds a year, hundreds of thousands of tons a year of discards. And I think other Councils have done similar things. There are still regulatory discards in place that I think shouldn't be in place or need to be carefully reevaluated—

Senator BOOKER. Mr. Oliver, you're filibustering me. I'm about to be out of time.

Mr. OLIVER. Sorry.

Senator BOOKER. But just a simple question, can we do better?

Mr. OLIVER. Yes.

Senator BOOKER. And will you focus on trying to do better?

Mr. OLIVER. Yes.

Senator BOOKER. Thank you very much, sir.

I'm going to try to get another question in. The Chairman is pretty tough and strict with time limits.

But in 1996, the Sustainable Fisheries Act established rebuilding requirements, and shortly thereafter, 92 fish stocks were identified as overfished. But by 2006, only three of those fish stocks had been rebuilt. The 2006 Magnuson Reauthorization Act responded by requiring annual catch limits, and by requiring that, rebuilding plans end overfishing immediately. By 2016, the United States had rebuilt an additional 38 stocks, something we should be proud of, and we now have the lowest level of overfished stocks in our entire history, at least since we've been recording this. In light of this success, do you agree that the annual catch limits are a critical tool for managing fisheries? And how do you respond to calls for even more flexibility on catch limits and rebuilding timelines? And I hear that call from really great folks in my state who are calling for more flexibility. I'm wondering how you balance that.

Mr. OLIVER. Senator, I think it is a balancing act. As I stated previously, through my experience in the North Pacific, I am a firm believer in annual catch limits. It has been a cornerstone of our successful management, but I also believe there are opportunities where, and I'll say it again, we can have it both ways.

I think there are opportunities for additional flexibility in how we apply annual catch limits, the subsequent accountability measures, and in those rebuilding plans where we can achieve some flexibility that people are seeking without rolling back our conservation successes and without resulting in additional overfished stocks. I think we can balance that.

Senator BOOKER. All right. Thank you.

And, Mr. Chairman, maybe I can throw myself on your—

Senator SULLIVAN. Sure, you can go on as long as you want.

[Laughter.]

Senator BOOKER. Thank you very much, sir. Thank you very much for being so generous and kind to your fellow Senator.

Senator SULLIVAN. No problem.

Senator BOOKER. So last question, sir. It's just another of my concerns about the larger ecological challenges we have as we go forward trying to sustain what is a critical industry for my state that provides a tremendous source of economic development as well as jobs. But to achieve these sustainable fishery management, managers must consider sort of that balance between the ecological needs and also the commercial and recreational value of fishing, and that includes managing forage fish that larger species depend upon.

New Jersey and the Mid-Atlantic region, as a whole, have made considerable strides to improve the sustainability of these important fish, but nationwide, I feel at least that we need to be doing

more. In many instances, there are no Federal management plans for forage species.

What can NOAA Fisheries and the Councils do to improve forage fish management so that fishermen in coastline and coastal communities can continue to enjoy the benefits of healthy forage fish stocks?

Mr. OLIVER. I totally agree with you, the importance of forage fish in the overall ecological picture. And we talk about ecosystem-based fishery management, and that's a critical aspect of that. And I keep falling back on my North Pacific experience, but we banned fishing for a number of forage fish species, oh, nearly 2 decades ago for those very reasons.

I think there are probably, in different regions that I don't fully understand, there probably are fisheries on those stocks for good reasons, but I think it goes back to that balancing act. And I guess—I very much appreciate and understand your comments, sir, and the importance of forage fish, and I think it's up to each Council working with the agency to make sure that we're protecting those to the extent we need to be doing for the larger ecological processes.

We can't maintain long-term sustainability of our target fisheries unless they have—unless we manage them properly in and of themselves and unless they have an adequate forage base. So they're both very important.

Senator BOOKER. Great. And I just have a yes or no, just another commitment I would love to get from you. But you know that shark finning was first outlawed in U.S. waters in 2000. And a loophole in that original law was closed by the Shark Conservation Act of 2009.

I recently asked your office how many shark finning investigations NOAA has opened since January 1, 2010. I was shocked to find out that since 2010, NOAA has investigated over 500 incidences of alleged shark finning. As of April, there were seven shark finning cases that were open, but not yet charged. And I guess I might ask for assurances that, Will you just keep me informed on the progress on investigating these outstanding cases? And can you assure me that you and your agencies will take this seriously?

Because, to me, it's a horrific act. Shark fins have no nutritional value whatsoever, and they do serious damage to that species. And so I just hope to get from you the assurances that the agency tasked with investigating these will just continue to make progress and that maybe you can keep me informed of that progress.

[The information referred to follows:]

SEN. BOOKER'S OFFICE—SHARK FINNING INVESTIGATIONS—APRIL 20, 2017

Request:

Senator Booker's office would like to know "how many shark finning investigations NOAA has opened since 2010, and how many of those investigations led to charges and/or arrests" (National-Scale). Background: On 03/30/17, Senator Booker introduced a bill, S. 793 that would prohibit the sale of shark fins.

Response:

**NOAA Cases Involving Shark Finning Violations
January 1, 2010 through April 17, 2017**

Since January 1, 2010, NOAA has investigated 526 incidents involving alleged shark finning.¹ Twenty-six of those investigations have resulted in charges. Of the remaining cases, 493 were resolved through compliance assistance (*i.e.*, verbal warning, education/outreach), closed for lack of evidence or resources, or declined for prosecution. Seven cases are open but not yet charged. Details on charged cases are provided below.

Case Number	Case Name	Facts/Charges ²	Statute/Regulation Violated	Date of Violation	Disposition ³
I1606769	FV Sea Dragon	Crew observed removing the fins from a shark at sea.	Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 USC § 1857(1)(A), regulations at 50 CFR § 600.1203(a)(1).	10/17/16	\$1,000 Summary Settlement issued by NOAA Fisheries Office of Law Enforcement (OLE).
I1604475	F/V Endurance	Landed 6 thresher and 4 blacktip sharks without fins attached.	MSA, 16 USC § 1857(1)(A), regulations at 50 CFR § 635.71(a)(2) and 648.14(a)(6).	10/24/16	Written Warning issued by OLE; case referred to State for further action.
SE1602041	<i>In Re</i> David Alan Stiller and Michael C. McFadden	Possession of at least nineteen shark carcasses with their fins or tails, or both, removed prior to landing.	MSA, 16 USC § 1857(1)(A), regulations at 50 CFR § 635.71(d)(6) and 635.30(c)(1).	2/27/16	Notice of Violation and Civil Penalty Assessment (NOVA) issued by the Office of General Counsel Enforcement Section (GCES) on 10/24/2016, assessing a civil monetary penalty of \$10,000. Case settled for \$9,000 on 2/23/17.
SW1600692	F/V Elizabeth H	Possession of fins unattached to the corresponding carcass.	MSA, 16 USC § 1857(1)(P)(ii)	2/11/16 ⁴	\$2,000 Summary Settlement issued by OLE.
PI1600618	F/V Crystal II	Possession of 6 shark fins unattached to the corresponding carcasses.	MSA, 16 USC § 1857(1)(P)(ii)	2/6/16	NOVA issued by GCES on 1/6/2017, assessing a civil monetary penalty of \$15,000.
PI1504060	F/V Captain J3	Shark finning	MSA, 16 USC § 1857(1)(P)(ii)	11/16/15 ⁴	Written Warning issued by OLE.
PI1503956	F/V Lady Amme	Possession of fins unattached to the corresponding carcass.	MSA, 16 USC § 1857(1)(P)(ii)	11/19/15 ⁴	\$1,000 Summary Settlement issued by OLE.

¹ This list includes only cases that included at least one charge related to shark finning and that resulted in the issuance of a Notice of Violation and Assessment, criminal complaint, Summary Settlement or Written Warning. Cases that involved only other charges related to sharks (*e.g.*, international trade permit violations, harvesting permit violations, Lacey Act import and export cases, using sharks as bait) were not included, nor were open cases, cases referred to a state government for prosecution, or cases that were dismissed for lack of evidence. This list does not include cases involving *de minimus* violations in which OLE issued a Verbal Warning or provided compliance assistance without any further enforcement action. The NOAA Fisheries Office of Law Enforcement issued 24 verbal warnings for shark finning violations during this time period.

Case Number	Case Name	Facts/Charges ²	Statute/Regulation Violated	Date of Violation	Disposition ³
PI1501463	F/V Golden Eagle	Shark finning.	MSA, 16 USC § 1857(1)(A) 50 CFR § 600.1204(a)(1)	5/22/15 ⁴	\$1,000 Summary Settlement issued by OLE.
PI1500764	F/V Crystal II	Shark finning.	MSA, 16 USC § 1857(1)(P)(iv)	4/6/15 ⁴	\$1,000 Summary Settlement issued by OLE.
SW1500065	F/V Charlotte V	Shark finning	MSA, 16 USC § 1857(1)(P)(i)	10/28/14	\$1,000 Summary Settlement issued by OLE.
I1305219	F/V Alexander	Shark finning.	MSA, 16 USC 1857(1)(A)	11/23/13	\$450 Summary Settlement issued by OLE.
SE1303346	F/V Big Boy	12 shark fins were found in bags on board a shrimp trawler operating in the Gulf of Mexico.	MSA, 16 USC 1857(1)(A) 50 CFR § 635.71(d)(6) 50 CFR § 600.1023(a)(2)	7/26/13	NOVA issued by GCES on 1/13/15, assessing a civil monetary penalty of \$9,000.
PI1300948	F/V Hokuao	Defendant who was the Captain of a federally permitted longline vessel ordered his crew to cut the fins off of 25 sharks and discard the carcasses overboard. He hid the fins in a void under the floorboards of the pilothouse to avoid detection.	The Lacey Act, 16 U.S.C. § 3372 (a)(1)	3/19/13 ⁴	Case referred to the U.S. Attorney's Office for criminal prosecution. Defendant Matthew Case pleaded guilty to misdemeanor violation of the Lacey Act.
I1203001	F/V Pat and Hannah	Shark finning (removal of tail).	MSA, 16 USC 1857(1)(A) 50 CFR § 635.71(a)(21)	9/7/12	\$250 Summary Settlement issued by OLE.
SE1202522	F/V Lady Lyanna	Possession of 2,029 fins (from 508 sharks) in a hidden compartment.	MSA, 16 USC 1857(1)(A) 50 CFR § 635.71(d)(6)	4/8/12	\$45,000 NOVA issued by GCES on 11/25/13.
PI1202251	F/V Libra	Shark finning	MSA, 16 USC § 1857(1)(P)(i)	7/9/12 ⁴	\$1,000 Summary Settlement issued by OLE.
SE1105098	F/V Watersport	The vessel landed three mako shark fins that were not naturally attached to the corresponding carcass.	MSA, 16 USC 1857(1)(A) 50 CFR § 635.71(d)(6)	11/21/11	NOVA issued by GCES on 3/18/14 assessing a civil monetary penalty of \$5,015.
SE1104085	F/V Lucky Diamond	146 shark fins were found on-board a shrimp trawler operating in the Gulf of Mexico.	MSA, 16 USC 1857(1)(A) 50 CFR § 635.71(d)(6)	8/16/11	A NOVA assessing a civil monetary penalty of \$15,000 was issued by GCES on 8/15/14.

Case Number	Case Name	Facts/Charges ²	Statute/Regulation Violated	Date of Violation	Disposition ³
SE1100674	F/V Whiskey Joe	48 shark fins without corresponding carcasses were found on board shrimp vessel.	MSA, 16 USC 1857(1)(A) 50 CFR § 635.71(d)(6)	12/21/10	A NOVA assessing a civil monetary penalty of \$13,000 was issued by GCES on 9/30/13.
SE1105076	F/V Southern Lady	Shark finning.	MSA, 16 USC § 1857(1)(A) 50 CFR § 635.71(d)(6)	5/20/11	\$100 Summary Settlement issued by OLE.
PI1104518	F/V Deborah Ann	Shark finning.	MSA, 16 USC § 1857(1)(P)	9/30/11 ⁴	Written Warning issued by OLE.
I1100573	F/V Buzzards Bay	Shark finning.	MSA, 16 USC § 1857(1)(A) 50 CFR § 600.1203(a)(1)	2/14/11	Written Warning issued by OLE.
PI1100828	F/V No. 1 Ji Hyun	Engaged in shark finning; and possessed shark fins without the corresponding carcasses while on board a U.S. fishing vessel.	MSA, 16 USC § 1857(1)(A) 50 CFR §§ 600.1203(a)(1) and (a)(2)	11/11/10 ⁴	Written Warning issued by GCES.
I1002197	F/V Ella and Sadie	Shark finning.	MSA, 16 USC § 1857(1)(A) 50 CFR § 635.71(d)(6)	6/29/10	Written Warning issued by OLE.
SE1002041	F/V Candie Luck	Shark finning.	MSA, 16 USC § 1857(1)(A) 50 CFR § 635.71	6/29/10 ⁴	Written Warning issued by OLE.
SE100390	F/V Golden Dragon	Possession of 4 shark fins.	MSA, 16 USC § 1857(1)(A) 50 CFR § 622.7(o)	6/11/10	Written Warned issued by GCES.

²Facts are those related to shark finning or related charges, the case may include additional counts that are unrelated to shark finning or requirements to maintain sharks in proper form with their fins naturally attached.

³The total assessed penalty is for all counts charged in the case, not only those related to shark finning.

⁴Date case opened.

Mr. OLIVER. Yes and yes.

Senator BOOKER. Thank you very much, sir.

I just want to note for the record the grace and generosity of the presiding Member, Senator Sullivan.

Senator SULLIVAN. As always, Senator Booker, I've got your back. [Laughter.]

Senator SULLIVAN. I'm going to wrap up the hearing with just two more questions for both of the witnesses. Again, I want to take advantage of having the two outstanding witnesses here.

Dr. Quinn, what are some of the problems—and in some ways, it does follow up on Senator Booker's line of questioning—what are some of the problems that Councils face when managing fisheries that catch a number of different stocks? And what is the CCC's position on the use of catch shares?

And, Mr. Oliver, if you want to weigh in on this question, we would welcome that as well.

Dr. QUINN. Why don't I start with the second question first, if that's OK, Mr. Chair.

Senator SULLIVAN. Sure.

Dr. QUINN. I think the catch shares certainly have been very successful in some part of the country, different Councils; in others,

including mine, they've been far more controversial. The CCC's position is that it should be a tool in the toolbox for regional Councils to determine if that works best for them. You know, there's the old saying, "One size does not fit all," and I think this is quite appropriate with the catch shares. It may work in some regions; it may not work in others. So it should stay in, but as an option, not as a mandate.

Senator SULLIVAN. And then that first question I asked about some of the challenges that the Councils face managing fisheries that catch a number of different stocks?

Dr. QUINN. Particularly in New England, it's a very big challenge because you've got the fish are swimming together, or the scallops and the fish are together, and one stock may be much more valuable, not just financially, but ecological, but the Act treats all species the same. So you cannot pick winners and losers. So it's important that we collect a lot of data on it.

This term that Mr. Oliver said, it's a choke species, and particularly as we move into the ecosystem-based fisheries management, it's going to exacerbate as a problem as well because we're trying to manage a stock, not just one individual species.

Senator SULLIVAN. Mr. Oliver, do you have any comments on those questions?

Mr. OLIVER. Well, I think my comments are fairly similar to Dr. Quinn's. When you have a mixed stock fishery, sometimes that's problematic; sometimes it's not. If all the species you happen to be catching are species that are currently open and you have markets for them, it's not a problem. The problem comes into play when you're targeting one species and catching another that may be seen as an economic discard species, or particularly when you're catching a species that's either a bycatch or a choke target species, but perhaps a choke target species, and that's where the difficulties in management come into play.

To briefly address your question about catch shares, I know catch shares were a huge priority for the previous administration. I don't—this administration hasn't taken a formal position on catch shares. Personally, my personal experience, is very similar to Dr. Quinn's. It's an incredibly important tool used in most of our major fisheries in Alaska, for example.

I think two things. It's not necessarily an appropriate tool for all fisheries. And I do believe that whatever legislation occurs, or we have current legislation, if there's new legislation, I think it really needs to maintain the maximum regional flexibility we can because so many of our fisheries are so different, and the way you construct these different catch share programs is very dependent on the specific characteristics and nuances of each fishery. And I would just urge that the maximum flexibility and, first of all, whether or not we use a catch share program, but in how we design the catch share program.

Senator SULLIVAN. Great. Thanks.

Let me wrap up with one final question, and I do want to compliment both of you on both not only your emphasis on the importance of data and science. We're going to back you up with that. We need that. That's critical to well-managed fisheries. I know that

that's been the experience of both of you, so I think that that's an area where you'll see bipartisan agreement on.

But a final question. I certainly have heard a lot about this in Alaska. In other hearings, I know that it's an issue in different regions of the country. And it's treated differently in terms of how it's funded or subsidized. But as you know, fishermen in some regions have complained about the costs of onboard observers, and have questioned whether emerging technologies such as electronic monitoring might be less expensive and provide comparable or even possibly better information for fisheries managers.

Does the MSA provide Councils with the flexibility to use alternative technologies such as electronic monitoring? And again a question for both of you, What additional tools can Congress provide to speed up their use? And I think it's again an important question. I've met fishermen, you know, in my state where they barely have room to have an additional person onboard, and yet they have to do that, and it can be burdensome. But we want the correct data. But there might be much more efficient ways of doing this.

So do you have a view on that, both of you?

Dr. QUINN. Sure. I'll lead off. Very similar answer as the catch shares. I mean, the authority is in the Act to put electronic monitoring in place. And, again, one size does not fit all. Regions have specific industries or specific fisheries that it may or may not, depending on the size of the boat and a whole host of other things that would work.

There are a lot of pilot programs and other work being done on electronic monitoring. So I think we should have the flexibility to have it as one of the tools in the toolbox to make a decision region-by-region if that's the best way to go.

Mr. OLIVER. I would just echo the importance of electronic monitoring options as an option for different fisheries. I know——

Senator SULLIVAN. Does Congress need to do more to make it clear that that's a viable option?

Mr. OLIVER. I don't know that there's more that has to be done. I know we are successfully implementing electronic monitoring options in a number of our fisheries. I just signed a rule last week that formerly brings electronic monitoring into our North Pacific observer program for the fisheries off Alaska as an option to a human observer. As you point out, Senator, in many of the small boat fisheries that we want information on, they're simply physically unable to accommodate a human observer.

And while cameras may not be free or even as less costly as many people thought they might be, they probably still are less costly than a human observer, and certainly can perform functions that we need. We have cameras in some of the large offshore factory boats as well inside the processing plant, for different reasons. But the importance of being able to use them particularly on the smaller boat fleet is absolutely critical.

Senator SULLIVAN. Well, listen, I want to thank both the witnesses for your past experience and service to our country and this critical area. And certainly there's a strong interest, I think a bipartisan interest, to work closely with the two of you as we move forward on ideas and consensus for MSA reauthorization. I think

this is an important start. And we will keep the record of this hearing open for 2 more weeks if there are additional questions from members who could not make the hearing and still have questions for both of you.

With that, our hearing is adjourned. Thank you again for attending.

[Whereupon, at 11:22 a.m., the hearing was adjourned.]

A P P E N D I X

NORTHEAST SEAFOOD COALITION
Gloucester, MA, July 26, 2017

Hon. DAN SULLIVAN,
Chairman,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
United States Senate,
Washington, DC.

Hon. Lt Cdr GARY PETERS,
Ranking Member,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
United States Senate,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters;

The Northeast Seafood Coalition (NSC) sincerely appreciates the opportunity to provide this statement for the record of the hearing your Committee will hold on August 1, 2017, regarding “*Reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act: NOAA and Council Perspectives*”.

For more than fifteen years NSC has vigorously represented the interests of New England groundfish fishermen and associated shoreside enterprises in Federal fishery science and management activities in the region and in Washington, D.C. Please recall our Policy Director, Vito Giacalone, has had the privilege of testifying before your Committee on a range of issues important to our fishery including the one discussed below. We are grateful for that and for this continuing dialogue.

Based on this extensive experience and expertise with the science and management of our fishery, we respectfully request your consideration of the following legislative proposal to revise a provision set forth in section 4(a)(2) of H.R. 200, the “*Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act*”, and to include that revised provision in any legislation to reauthorize and amend the Magnuson-Stevens Act considered by your Committee. That provision would amend section 304(e) of the Magnuson-Stevens Act to provide new and additional authority for the use of a science-based alternative rebuilding strategy in certain limited circumstances identified by a Council’s Scientific and Statistical Committee.

There then follows below what we hope you will find to be a thoughtful rationale for why we firmly believe this new additional authority is needed for effectively managing our fishery in a manner that will enable us to prevent overfishing, rebuild overfished stocks and achieve the optimum yield.

Proposed Revision to section 4(a)(2) of H.R. 200

“(8)A Notwithstanding subparagraph 4(A), if the Scientific and Statistical Committee determines that a reliable fixed rebuilding period or a reliable biomass target cannot be established, then a fishery management plan, plan amendment, or proposed regulations may use alternative rebuilding strategies, including harvest control rules and fishing mortality-rate targets to the extent they are in compliance with the other requirements of this Act.”

Rationale for Authority to Implement an Alternative Rebuilding Strategy

Currently there is only one rebuilding strategy authorized in the MSA that must be used for all stocks determined to be overfished. This is the so-called “10-year rebuilding strategy” set forth in MSA section 304(e)(4). This strategy establishes a fixed rebuilding target and sets a fixed time-frame for rebuilding the stock biomass to that target.

This strategy is predicated on the ability to reliably estimate what the Maximum Sustainable Yield (MSY) for a stock will be years into the future. In turn, this strategy also depends on the ability to estimate a reliable rebuilding target (stock biomass) that would produce that estimate of MSY by the end of the rebuilding period. In fishery science and management, that estimated stock biomass is called Bmsy and typically defines the rebuilding target of a rebuilding plan.

Thus, the current MSA rebuilding strategy is based on the assumption that a stock's biomass will rebuild during those years at a rate or trajectory that is sufficient to achieve the estimated Bmsy by a pre-specified date (rebuilding timeframe), such as year 10.

However, the rate at which a stock's biomass increases (or decreases) depends on 3 key elements of the stock's biological population dynamics. These elements are—

- (1) “recruitment”—the measure of annual reproductive success and the degree to which it contributes to a stock's biomass,
- (2) “growth”—the measure of the annual collective growth of individuals in the population and the degree to which that contributes to the stock's biomass, and
- (3) “natural mortality”—the measure of annual non-fishing deaths that occur naturally in the population through, for example, old age, disease or predation—and the degree to which those deaths subtract from the stock's biomass.

It is important to recognize that none of these 3 biological parameters can be controlled by man. They are instead a product of ‘nature’, which means they are highly susceptible to changes in ecological and environmental conditions.

Thus, a stock's recruitment, growth and natural mortality can be extremely difficult if not impossible to reliably predict into the future, especially when the ecosystem and environment are highly dynamic and also unpredictable. Simply stated, in some instances such as for New England groundfish, the current MSA rebuilding strategy places unrealistic demands on the ability of science to predict an unpredictable future. This strategy simply does not work for many groundfish stocks in the northeast multispecies complex and this has had profound economic and social consequences.

The fourth key element affecting stock biomass is “fishing mortality”—the measure of deaths caused by fishing and the degree to which that subtracts from the stock's biomass. Unlike the other 3 key elements, however, fishing mortality can be controlled by man and can be far more reliably estimated than a stock's productivity (MSY), biomass or the time it might take for a stock to rebuild to Bmsy.

With all this in mind, Congress needs to provide fishery managers with another tool in the toolbox to address these realities by providing an additional science-based authority for fishery managers to choose, when appropriate, an alternative rebuilding strategy that is based on managing the fishing mortality rate of a stock. If a stock is managed so that the fishing mortality rate is always held at some precautionary margin below the overfishing level (Fmsy), the stock will naturally rebuild to its true Bmsy in the time-frame that nature dictates, and it will never be subject to overfishing—the two fundamental objectives of MSA rebuilding policy.

Recognizing the mixed results of the current MSA target/timeframe rebuilding strategy set forth in section 304(e)(4), in 2010 Members of Congress requested a study by the National Academy of Sciences (NAS) to evaluate the effectiveness of and alternatives to this policy. In 2014, the National Research Council (NRC) of the NAS issued its report to Congress—“*Evaluating the Effectiveness of Fish Stock Rebuilding Plans of the United States*”.¹

As set forth in the NRC's “key findings” of this report, the scientific community has concluded and recommended that a rebuilding strategy based on controlling the fishing mortality rate would be far more effective than the current rebuilding target/timeframe strategy especially in situations of high ecosystem/environmental dynamics:

- 3) Rebuilding plans that focus more on meeting selected fishing mortality targets than on exact schedules for attaining biomass targets may be more robust to assessment uncertainties, natural variability and ecosystem considerations, and have lower social and economic impact.

a. The rate at which a fish stock rebuilds depends on ecological and other environmental conditions such as climate change, in addition to the fishing-induced mortality,

b. A rebuilding strategy that maintains reduced fishing mortality for an extended period (e.g., longer than the mean generation time) would rebuild the stock's age structure and be less dependent on environmental conditions than one that requires rebuilding to prespecified biomass targets, and

¹National Research Council. 2014. *Evaluating the Effectiveness of Fish Stock Rebuilding Plans in the United States*. Washington, D.C.: The National Academies Press. <https://doi.org/10.17226/18488>.

c. When rebuilding is slower than expected, keeping fishing mortality at a constant level below FMSY may forgo less yield and have fewer social and economic impacts than a rule that requires ever more severe controls to meet a predetermined schedule for reaching a biomass target. (NRC Summary, key findings #3. See also Summary, Task 2 and Task 5 Discussion, and Conclusions).

Consistent with the NRC's recommendations, the New England Fishery Management Council (NEFMC) included the following text in its regional perspective on the need for greater flexibility in the MSA rebuilding provisions in the June 2017 Council Coordination Committee's draft White Paper on MSA Reauthorization.² This perspective also provides a compelling case for Congress to provide additional authority for a fishing mortality rate-based rebuilding strategy as an alternative to the current biomass target/timeframe strategy.

"New England:

The New England Council believes the Magnuson-Stevens Act (MSA) should be amended to allow more rebuilding flexibility. The current emphasis on a fixed rebuilding time period assumes a level of stock assessment certainty that does not exist. We have little ability to predict, and no ability to control, the environmental changes that are key drivers in rebuilding progress. We think management should focus on ending overfishing and not arbitrary rebuilding time frames.

The requirement to define a fixed rebuilding period assumes that we know current stock size, stock size targets and rebuilding trajectories to a degree of certainty that is rarely met."

The provision described above would amend MSA section 304(e) by adding a new paragraph (8) that provides a separate and additional authority for fishery managers to apply a science-based fishing mortality rate-based rebuilding strategy in the specific limited circumstance when the Scientific and Statistical Committee determines that a reliable rebuilding time-frame or a reliable biomass target cannot be established. This new and additional authority does not replace the existing biomass target/timeframe rebuilding strategy set forth in MSA sec. 304(e)(4)(A), which will remain in the statute and available for fishery managers to use at their discretion.

We deeply appreciate your serious consideration of including this provision in the Committee's Magnuson-Stevens reauthorization legislation this Congress. We look forward to the opportunity to work with you and your excellent staff on this proposal and overall legislation, and in assisting with the Committee's consideration of this critical legislation in any way we can.

Sincere thanks,

JACKIE ODELL,
Executive Director.

THE PEW CHARITABLE TRUSTS
July 28, 2017

Hon. DANIEL S. SULLIVAN,
Chair,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Committee on Commerce, Science, and
Transportation,
U.S. Senate,
Washington, DC.

Hon. GARY C. PETERS,
Ranking Member,
Subcommittee, on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Committee on Commerce, Science, and
Transportation,
U.S. Senate,
Washington, DC.

Dear Chair Sullivan and Ranking Member Peters:

On behalf of The Pew Charitable Trusts, I write to provide our views on the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and our policy priorities for any upcoming reauthorization of the law.

First and foremost, we ask that Congress not weaken the core conservation provisions of the Magnuson-Stevens Act that are working to prevent overfishing and rebuild depleted populations across the Nation. Since 2000, 43 fish populations have been rebuilt to healthy levels. In addition, U.S. marine fisheries (commercial and

²Regional Fishery Management Council Positions on Magnuson-Stevens Act Reauthorization Issues Council Coordinating Committee (CCC) Working Paper June 1, 2017 http://s3.amazonaws.com/nefmc.org/9b_170601_CCC_MSA_White_Paper.pdf

recreational) supported 1.6 million jobs in 2015, a 12 percent increase since 2011. This record of progress is due to changes made to the law in the two most recent reauthorizations and a concerted effort by fishermen, scientists, conservationists, fishery managers, and other stakeholders to implement the Magnuson-Stevens Act through a regionally-driven management process.

Although progress toward sustainable management of U.S. fisheries over the past two decades has been considerable, much more needs to be done. Overfishing in the United States has not ended. As NOAA Fisheries indicated in its most recent Status of Stocks report, 30 stocks are subject to overfishing, including six that were newly added to the overfishing list in 2016. Further, 38 stocks, or 16 percent of stocks with a known, assessed status, are considered overfished and remain subject to rebuilding plans. Some of these overfished stocks are not successfully rebuilding. For these stocks, it is clear that annual catch limits and rebuilding timelines alone are insufficient. Additional considerations to incorporate more effective measures to restore fish populations are necessary to address these lingering problems.

To advance this more comprehensive approach, Congress should amend the Magnuson-Stevens Act so that regional and national managers:

- *Conserve forage fish* (such as sardines and menhaden), the primary food source for many larger fish species (such as cod and tuna) that are caught commercially and recreationally, in addition to seabirds and marine mammals.
- *Minimize bycatch*, which is the catching and discarding of non-target fish and other marine wildlife. Bycatch results in large-scale waste of wildlife and lost economic opportunity for fishermen.
- *Protect fish habitat* from destructive fishing practices and other damaging human activities to ensure fish have safe places to breed, feed, grow, and take shelter.
- *Proceed with caution* before establishing new fisheries to ensure they are sustainable from the start.
- Develop *Fishery Ecosystem Plans*, using the best available scientific information, to provide a road map for management that considers the important connections among predators, prey, habitat, and human needs.

America's fish populations are national resources that provide significant economic and ecological benefits. Therefore, it is important to maintain the existing, robust process for public involvement in evaluating how fishery management decisions might affect coastal and ocean environments and considering reasonable alternatives to proposed decisions. It is also critical to make sure management decisions are grounded in science and balance the immediate and long-term needs of marine life, fishermen, ecosystems, and coastal communities. Pew is concerned about recent Department of Commerce and NOAA Fisheries decisions that disregard these objectives and significantly increase the risk of sanctioned overfishing. Specifically, the agency's extension of the Gulf of Mexico red snapper recreational fishing season and the override of the Atlantic States Marine Fisheries Commission determination that New Jersey's summer flounder regulations are out of compliance with its management plan are inconsistent with these objectives.

Finally, we would encourage the Subcommittee to undertake an inclusive, non-partisan process that actively engages a range of stakeholders in considering potential changes to the Magnuson-Stevens Act. During the 2006 reauthorization of the Magnuson-Stevens Act, a bipartisan group of Senators and Representatives worked with President George W. Bush's administration to confront the problems of overfishing by ensuring councils adopt science-based annual catch limits and appropriate accountability measures. The resulting legislation passed both chambers by voice vote. We believe that the process and outcome of the 109th Congress should serve as the model for the next reauthorization. To begin the development of a similar bipartisan bill, hearings that allow a diversity of stakeholders to share their perspectives on legislative changes to the Act should be held.

Thank you for considering our views on this important issue. My colleagues and I would welcome the opportunity to discuss reauthorization of the Magnuson-Stevens Act with the Committee further. If you, or your staffs, have any questions, please do not hesitate to contact me.

Sincerely,

TED MORTON,
Director, U.S. Oceans, Federal,
The Pew Charitable Trusts.

cc: Members of the U.S. Senate Committee on Commerce, Science, and Transportation

July 31, 2017

Hon. DAN SULLIVAN,
Chairman, Subcommittee on Oceans,
Atmosphere, Fisheries, and Coast
Guard,
Committee on Commerce, Science, and
Transportation,
Washington, DC.

Hon. GARY PETERS,
Ranking Member, Subcommittee on
Oceans, Atmosphere, Fisheries, and
Coast Guard,
Committee on Commerce, Science, and
Transportation,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters

Nearly 300 chefs, restaurateurs and seafood suppliers from 24 states¹ signed onto the attached letter, stating their unequivocal support for a strong fisheries management system that addresses 21st century challenges. Changing ocean conditions, loss of vital habitat, and protection of the base of the food chain all need to be addressed by regional fishery managers.

Despite the need for improvements, our fisheries represent some of the best managed fisheries in the world. Our businesses depend on the availability of sustainably caught seafood from U.S. waters. For this reason, we are not only strongly supportive of efforts to modernize fisheries law, but also opposed to any efforts to weaken it. We are concerned that any steps backwards could lead to overfishing, reducing our access to the products that our customers have come to expect.

This Congress, please oppose any efforts that will take our fisheries backwards and support those efforts that will carry us into the future.

LINDA DI LELLO MORTON,
Co-founder,
Terra Plata.

cc: Senate Commerce, Science and Transportation Committee members and staff

Hon. DAN SULLIVAN,
Chairman, Subcommittee on Oceans,
Atmosphere, Fisheries, and Coast
Guard,
Committee on Commerce, Science, and
Transportation,
Washington, DC.

Hon. GARY PETERS,
Ranking Member, Subcommittee on
Oceans, Atmosphere, Fisheries, and
Coast Guard,
Committee on Commerce, Science, and
Transportation,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters

As chefs, restaurateurs, grocers, and restaurant seafood suppliers we depend on healthy ocean ecosystems, sustainable seafood, and abundant fish populations. Today, we write to encourage your support for advancing a more comprehensive fishery management approach when the Magnuson-Stevens Fishery Conservation and Management Act is next reauthorized. This kind of big picture fishery management is good for fish, fishermen, and businesses that depend on fish, including the ones that provide seafood at restaurants across the United States.

The current U.S. fisheries management system emphasizes establishing fishing rules on individual populations or groups of similar populations. Although improvements to the law in 1996 and 2006 have helped to end overfishing on many species and to rebuild a number of depleted populations, they do not address the bigger picture. Taking a big picture approach, factoring the knowledge we have about what each species eats, where it lives and what it depends upon is a critical next step in advancing good management. As Congress moves forward to consider further updates to the Magnuson-Stevens Act, it is important to not only maintain our management successes but also build on them to make sure fish are managed as part of the larger ocean environment and to reinforce our fisheries against emerging and ongoing threats such as loss of habitat.

Specifically, we should strengthen the Magnuson-Stevens Act to better protect essential fish habitats, minimize the incidental catch of fish and other wildlife, and account for the critical role that forage fish play as prey for other fish and wildlife. We should analyze and understand the impact of fishing before opening or expanding fisheries or accessing new areas. And, we should develop plans that establish a road map for broadening the scope of managing fish populations, so we factor in

¹ Arizona, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Iowa, Illinois, Louisiana, Massachusetts, Mississippi, North Carolina, New Hampshire, New Jersey, Nevada, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas and Washington

the important interactions among fish populations, other marine wildlife, and habitats of the ocean ecosystem.

By incorporating a big-picture approach to fisheries management, Congress can safeguard our ocean resources and coastal communities for the long-term benefit of our customers and your constituents.

As an influential member, representing a [state/district] known for some of the best fisheries in the world, you have the opportunity to contribute in a critical and substantial way. It is our hope that you will wholeheartedly embrace such a pivotal leadership role and champion ecosystem based fisheries management in the reauthorization of Magnuson-Stevens Act.

Thank you for considering our views. We look forward to working with you to advance stronger, healthier fisheries that can benefit our communities from ocean to plate.

Adam Green, Chef
Fez Restaurant & Bar
Phoenix, AZ

Jackson & Kevin Kelly, Owners
Bliss ReBAR
Phoenix, AZ

Kevan Kiefer, Chef
Corduoy
Phoenix, AZ

Mario Pineda, Chef
Bliss ReBAR
Phoenix, AZ

Mark Dillon, Owner
Fez Restaurant & Bar
Switch
Corduoy
Pizza People Pub
Phoenix, AZ

Mark Howard, Owner
Fez Restaurant & Bar
Bliss ReBAR
Phoenix, AZ

Tim & Marybeth Scanion, Owners
Pizza People Pub
Phoenix, AZ

Tom Jetland, Owner
Fez Restaurant & Bar
Switch
Corduoy
Pizza People Pub
Phoenix, AZ

Suzanne Goin, Chef/Owner
Larder Baking Company & Restaurants
Lucques
Tavern
a.o.c
Los Angeles, CA

Seamus Gibney, Executive Chef
Pier 23
San Francisco, CA

Michael Botello, Owner
Wally's Desert Turtle
Rancho Mirage, CA

Soerke Peters, Chef/Owner
Basil Seasonal Dining
Carmel By The Sea, CA

Albert Serrano, Chef
Bluewater Grill
Coronado, CA

Evan Cruz, Executive Chef
San Diego Marriott Del Mar/Arterra
Restaurant & Outdoor Lounge
San Diego, CA

Trey Foshee, Executive Chef & Partner
George's at the Cove
Galaxy Taco
La Jolla, CA

Shihomi Borillo, Owner
Azuki Sushi
Artisan Bento
San Diego, CA

Jeff Jackson, Executive Chef
Lodge at Torrey Pines-A.R. Valentien
Restaurant
La Jolla, CA

Matt Gordon, Executive Chef/Owner
Urban Solace
Solace and the Moonlight Lounge
Encinitas, CA

Davin Waite, Chef Owner
The Whet Noodle
Wrench and Rodent Seabasstropub
Oceanside, CA

Jason Knibb, Executive Chef
Grande Colonial, NINE-TEN Restaurant
La Jolla, CA

Mourad Jamal, Executive Chef
Poseidon on the Beach
Del Mar, CA

Nikki Martin, Chef/Actress
Food Network
Hollywood, CA

Nathan Lyon, Host
Growing A Greener World; Good Food
America with Nathan Lyon
Los Angeles, CA

Michael McGeath, Owner
Brooklyn Girl Eatery
San Diego, CA

Sammy Monsour,
Preux & Proper
Los Angeles, CA

Kim Muller B/O/T/H Consulting Manhattan Beach, CA	Jeff Krivokopich Guckenheimer Venice Beach, CA
Cindy Pawlcyn, Founder & Owner Mustards Grill Cindy's Backstreet Kitchen Napa Valley, CA	Stephen Zwick zecture West Los Angeles, CA
Rob Ruiz, Chef & Owner The Land and Water Company Carlsbad, CA	Christian Graves, Executive Chef Panzano Denver, CO
Andrew Spurgin, Chef/Owner Andrew Spurgin: Bespoke event styling & menu design San Diego, CA	Brianne Bowdish Cart driver Denver, CO
Gordon Drysdale, Culinary Director Scoma's San Francisco, CA	Jeffrey Lammer, RootdownDIA Denver, CO
Jason Azevedo, Hock farm craft & I provisions Sacramento, CA	Todd Rymer Colorado Mountain College Edwards, CO
Jason McLeod, Executive Chef & Partner Ironside Fish & Oyster San Diego, CA	Mark R. Leopoldino, Owner Bill's Seafood Westbrook, CT
Dustin Summerville, Founder Harney Sushi Restaurants San Diego, CA	Elena Fusco, Chef Bin 100 Milford, CT
Ricardo Heredia, Executive Chef & Owner Kitchen Mafioso San Diego & Los Angeles, CA	Adam Young, Owners Sift Bakeshop Mystic, CT
Alisha Lumea, Polished Brands San Francisco, CA	Lisa Arsenault, Chef Lis Bake Shop Mystic, CT
Mark Dommen, Head Chef & Partner One Market Restaurant San Francisco, CA	Elizabeth Alina, Chef Karma Kitchen Mystic & Juicery Mystic, CT
Patty Unterman, Chef & Owner Hayes Street Grill San Francisco, CA	Ken Lin, Chef Workery in Mystic Mystic, CT
Mary Sue Milliken, Chef and Co-Owner The Border Grill Santa Monica, CA	Nora Pouillon, Chef and Owner Restaurant Nora Washington, DC
Susan Feniger, Chef and Co-Owner The Border Grill Santa Monica, CA	David Rashty, Executive Chef Jack's-Farm to Fork @ The Pinkshell Beach Resort and Marina Fort Myers Beach, FL
John Ash, Chef & Owner John Ash & Co Santa Rosa, CA	Jack Boykin, Owner Pink Shell Beach Resort & Marina— Jack's Farm to Fork & Bongos Bea hide Grille Ft Myers Beach, FL
Raymond Ho, Chef and Co-Founder Tataki Sushi Bars San Francisco, CA	Bob Statler, Owner/Founder Food Island Hobe Sound, FL
Kin Lui, Chef and Co-Founder Tataki Sushi Bars San Francisco, CA	Persefoni Nicolosi, Director of Operations Blu Mangrove Grill Palmetto, FL
Casson Trenor, Co-Founder Tataki Sushi Bars San Francisco, CA	David Curran, Chef Hitched and Honey Sarasota, FL

- Isaac Johnson, Chef
Lila
Sarasota, FL
- Patrick Loughrey, Owner/Designer/
Writer/Producer
TastyRoyProductions
Sarasota, FL
- Stephen Phelps, Chef
Indigenous
Sarasota, FL
- Alex Gazdik, Manager
Red Mesa Mercado
St. Petersburg, FL
- Cameron Bolonski, Manager
Casita Taqueria
St. Petersburg, FL
- Casey Petrauskas, Manager
The Burg Bar and Grill
St. Petersburg, FL
- Danny Autrey D, Manager
Engine Rose
St. Petersburg, FL
- Denise Backnell, Manager
Leafy Greens Cafe
St. Petersburg, FL
- Jason Dudney, Manager
Bodega
St. Petersburg, FL
- Jerry Rice, Owner/Chef
Kissin' Cuzzins Restaurant
St. Petersburg, FL
- Paul Renner, Owner/Chef
Kissin' Cuzzins Restaurant
St. Petersburg, FL
- Jillian Lund Frer, Owner
Chattaway
St. Petersburg, FL
- John Reutz, Manager
400 Beach Seafood and Taphouse
St. Petersburg, FL
- Travis Zalewski, Manager
400 Beach Seafood and Taphouse
St. Petersburg, FL
- Kevyn Kerrivan, Manager
Ricky P's Orleans Bistro
St. Petersburg, FL
- Matthew Bronkema, Manager
Ferg's Sports Bar & Grill
St. Petersburg, FL
- Natalie Widlak, Manager
Kings's Street Food Counter
St. Petersburg, FL
- Rachel Lawhorn, Manager
Engine#9 Bar & Grill
St. Petersburg, FL
- Rodney Contreras, Manager
Gratzzi Italian Grille
St. Petersburg, FL
- Sean Hannon, Manager
Stations House
St. Petersburg, FL
- Sierra Emory, Manager
Rowdies Den
St. Petersburg, FL
- Teerapong Polrat, Manager
The Lemon Grass Tapas
St. Petersburg, FL
- Tom Woodard, Owner
Pom Pom's Teahouse & Sandwicheria
St. Petersburg, FL
- Tony Harahan, Manager
Hawkers Asian Street Fare
St. Petersburg, FL
- Tracy Asalita, Owner
The Queens Head
St. Petersburg, FL
- Terry Koval, Chef
Wrecking Bar Brewpub
Atlanta, GA
- Mathew Green, Director of Culinary
Operations
Blue Orbit
Duluth, GA
- Ed Kenney, Chef & Owner
Town Hospitality Group
Mahin & Sun
Town
Kaimuki Superette
Mud Hen Water
Honolulu, HI
- Ann Reed,
Iowa State University
Ames, IA
- Grant Tipton, Chef
T3 Culinary
Antioch, IL
- Bruce Sherman, Chef & Partner
North Pond Restaurant
Chicago, IL
- Dan Rosenthal, Owner/Founder
Sopraffina
Chicago, IL
- John Mark Stanley
Illinois Institute of Art—Chicago
Chicago, IL
- Paul Fehribach, Chef and Co-owner
Big Jones
Chicago, IL
- Alfredo Manzanares, Chef
Catahoula Hotel
New Orleans, LA
- Dana Honn, Chef and Co-Owner
Carmo: A Tropical Café
New Orleans, LA
- Isaac Toups, Chef and Owner
Toups Meatery
New Orleans, LA

Kerry Heffernan, Chef Seaworthy (NOLA), Grand Banks (NY) New Orleans, LA	Abdus Shakur, Chef and Culinary Arts Instructor East Weymouth, MA
Nina Compton, Chef Compère Lapin New Orleans, LA	Corbin Evans, Chef and Owner Oxford Canteen Oxford, MS
Ryan Prewitt, Chef, Partner Pêche Seafood Grill New Orleans, LA	Vishwesh Bhatt, Executive Chef SNACKBAR Oxford, MS
Stephen Stryjewski, Chef, Partner Cochon Cochon Butcher Pêche Seafood Grill Calcasieu Rooms New Orleans, LA	William Dissen, Owner and Executive Chef The Marketplace Restaurant Asheville, NC
Dickie Brennan Jr, Chef Dickie Brennan and Company New Orleans, LA	Clark Barlowe, Chef and Owner Heirloom Restaurant Charlotte, NC
Lauren Brennan Brower, Owner Dickie Brennan and Company New Orleans, LA	Michael Beers, Chef Gracie K's Statesville, NC
Steve Pettus, Managing Partner Dickie Brennan and Company New Orleans, LA	Corey Fletcher, Chef and Owner Revival Kitchen and Bar Concord, NH
Leah Chase, Owner and Executive Chef Dooky Chase's New Orleans, LA	Brent Hazelbaker, Chef Earth's Harvest Kitchen and Juicery Dover, NH
Susan Spicer, Owner and Executive Chef Bayona New Orleans, LA	Mary Ann Esposito, Chef/Host PBS Ciao Italia with Mary Ann Esposito Durham, NH
Johnny Sheehan, Chef Liquid Art House Boston, MA	Catherine Brown, Chef DiCocoa's Market Bakery Errol, NH
Peter Davis, Chef The Charles Hotel/Henrietta's Table Cambridge, MA	Jeff Alberti, Executive Chef Tuckers Tavern Beach Haven, NJ
Carolyn Johnson, Chef 80 Thoreau Concord, MA	Peyton Johnson, Chef de Cuisine Daddy O Restaurant Brant Beach, NJ
Richard Garcia, Chef Crescent Hotels & Resorts Kingston, MA	Jeff Alberti, Executive Chef Plantation Restaurant Harvey Cedars, NJ
Michael Leviton, Chef Sustainable Food Systems Consulting Group Lexington, MA	Mattias Gustafsson, Executive Chef; Co- Owner Madame Claude Bis Jersey City, NJ
Jesse Ferriter Smith College Northampton, MA	DeAnna Pattera, Chef and Co-Owner DeAnna's Restaurant Lambertville, NJ
John Lawrence, Owner Peppers Fine Catering Northborough, MA	Lisa Nichols, Co-Owner DeAnna's Restaurant Lambertville, NJ
Jes Childers, Chef New World Tavern Plymouth, MA	Adam Rose, Chef and Owner Villalobos Montclair, NJ
Matt Hennessey, Owner Driftwood Publick House and Oysteria Plymouth, MA	Marc Oshima, Chief Marketing Officer AeroFarms Newark, NJ

- Ariane Duarte, Chef/Owner
Ariane Kitchen & Bar
Verona, NJ
- Greg Honachefsky, Chef/Owner
The Bi-catch Cafe
Dorchester, NJ
- Steven Soltz, Professor—Culinary Arts
Dept
College of So. NV
Las Vegas, NV
- Dorothy Yang
Purple Kale Kitchenworks
Brooklyn, NY
- Jacob Tupper, Fishmonger
Greenpoint Fish/MP Fish
Sea To Table
Brooklyn, NY
- Michael Dimin, Founding Director
Sea to Table
Brooklyn, NY
- Julie Levin, Chef
Nardin Academy
Buffalo, NY
- Samantha Buyskes, Former Executive
Chef
Kindred Fare
Geneva, NY
- Judith Klinger, Founder
World-Eats
New York, NY
- Kathy Zeiger, Founder
Artwalk Hamptons
New York, NY
- Kerry Heffernan, Chef
Grand Banks
New York, NY
- Lilli Donahue, Community Manager
Culinary Agents
New York, NY
- Matt Griffin, Executive Chef
Happy Cooking Hospitality
Fedora
Bar Sardine
New York, NY
- Michael-Ann Rowe,
Emmy® Award-Winning television
personality, food & travel journalist; a
culinary advocate, specializing in
seafood.
Off the Beaten Palate Productions
New York, NY
- Rachel Palczynski, General Manaer
Rouge Tomate Chelsea
New York, NY
- Suzannah Schneider, Sustainability
Connector
Katchkie Farm/Great Performances
New York, NY
- Carl Salamone, Vice President for
Seafood
Sustainability
Wegmans Food Markets, Inc.
Rochester, NY
- Pamela Lynch, Associate Professor of
Biology
Suffolk County Community College
Selden, NY
- Amy Paul, Director
Edible Ohio Valley
Cincinnati, OH
- Derek dos Anjos, Chef/Owner
The Anchor
Cincinnati, OH
- Lilly Burdsall, Chef and Manager
Midwest Culinary Institute at Cincinnati
State College
Cincinnati, OH
- Douglas Katz, CEO/Chef
Fire Spice Company and fire food and
drink
Cleveland, OH
- Gian Mercurio,
Greenwillow Grains
Brownsville, OR
- Maylin Chavez Navarro, Chef/Owner
Olympia Oyster Bar
Portland, OR
- Russell Ruscigno,
Slow Food Portland
Portland, OR
- Lyf Gildersleeve, Owner
Flying Fish Company—Sustainable
Seafood
Portland, OR
- David Joachim, Author/Editor
Joachim Ltd
Center Valley, PA
- Zach Grainda, Executive Chef
White Dog Cafe
Haverford, PA
- Vince Alberici, Chef Consultant
Seviche
Poros
Sonoma
Nola on the Square
Havertown, PA
- George Bush,
The Summit Restaurant
New Milford, PA
- Anthony Bonett, Executive Chef
Moshulu
Philadelphia, PA
- Yves Carreau, Chef and Proprietor
Perl e
Seviche
Poros
Sonoma
Nola on the Square
Pittsburgh, PA

- Ralph P Fernandez, Executive Chef
Autograph Brasserie
Wayne, PA
- Dan Stern, Chef
R2L
Philadelphia, PA
- David Dadekian, President and Writer/
Editor
Eat Drink Rhode Island
Coventry, RI
- Chef Bill Idell, Assistant Dean of the
College of Culinary Arts
Johnson and Wales University
Providence, RI
- Liam Kimball, General Manager,
Business Operations
Juilians
Providence, RI
- Meghan Brennan, Executive Chef
The Sqaure Peg
Warren, RI
- Bill Idell, Assistant Dean
Johnson and Wales University—College
of Culinary Arts
Providence, RI
- Kaza Kondo, Executive Chef
Wara Wara
Providence, RI
- Rick Farmer
St. Jude Children's Research Hospital
Memphis, TN
- Wally Kinney, Partner
Cafe Blue
Bee Cave, TX
- Crystal Laramore, Owner/Executive Chef
Crystal's Bistro
Cold Spring, TX
- Felipe Gonzalez, Executive Chef/
Executive Sous Chef
Shearn's: Moody Gardens Hotel, Spa and
Convention Center
San Luis Steakhouse: The San Luis
Resort & Conference Center
Galveston, TX
- Paco Vargas, Executive Chef and Co-
Owner
Rudy & Paco's
Galveston, TX
- Ricky Craig, Co-Owner and Chef
Harborside Mercantile
Galveston, TX
- Jack Tyler, Chef, Writer, and
Photographer
Culinary Houston
Houston, TX
- David Skinner, Co-Owner and Executive
Chef
Eculent
Kemah, TX
- Jason Loban, Executive Chef
Sulphur Springs Country Club
Sulphur Springs, TX
- Nancy Manlove, Executive Chef and
Owner
Personal Chef; Host: I45NW Cooking
Show
Texas City, TX
- Casey Gaido, Executive Chef
Gaido's Restaurant
Galveston, TX
- Mark Schneider, Texas Chef's
Association
President
Department Chair Culinary Arts, Texas
State
Technical College
Waco, TX
- Michael Wards, Executive Chef/Owner
The Austin Artisan
Austin, TX
- Alan McArthur, Owner
McArthur's
Lakeway, TX
- Al Lopez, Executive Chef
McArthur's
Lakeway, TX
- Ben Nathan, Executive Chef/Partner
Cafe Blue
Austin, TX
- Johnny Smecca, Partner
Saltwater Grill
Sky Bar 1 Steak & Sushi
Little Daddy's Gumbo Bar
NONNO TONY'S
The Gumbo Diner
Taquilo's
Galveston, TX
- Erkem Hyseni, Owner/Chef
Adriatic Cafe
Jersey Village, TX
- Haythem Dawlett, Owner
Floyd's on the Water
Texas City, TX
- Trace Benno, Chef/Owner
Benno's Cajun Seafood
Galveston, TX
- Jimmy McClure, Chef/Owner
Jimmy's on the Pier
Galveston, TX
- Jim Watkins, Chef & Director
Food Services Bastyr University
Kenmore, WA
- Holly Smith, Chef/Owner
Cafe Juanita
Kirkland, WA
- Brian Canlis and Mark Canlis, Owners
Canlis
Seattle, WA

Diane LaVonne, Founder/Owner
Diane's Market Kitchen
Seattle, WA

Eric Tanaka, Executive Chef &
Managing Partner
Tom Douglas Restaurants
Seattle, WA

Johnathan Sundstrom, Chef/Owner
Lark Restaurant
Seattle, WA

Joshua Henderson, Chef & Proprietor
Huxley Wallace Collective
Westward
State
Saint Helens
Bar Noroeste Taqueria
Vestal
Poulet Galore
Cantine
Scout PNY
The Nest
Seattle, WA

Mick Heltsley, Owner
Agua Verde Café
Seattle, WA

Tamara Murphy, Chef/Co-Founder
Terra Plata
Seattle, WA

Linda Di Lello Morton, Co-Founder
Terra Plata
Seattle, WA

Maria Hines, Chef & Owner
Maria Hines Restaurants
Tilth
Golden Beetle Agrodolce
Seattle, WA

Toby Eidem, GM/Owner
Corbett Fish House
Vancouver, WA

Jon Rowley
Jon Rowley & Associates
Vashon, WA

Robin Leventhal, Chef-Instructor
Wine Country Culinary Institute
Walla Walla, WA

Robin Leventhal, Chef-Instructor
Crave Catering & Consulting
Walla Walla, WA

Roy Breiman, Corporate Culinary
Director
Coastal Hotels
Bellevue, WA

Bruno Feldeisen, Executive Chef
Semiahmoo Resort
Blaine, WA

Riley Starks, Partner
Lummi Island Wild Co-op
Bellingham, WA

Kären Jurgensen, Chef Instructor
Seattle Culinary Academy & Quilliscut
Farm School
Seattle, WA

Jason Stoneburner, Chef Partner
Stoneburner
Seattle, WA

Stacey Hettinger, Chef & Owner
Geraldine's Counter
Seattle, WA

Gary Snyder, Owner
Heyday
Seattle, WA

Brendan McGill, Chef/Owner
Hitchcock
Bainbridge Island, WA

Carla Leonardi, Chef/Owner
Cafe Lago
Seattle, WA

Joe Bayley, Chef
Munchery
Seattle, WA

Zoi Antonitsas, Chef
Jarr and Co
Seattle, WA

Mike & Liz McConnell, Owners
Via Tribunali
Seattle, WA

David Burger, Executive Director
Stewardship Partners
Seattle, WA

Ethan & Angela Stowell, Owners & Chef
(Ethan)
Stowell Restaurants
Seattle, WA

Matt Dillon, Chef/Owner
Sitka & Spruce
Bar Ferdinand
The Corson Building
The London Plane
The Old Chaser Farm
Seattle, WA

William Belickis, Chef/Owner
Mistral Kitchen
Seattle, WA

Dre Neeley & Pepa Brower, Chef &
Owners
Gravy Vashong
Vashon, WA

Jason LaJeunesse, Chef
Earnest Loves Agnes
Seattle, WA

Marius Arbune, Chef
Cornuto
Seattle, WA

Sieb & Jen Jurriaans, Chef & Owner
Prima Bistro
Langley, WA

Alex Wilson, Chef
Odd Fellows
Seattle, WA

Walter Edward, Chef/Consultant
University Club
Seattle, WA

Blain Wetzel, Chef
Willows Inn
Lummi Island, WA

July 31, 2017

Hon. DAN SULLIVAN,
Chairman,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Hon. GARY PETERS,
Ranking Member,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters,

We operate businesses that cater to clients who value healthy coasts and ocean wildlife. The ecotourism industry in California represents more than 125,000 jobs and over \$600 million in revenue per year. It is a vital part of our local economy. Ensuring sustainable fish populations and conserving marine resources are important to us and our customers. As Congress considers the next reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), we request your leadership to ensure it is updated to advance a big picture approach, which will better protect our natural resources and the economies that depend on them.

MSA is forty years old, and we've learned more about how to maintain productive ecosystems since then. MSA can be improved to help managers fully utilize the knowledge we have today and account for the big picture when making management decisions. This means conserving forage (or bait) fish, which is what other fish and wildlife eat, protecting where fish live (habitat), and reducing wasteful catch (bycatch), in addition to other priority actions.

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Additionally, ensuring healthy fish habitats is a critical component of sustainable fisheries management. It is important to address the impacts of certain types of fishing and other activities, such as pollution, in order to conserve habitats for fish. Therefore, the MSA needs to include greater protections of essential habitats, such as deep sea corals and spawning sites that fish need for reproduction, shelter, and growth.

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Coastal businesses and other enterprises that are involved in the ecotourism industry are impacted by how the U.S. manages fish populations under the Magnuson-Stevens Act. From tour operators to beachside restaurants, bed and breakfasts to dive shops, businesses like ours can benefit from a thoughtful bill that advances a big picture approach to fisheries management. Please understand that inclusion of big picture management principles in the next reauthorization of the MSA is critical to our continued economic success.

Thank you for your time and your consideration of this important issue.

Sincerely,

We the undersigned

Sail Channel Islands
Dan Ryder, Captain
Oxnard, CA

Channel Islands Outfitters, Inc.
Fraser Kersey, CFO & Co-Founder
Santa Barbara, CA

Paddle Sports Center
Fraser Kersey, CFO & Co-Founder
Santa Barbara, CA

Shearwater Journeys, Inc
Debra Shearwater, Owner
Hollister, CA

Blue Water Ventures
Kim Powell, Owner, Operator & Naturalist
Santa Cruz, CA

Newport Landing Whale Watching
Jessica Roame, Marine Education Specialist
Newport Beach, CA

Channel Islands Surfboards

Evan Gambetta, Manager
Santa Barbara, CA

Harbor Breeze Cruises

Amber Boyle, Vice President
Long Beach, CA

Deep Blue Scuba & Swim Center

Matt Millikin, Manager
Long Beach, CA

Ventura Dive & Sport

James Smith, Owner
Ventura, CA

Living Sea Images

Marc Shargel, Founder & Photographer
Felton, CA

Epic SUP Adventures

Austin Haggerty, Owner
Santa Barbara, CA

Santa Barbara Adventure Company

Michael Cohen, Owner
Santa Barbara, CA

Central Coast Sailing Charters

Captain Mark Kocina, Owner
San Luis Obispo, CA

Malibu Divers

Barbara Gentile-Crary, Owner
Malibu, CA

Tom Boyd Underwater Images

Tom Boyd, Founder & Photographer
Los Angeles, CA

Kip Evans Photography

Kip Evans, Founder & Photographer
Pacific Grove, CA

Davey's Locker Sportfishing & Whale Watching

Jessica Roame, Marine Education Specialist
Newport Beach, CA

Humboats Kayak Adventures

Brian Saxton, Owner
Eureka, Ca

Beach Bungalow Inn and Suites

Anna Patel, Owner
Morro Bay, CA

Pacifica Sailing Charters

Mick Moore, Captain
San Diego, CA

Sail San Diego

Captain Tim Hanley, Operations Manager
San Diego, CA

Matthew Meier Photography

Matthew Meier, Underwater Photographer
San Diego, CA

Xplore Offshore

Captain Russell Moore, Owner
San Diego, CA

Central Coast Outdoors

John Flaherty
Los Osos, CA

Raptor Dive Charters

James Smith, Owner
Ventura, CA

Seas the Day QQ Adventures

Dawn Lamb, Owner
San Clemente, CA

July 31, 2017

Hon. DAN SULLIVAN,
Chairman,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Hon. GARY PETERS,
Ranking Member,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters,

We operate businesses that cater to clients who value healthy coasts and ocean wildlife. The ecotourism industry in CT supports a vibrant tourist industry, vital to the growth of our local economy. Ensuring sustainable fish populations and conserving marine resources are important to us and our customers. As Congress considers the next reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), we request your leadership to ensure it is updated to advance a big picture approach, which will better protect our natural resources and the economies that depend on them.

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Thank you for your time and your consideration of this important issue.

Sincerely,

Kristin Hart
Candlewood Stand Up Paddleboard
New Fairfield, CT

Ed & Ginamarie Hayes
Scuba Shack
Rocky Hill, CT

Jeff Jodoin
Paddle Mystic
Mystic, CT

James Verni
Tidal River Clothing Co.
Mystic, CT

Jill Kobrin
New England Dive LLC
Wallingford, CT

Mark Leopoldino
Bills Seafood
Westbrook, CT

Elena Fusco
Bin 100
Milford, CT

Adam Young
Sift Bakeshop
Mystic, CT

Lisa Arsenault
Lisa Bakeshop
Cos Cob, CT

Elizabeth Alina
Karma Kitchen Mystic & Juicery
Mystic, CT

Ken Lin
Workery in Mystic
Mystic, CT

July 31, 2017

Hon. DAN SULLIVAN,
Chairman,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Hon. GARY PETERS,
Ranking Member,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters,

We operate businesses that cater to clients who value healthy coasts and ocean wildlife. The ecotourism and outdoor recreational industries in Florida represents tens of thousands of businesses and more than 329,000 direct jobs according to the Outdoor Industry Association. It is a vital part of our local economy. Ensuring sustainable fish populations and conserving marine resources are important to us and our customers. As Congress considers the next reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), we request your leadership to ensure it is updated to advance a big picture approach, which will better protect our natural resources and the economies that depend on them.

MSA is forty years old, and we've learned more about how to maintain productive ecosystems since then. MSA can be improved to help managers fully utilize the knowledge we have today and account for the big picture when making management decisions. This means conserving forage (or bait) fish, which is what other fish and wildlife eat, protecting where fish live (habitat), and reducing wasteful catch (bycatch), in addition to other priority actions.

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Coastal businesses and other enterprises that are involved in the ecotourism and outdoor recreational industries are impacted by how the U.S. manages fish populations under the Magnuson-Stevens Act. From tour operators to beachside restaurants, bed and breakfasts to dive shops, businesses like ours can benefit from a thoughtful bill that advances a big picture approach to fisheries management. Please understand that inclusion of big picture management principles in the next reauthorization of the MSA is critical to our continued economic success.

Thank you for your time and your consideration of this important issue.

Sincerely,

Captain Memo's Pirate Cruise
Pam Wozencraft—Owner
Clearwater Beach, FL
Little Toot Tours
Clearwater Beach, FL
Sea Screamer's of Clearwater
Eric Spaulding—Owner
Clearwater Beach, FL
Encounters With Dolphins
William Fineran—Owner
Clearwater Beach, FL
Calypso Queen Tours
Phil Henderson—Owner
Clearwater Beach, FL
The Tropics Boat Tours
Trisha Rodriguez—Owner
Clearwater Beach, FL
MEGA BITE Tour Boat
Derrick and Darrel Lombardi—Owners
Kai Lani Catamaran
Mike Judge—Owner
Clearwater Beach, FL
ParrotDise Express Boat Tours
Jeff Gearheart
Dunedin, FL
Chute Em Up Parasail
Caleb McClymont—Manager
Clearwater Beach, FL
Tampa Bay SUP Standup Paddle
Boarding & Kayaking
Safety Harbor, FL
Kim Ward—Owner
Carolina Mike's Kayaking Adventures
Kim Ward referral-great opportunity
Safety Harbor, FL
High Times Parasail and Watersports
Mark Ketlan—Manager/Owner
Clearwater Beach, FL

Around the Bend Nature Tours
Karen Willey—Owner
Bradenton, FL
Parasail City
Caleb McClymont—Owner
Clearwater Beach, FL
Riverfront Cruises
James Cambell—Owner
Fort Lauderdale, FL
Jungle Queen Riverboat
Mike Faber—Owner
Fort Lauderdale, FL
Carrie B Cruises
Steve Thorton—Owner
Fort Lauderdale, FL
Riverfront Gondola Tours
Captain's Roy and Lauralee Conklin
Fort Lauderdale, FL
Sea Life Kayak Adventures
Tom McFarland—Owner
Sarasota, FL
Island Time Charter
Captain—Chet Soltak
Sarasota, FL
Kenneth A Myers
Atlantic Coast Kayak Company
Wilton Manors
Carmen Driscoll
Carmen's Kayaks
Pine Island
Barbara Schenck
FunDay Tours
Cocoa Beach
Motorized Kayak Adventures
Bill Gibson
Fort Pierce, FL

Paddle Florida, Inc.
Bill Richards
Gainesville, FL

South Florida Underwater Photographic
Society
Sam Hodge
Fort Lauderdale, FL

July 31, 2017

Hon. DAN SULLIVAN,
Chairman,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Hon. GARY PETERS,
Ranking Member,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters,

We operate and represent businesses that cater to clients who value the health of our waters and the wildlife it sustains. The ecotourism industry in New Jersey is not only vital to our local economies, it is robust—for example, ecotourism in Cape May County alone represents a \$544 million industry. And, these benefits extend far beyond our coastal waters to include the major rivers and estuaries which serve as the spawning areas for species such as sturgeon and shad.

Ensuring sustainable fish populations and conserving marine resources are important to us and our customers.

As Congress considers the next reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), we request your leadership to ensure it is updated to advance a big picture approach, which will better protect our natural resources and the economies that depend on them.

MSA is forty years old, and since its enactment we've learned more about how best to maintain productive ecosystems. MSA can be improved to help managers fully utilize the knowledge we have today and account for the big picture when making management decisions. This means conserving forage (or bait) fish, which is what other fish and wildlife eat, protecting where fish live (habitat), and reducing wasteful catch (bycatch), in addition to other priority actions.

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Coastal and river-based businesses and other enterprises that are involved in the ecotourism industry are impacted by how the U.S. manages fish populations under the Magnuson-Stevens Act. From tour operators to beachside restaurants, bed-and-breakfasts to dive shops, businesses like ours can benefit from a thoughtful bill that advances a big picture approach to fisheries management. Please understand that inclusion of big picture management principles in the next reauthorization of the MSA is critical to our continued economic success.

Thank you for your time and your consideration of this important issue.

Sincerely,

Bend The Rod and Island Girl Charters
Scott Krawiec, Owner
Cape May, NJ

Bike Lambertville
Lloyd Davis, Chairman
Lambertville, NJ

Center for Aquatic Sciences at Adventure
Aquarium
Brian DuVall, President & CEO
Camden, NJ

Greater Newark Convention & Visitors Bureau
Bob Provost, Acting President/CEO
Newark, NJ

The Inn at Lambertville Station
Dan Whitaker, Owner
Lambertville, NJ

Jenkinson's Aquarium
Cindy Claus, Director
Point Pleasant Beach, NJ

Delaware River Towns Chamber of
Commerce and Visitors Bureau
Glenn Davis, President & David Morgan,
Executive Director
Lambertville, NJ

Frenchtown Business & Professional
Association
Molly Sumridge, President
Frenchtown, NJ

NJ Campground Owners Association
Joann DelVescio, Executive Director
Marmora, NJ

Pequest Valley Farms
Richard Vohden, Owner
Andover, NJ

Pinelands Adventures
Rob Ferber, Director
Shamong, NJ

Pure Energy Cycling
Arounkone Sananikone, Owner
Lambertville, NJ

July 31, 2017

Hon. DAN SULLIVAN,
Chairman,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Hon. GARY PETERS,
Ranking Member,
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard,
Washington, DC.

Dear Chairman Sullivan and Ranking Member Peters,

We operate businesses that cater to clients who value healthy coasts and ocean wildlife. The ecotourism and outdoor recreational industries in Washington State represents tens of thousands of businesses and more than 227,000 direct jobs. It is a vital part of our local economy. Ensuring sustainable fish populations and conserving marine resources are important to us and our customers. As Congress considers the next reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), we request your leadership to ensure it is updated to advance a big picture approach, which will better protect our natural resources and the economies that depend on them.

MSA is forty years old, and we've learned more about how to maintain productive ecosystems since then. MSA can be improved to help managers fully utilize the knowledge we have today and account for the big picture when making management decisions. This means conserving forage (or bait) fish, which is what other fish and wildlife eat, protecting where fish live (habitat), and reducing wasteful catch (bycatch), in addition to other priority actions.

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Coastal businesses and other enterprises that are involved in the ecotourism and outdoor recreational industries are impacted by how the U.S. manages fish populations under the Magnuson-Stevens Act. From tour operators to beachside restaurants, bed and breakfasts to dive shops, businesses like ours can benefit from a thoughtful bill that advances a big picture approach to fisheries management. Please understand that inclusion of big picture management principles in the next reauthorization of the MSA is critical to our continued economic success.

Thank you for your time and your consideration of this important issue.

Paul Fish, President Mountain Gear, Inc. Spokane Valley, WA	John Land Le Coq, CEO/Founder Fishpond, Inc. Silverthorne, CO
Grant Putman, President Northwest Guides & Anglers Association Tillamook, OR	Mandy Dillard Holiday Sports Mart Burlington, WA
Heidi Siegelbaum, Former Owner Calyx Sustainable Tourism Seattle, WA	Dianna Denny, Owner Dianna Denny Design Port Townsend, WA
Jake Hauptert, Founder Evergreen Escapes Seattle, WA	Dunham Gooding, President American Alpine Institute Bellingham, WA
Dave McCoy, Owner Emerald Water Anglers, LLC Seattle, WA	Howard Garrett, Board President Orca Network Freeland, WA
Shari Tarantino, President Orca Conservancy Seattle, WA	Morgan Colonel, Owner Olympic Raft & Kayak Port Angeles, WA
Filson Company Seattle, WA	Caroline Armon, Owner OnBoard Tours Whales Friday Harbor, WA

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DAN SULLIVAN TO
CHRIS W. OLIVER

Question 1. You stated in your testimony that there are opportunities for additional flexibility in how we apply Annual Catch Limits (ACLs), accountability measures, and rebuilding plans in the currently enacted MSA, and that “we can have it both ways” as it pertains to ensuring conservation efforts are not jeopardized. Please elaborate on this, specifically what tools Congress can provide to the Councils that would allow additional management flexibility without jeopardizing conservation.

Answer. Annual catch limits (ACLs) have been and remain an effective tool in ending overfishing and rebuilding fish stocks, and are a cornerstone of sustainable fisheries management. However, implementing them and associated accountability measures has been challenging in some fisheries—particularly where data is scarce and where commercial and recreational user groups have fundamentally different goals and objectives. For example, setting effective ACLs for species in coral reef ecosystems in the Pacific Islands and Caribbean regions, is one of our biggest challenges due to lack of data regarding stock status and fishing harvests. Calls for increased flexibility are also coming from some recreational fisheries along the Atlantic and Gulf coasts. In these fisheries, harvest data can be much more difficult to collect and report on a timely basis than in most commercial fisheries. Therefore, alternative management mechanisms may be useful.

Increased flexibility under the current MSA was a primary goal of NOAA Fisheries’ recent revisions to the National Standard 1 Guidelines. The revised guidance provides additional flexibility to the Councils in setting rebuilding timelines, phasing in new catch limits, carrying over unused quota, determining when stocks are subject to overfishing, and managing data limited stocks. For example, if a stock assessment shows fishing needs to be curtailed to ensure a stock is sustainable, a Council may phase the full reduction over a period of 3 years as long as the catch level is set below the overfishing limit. This flexibility allows the Council to reduce the economic impact of such a cut instead of taking the entire needed reduction in a single year.

While the Councils are actively exploring the use of the flexibility included in the revised guidelines, we recognize additional measures may be necessary—particularly for some recreational fisheries. Increasing flexibility further will require a multipronged approach focusing on both science and effective management tools and with involvement from a wide host of stakeholders including Congress. NOAA Fisheries is committed to ensuring regional fishery management councils have flexibility to tailor their management plans to maximize fishing opportunities and develop regional solutions to regional problems while preventing overfishing and maintaining stocks at sustainable levels.

Question 2. What new tools could Congress provide the Councils to manage recreational fisheries differently, while also being mindful of annual catch limits?

Answer. NOAA Fisheries continues to support the pursuit of alternative management strategies that may be better suited for recreational fisheries, while remaining mindful of annual catch limits. In 2016, the American Sportfishing Association and Theodore Roosevelt Conservation Partnership convened a saltwater recreational fisheries alternative management strategy workshop with support from and participation by NOAA Fisheries. The resulting report highlighted several potential tools including harvest rate management, harvest tags, conservation equivalency, revising optimum yield, and others. The Agency is currently evaluating the feasibility of the proposed tools. Our continued efforts with the Councils aim to identify the right tools, or combination of tools, to address the specific needs encountered in recreational fisheries management.

Question 3. In Alaska, studies have shown that the average age of fishery permit holders in 2015 was 50 years, up nearly 10 years since 1980. In other areas of the country the average age is even older. What needs to be done to train and equip the next generation of fishermen with the tools they otherwise lack in order to build successful fishing businesses?

Answer. We support the goal of training beginning and young fishermen, and NOAA has a variety of programs that support this. NOAA's most recent data show that the seafood industry generated an estimated \$208 billion in sales impacts and supported 1.6 million jobs in 2015. Fishermen are a cornerstone of this economic engine supplying consumers with healthy, safe, and sustainable seafood. Ensuring fishermen, particularly young fishermen interested in entering the industry, are provided with the information and tools necessary to establish their businesses, and are trained to fish safely and sustainably benefits the future of the U.S. seafood industry, the economies that depend on that industry, and the continued viability of fish stocks.

For example, NOAA provides funding for the Marine Resource Education Program, a highly successful program in the Northeast and Southeast, which gives fishermen with an inside look at fisheries science and management processes and equips them with tools to engage in shaping regulatory action and participate in collaborative science.

NOAA also provides funding for the National Fish and Wildlife Foundation's Fisheries Innovation Fund (Fund), which focuses on community capacity building, among other priorities. The Fund is designed to foster innovation in the fishing industry to sustain fishermen's livelihoods while rebuilding fish stocks. One project funded in 2016 is a state commercial fisherman apprenticeship program in California, involving classwork and on-the-water training for students. The program also recruits experienced fishermen as employers for new entrants into California commercial fisheries. Another project funded in 2016 is the Local Fish Fund, which works to ease entrance into the Gulf of Alaska groundfish fishery by facilitating the transfer of fishing rights from established fishermen and thus removing financial barriers for new entrants.

NOAA's National Sea Grant Program, with its network of 33 Sea Grant programs in the coastal U.S. States and territories, also provides an avenue for and legacy of training fishermen. For example, Alaska and Washington Sea Grant programs fund social science research to understand and address the barriers faced by young people who want to enter and grow in the fishing industry. Since 2007, Alaska Sea Grant has convened six statewide Alaska Young Fishermen's Summits. More than 400 new fishery entrants have attended, and nearly 100 industry volunteers have been mentors and speakers. In 2016, California Sea Grant launched an apprenticeship program to help educate young people about the opportunities in commercial fishing while educating them about the regulations, skills and co-management approach necessary to keep commercial fishing economically, ecologically and socially sustainable. Louisiana Sea Grant's Louisiana Fisheries Forward program helps fishermen, dealers and processors understand the integrated pieces of commercial fishing, including business trends, new technologies and equipment, regulatory rules and policies, resource preservation, and responsible and safe fishing. The program also includes educational meetings for inshore recreational for-hire captains focusing on the importance of recreational surveys, current charter captain license requirements and opportunities for reaching new customers.

In addition, many Sea Grant programs provide training to commercial fishermen on marine safety and safe seafood handling. Alaska Sea Grant provided marine safety training to 4,400 commercial fishermen in 2016 and provided safe seafood handling techniques training to 100 individuals in 27 communities (100 people in 27 communities trained in 2016). Sea Grant programs also routinely provide technical assistance to new and existing commercial fisheries businesses. For example,

Alaska Sea Grant partnered with the Bristol Bay Economic Corporation's Business of Fish program and has provided relevant fishing business information and support to more than 200 commercial fishermen in the Bristol Bay region since 2014.

Question 4. What steps is NOAA undertaking to assess the requirements that require council members to recuse themselves from voting? As you know, recusal of voting council members has been a concern for the North Pacific Fishery Management Council.

Answer. The recusal of voting Council members has been an issue for several of the regional fishery management Councils, including the North Pacific Fishery Management Council as is explained below. The MSA requires recusal of certain members if a council decision would have a "significant and predictable effect" on a financial interest that the member is required to disclose pursuant to related provisions of the Act. See 16 U.S.C. § 1852(j)(2),(7). The Act specifies that "[a] Council decision shall be considered to have a significant and predictable effect on a financial interest if there is a close causal link between the Council decision and an expected and substantially disproportionate benefit to the financial interest of the affected individual relative to the financial interests of other participants in the same gear type or sector of the fishery." *Id.* § (j)(7)(A). NOAA's regulations define "council decision" to mean, among other things, "approval of a fishery management plan (FMP) or FMP amendment (including any proposed regulations) [or] request for amendment to regulations implementing an existing FMP." 50 C.F.R. § 600.235(a)(2). For purposes of the recusal procedures, the regulations define "expected and substantially disproportionate benefit" in terms of a ten percent interest in harvesting, marketing, or processing, or a ten percent ownership of vessels operating in a fishery. *Id.* § 600.235(c)(3). This applies whether the individual is an actual owner of such activity or an employee of an entity owning such activity.

The North Pacific Council has concerns with the way in which NOAA attributes fishing activity and vessel ownership to a Council member when multiple company ownership is involved. Agency regulation, referred to as full attribution, is as follows: if Council member Jones works for company A, and company A owns 3 percent of company B, then 100 percent of company B's activities are attributed to Council member Jones for purposes of comparing Jones' financial interests to the 10 percent recusal thresholds. The North Pacific Council, as well as the Council Coordination Committee representing all eight of the regional fishery management Councils, has argued that that attribution should be proportional to ownership. Under proportional attribution, and using the same example, Council member Jones would only be attributed with 3 percent of company B's fishing activity. The full attribution approach results in the frequent recusal of one Council member in the North Pacific because this member is employed by a company that partially or wholly owns several other fishing companies and the total activity of all the companies routinely exceeds the 10 percent threshold for groundfish harvest in the Bering Sea/Aleutian Islands. However, it is likely this Council member would not be recused under a proportional attribution approach.

In the spring of 2017 the Council member was recused from a Council vote on designation of Essential Fish Habitat (EFH). The amendment updated EFH descriptions following a five-year review of existing EFH components, replaced existing EFH maps, updated EFH conservation recommendations for non-fishing activities, initiated a HAPC proposal process, and revised research priorities for EFH. No regulations will be changed as a result of the amendments, and there will be no changes to fishing activities (including the total amount of groundfish harvested by that Council member's employer). Because the action taken by the North Pacific Council was a Council decision and his employer exceeds the 10 percent threshold of groundfish harvest under the current attribution policy, the Council member was recused. The North Pacific Council has argued that this recusal also was inappropriate because there could be no "close causal link" between a Council decision and a "substantial and disproportionate benefit", because there is no benefit to be realized in the first place.

NMFS has tasked its recusal working group, which is comprised of experts in both NMFS and NOAA GC, to consider whether the agency should take any action regarding how the recusal provisions should be applied in such circumstances in the future. We have discussed this issue internally during my first few weeks in the AA position and I have made this a high priority for resolution. I have requested NMFS staff and NOAA GC to reevaluate the attribution policy for recusal determinations and to clarify the application of the close causal link requirement in the MSA. I expect the working group to provide a report in September, and we will promptly undertake appropriate action.

Question 5. Do you believe that cooperative research programs that utilize state, university, and other data could be helpful to Federal managers? How best can the integrity of third-party data be assured?

Answer. Data collected by states, universities, and other entities is important to Federal scientists and managers and NOAA Fisheries currently utilizes data collected by third parties in its stock assessments. This includes fishery-dependent and fishery-independent data collected by state partners, university researchers, and cooperative research projects. NOAA Fisheries coordinates with state partners to cooperatively collect, manage, and disseminate fishery data through the Fisheries Information Networks (FINs). NOAA Fisheries also collaborates with state and university partners on some fishery independent surveys, such as the Southeast Area Monitoring and Assessment Program (SEAMAP), Northeast Area Monitoring and Assessment Program (NEAMAP), and cooperative trawl surveys. Additionally, every Fisheries Science Center supports cooperative research projects involving a broad range of stakeholders, including state and tribal managers and scientists, fishing industry partners, and educational institutions. All of these programs are integral to NOAA Fisheries' scientific enterprise because they increase the quality and quantity of data, include stakeholder knowledge, improve relevance and transparency of research, and reduce costs by creating greater efficiencies and shared costs.

A few factors are important for the integrity of data to inform management, including establishing a long time series of data and using appropriate survey and sampling designs. All data included in stock assessments must undergo review to ensure the best scientific information available is used and to ensure that the data does not introduce too much uncertainty into assessments. For this reason, NOAA Fisheries scientists work closely with many cooperative research programs to design projects which can be incorporated into or inform assessments. Many cooperative long-term projects, such as industry-based surveys, undergo periodic peer reviews to ensure that field methods, data collection and analysis, and interpretation are all valid and robust. For recreational fisheries surveys, the Marine Recreational Information Program also works to certify state or third party surveys, following independent peer review, to ensure they meet statistical standards.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER F. WICKER TO
CHRIS W. OLIVER

Question 1. Last year NOAA published a final rule that lays the groundwork for implementing offshore aquaculture in the Gulf of Mexico. However, to date nobody has filed to get a permit for finfish or shellfish, citing regulatory challenges as the primary obstacle. What has NOAA been doing to streamline the Federal permitting process?

Answer. To streamline the Federal permitting process, NOAA and six other Federal agencies have entered into a Memorandum of Understanding for Permitting Offshore Aquaculture Activities in Federal Waters of the Gulf of Mexico (MOU). The signatories are the Coast Guard and the regional and district offices of the Bureau of Ocean Energy Management (BOEM), Bureau of Safety and Environmental Enforcement (BSEE), National Marine Fisheries Service (NMFS), Army Corps of Engineers (Corps), Environmental Protection Agency, and Fish and Wildlife Service.

NOAA's approach to implementing the Gulf rule was developed in close collaboration with these other Federal regulatory agencies and with input from an aquaculture task force within the Marine Fisheries Advisory Committee. We now have mechanisms in place to coordinate our new regulatory program for Gulf Aquaculture Permits with existing regulatory programs at the Corps (Section 10 permits under the Rivers and Harbors Act) and EPA (Clean Water Act permits), as well as with the Coast Guard, BOEM, and BSEE with respect to potential conflicts with other activities in the Gulf of Mexico (shipping, oil and gas production). A key element of this approach is to provide potential permit applicants an opportunity to schedule a pre-application meeting with multiple agencies at one time so that potential issues may be addressed prior to beginning the formal application process.

In addition, we now have a suite of informational materials and guidance documents to assist permit applicants, including:

- A Permit Applicant Guide, which summarizes Federal agency authorities and describes the coordinated Federal permit process
- A Pre-Application Meeting Checklist, which identifies the information agencies need the applicant to provide at the initial stage of the process, along with an example of a completed checklist

- Guidance for preparation of a baseline environmental survey, which addresses the requirements of both NMFS and EPA
- Guidance on the assurance bond and genetics requirements in the Gulf rule
- The Permit Application and Forms are available on-line
- NOAA is currently developing an on-line system that will provide the applicant a user account and a means to submit the Operating and Reporting Forms electronically

All of the above documents are posted on the NMFS Southeast Regional Office website at:

http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/aquaculture/.

Question 2. What do you think are the other challenges holding back the offshore aquaculture industry in the Gulf of Mexico and how is NOAA helping remedy those issues?

Answer. In November 2016, the Gulf Seafood Institute, in collaboration with NOAA Fisheries and the Gulf States Marine Fisheries Commission, hosted a Gulf of Mexico Offshore Aquaculture Roundtable to discuss challenges and opportunities. Roundtable participants include nearly 40 industry and government leaders. A key takeaway from this meeting is that industry is uncertain as to whether a return on investment in offshore aquaculture could be earned given a number of current challenges, including but not limited to permitting challenges described in question 1. The conversation included the following:

- Investors are uncertain if they will be welcomed by Gulf communities.
- A strong coalition of diverse interests to compel government and investors to support offshore aquaculture efforts is needed.
- Area management plans to manage disease, siting, biosecurity and other operational features for entities using the same water systems are needed.

At the roundtable, specific government actions (other than those regarding permitting) were discussed and details on how NOAA is addressing these actions are listed below:

- Develop mapping tools in consultation with recreational and commercial fishermen, eNGOs, and state agencies for the Gulf which indicate areas that are and that may not be suitable for offshore aquaculture. Such tools would help ease the siting process for industry, government agencies, and affected stakeholders.
 - *NOAA actions:* A team of researchers with our NOAA Aquaculture Program partners at the National Ocean Service is developing siting and mapping tools to indicate areas suitable for offshore aquaculture in the Gulf. In addition, environmental models (to predict and avoid potential impacts) and monitoring protocols are being developed to support the needs of an offshore aquaculture industry and coastal managers.
- Support partnerships to undertake economic and market analyses, refinement of aquaculture science products, technology innovations, monitoring and evaluation of offshore fish farms, and outreach and educational efforts.
 - *NOAA actions:* NOAA Fisheries awarded \$500K to the Gulf States Marine Fish Commission (in addition to similar awards to the Atlantic and Pacific Commissions) for industry partnerships to support regional pilot projects. We will work with the Commission to identify priorities including addressing challenges to the development of offshore aquaculture. NOAA Fisheries awarded an additional \$76K to the Gulf Commission for economic analysis of aquaculture in the region. NOAA Fisheries' Saltonstall-Kennedy Grant Program has funded projects that directly relate to development of offshore aquaculture in the Gulf including red drum genetics, snapper hatchery technologies, waste monitoring, and cage engineering. NOAA Sea Grant awarded over \$3.2M from its FY 2017 National Aquaculture Initiative to researchers and private industry partners to address impediments to increased aquaculture production in the Gulf of Mexico. Seven projects will address topics involving basic and applied research to improve efficient production of seafood, permitting and public perception of new offshore operations, management of environmental health issues and economic success of shellfish and finfish aquaculture businesses. In addition, the \$6M awarded to support projects in other regions will have potential benefit to aquaculture initiatives in the Gulf.

Other NOAA actions to support development of offshore aquaculture in the Gulf include the following:

- NOAA Fisheries worked with the Gulf States Marine Fish Commission to fund the Gulf Seafood Institute's "Gulf Seafood Tour of Maine's Aquaculture Community" in July 2017. This event brought together influential, Gulf of Mexico stakeholders from the fishing community and Gulf states' governments to experience, first-hand, the aquaculture community in Maine with a focus on identifying potential obstacles and opportunities for the Gulf of Mexico.
- NOAA Fisheries with USDA and the White House's OSTP are developing an Aquaculture Innovation Challenge that seeks to increase positive perception of aquaculture on a national level.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. GARY PETERS TO
CHRIS W. OLIVER

Question 1. Regional Management Authority: Regional management authority is a core foundation of the Magnuson-Stevens Act, and part of that foundation is the emphasis on the balance and diversity of council appointments. Mr. Oliver, are there areas where current law could be improved to ensure councils remain balanced across different sectors and viewpoints?

Answer. Strong regional management is the foundation of the Magnuson-Stevens Act. Because of the unique, regional nature of our fisheries, achieving balance and diversity of Council members on each Council is a challenge. The current law provides adequate means for the Secretary to achieve a fair and balanced apportionment in the commercial and recreational fisheries under the jurisdiction of the Council. A major factor in meeting the requirement to balance membership is the unique role of the Governors in nominating individuals from different sectors. The process works best when Governors provide the Secretary with a variety of highly qualified nominees reflecting the types of fisheries under a Council's jurisdiction. Under current law, there are several ways that NMFS may encourage Governors to submit a fair and balanced slate of nominees for consideration.

First, Section 302(b)(2)(A) of the Magnuson-Stevens Act requires that members appointed by the Secretary must be individuals who are "knowledgeable regarding the conservation and management, or the commercial or recreational harvest, of the fishery resources of the geographical area concerned." Provisions at 50 CFR 600.215 outline the Secretary's definition of a qualified nominee. Equally important is the stewardship responsibilities of Councils and the appointment of individuals who can work collectively with other members to achieve the conservation standards under the MSA.

Second, NMFS encourages the Governors to submit a balanced slate of nominees and may make recommendations for nominees who represent underrepresented sectors or industries. Section 302(b)(2)(B) also requires the Secretary to report annually to Congress on actions taken to achieve, to the extent practicable, a "fair and balanced apportionment, on a rotating or other basis, of the active participants (or their representatives) in the commercial and recreational fisheries under the jurisdiction of Council." This report also makes recommendations to the Governors on the types of nominees who could help better enable the Secretary to meet the fair and balanced apportionment standard.

The Act requires Governors, to the extent practicable, consult with representatives of the commercial and recreational fishing interests of the State. The exact method each Governor uses to consult with commercial and recreational fishing interests differs due to varying State law and process. A Governor must provide a statement explaining how nominees meet the qualification and consultation requirements. The Magnuson-Stevens Act allows the Secretary to review the nominees and determine if they are qualified. Infrequently, the Secretary may determine that individuals are not qualified and return the list to the Governor, who then must submit a new or revised list.

Finally, the Secretary considers Congressional and public endorsements. Endorsements are sent by members of the public (including fishermen, industry groups, environmental non-profit organizations, academia, and unaffiliated citizens), members of local/state/federal government, and members of Congress. Endorsements ensure public involvement, and help inform the Secretary as to whom is best qualified pursuant to the Magnuson-Stevens Act and implementing regulations.

Question 2. Rebuilding Fish Stocks: Can you please describe your experience as Executive Director of the North Pacific Fishery Management Council, and the flexi-

bility you and the Council had within the existing MSA to account for biological and economic considerations when rebuilding and managing fish stocks?

Answer. The Magnuson-Stevens Act provides us with a very successful fisheries management construct to ensure fisheries are both environmentally sustainable and economically important. The Act created broad goals for U.S. fisheries management and a unique, highly participatory management structure centered on the Regional Fishery Management Councils. Given my past work as the Executive Director of the North Pacific Fishery Management Council, I can attest to the value of the regional fishery management council system, which encourages a collaborative, “bottom up” process where input and decisions about how to manage U.S. fisheries include fishermen, other fishery stakeholders, affected states, tribal governments, and the Federal Government. The Councils have flexibility to choose from a variety of approaches and tools to manage fish stocks and meet the mandates of the Magnuson-Stevens Act.

Flexibility is also inherent in the Magnuson-Stevens Act’s rebuilding requirements. The Act requires that the period to rebuild a stock not exceed 10 years, but it permits a longer time in certain cases where the biology of the fish stock, management measures under an international agreement in which the United States participates, or other environmental conditions dictate otherwise, although this period still must be as short as possible. Current rebuilding time periods for stocks with active rebuilding plans range from 3 years to 100 years. Of the 35 active rebuilding plans with a target time to rebuild, 22 of them (63 percent) are set longer than 10 years due to the biology of the stock (slow reproducing, long lived species) or environmental conditions. For example, Pacific yelloweye rockfish has a rebuilding timeline of 71 years. The remaining 13 rebuilding plans are set for 10 years or less.

Increased flexibility under the current MSA was a primary goal of NMFS’ recent revisions to the National Standard 1 Guidelines. The revised guidance provides additional flexibility to the Councils in setting rebuilding timelines, phasing in new catch limits, carrying over unused quota, determining when stocks are subject to overfishing, and managing data limited stocks. For example, if a stock assessment shows fishing needs to be curtailed to ensure a stock is sustainable, a Council may phase the reduction in over 3 years as long as overfishing is not occurring. This flexibility allows the Council to reduce the economic impact of such a cut instead of taking the entire needed reduction in a single year.

The North Pacific Fishery Management Council has successfully managed fish stocks using the flexibility inherent in the Magnuson-Stevens Act. There is currently only one stock on the overfished list in the region—Pribilof Islands blue king crab—likely due to environmental conditions. This successful track record has led to an Alaska commercial fishing and seafood industry that generated \$4.4 billion in sales impacts and 53,400 full-and part-time jobs in 2015.

Question 3. Annual Catch Limits: Several times during the hearing, you made the point of a need for greater flexibility with various management tools and specifically cited flexibility with catch shares, annual catch limits, and accountability measures. Specifically, you made the case for one management tool or approach not being a good fit for all fisheries. So, when are annual catch limits the appropriate tool and when are they not? What characteristics of the given fishery or environment make annual catch limits a good choice as a management tool?

Answer. Annual catch limits (ACLs) have been and remain an effective tool in ending overfishing and rebuilding fish stocks, and are a cornerstone of sustainable fisheries management. However, implementing ACLs and associated accountability measures has been challenging in some fisheries—particularly where data is scarce and where commercial and recreational user groups have fundamentally different goals and objectives. For example, setting effective ACLs for species in coral reef ecosystems in the Pacific Islands and Caribbean regions, is one of our biggest challenges due to lack of data regarding stock status and fishing harvests. Calls for increased flexibility are also coming from some recreational fisheries along the Atlantic and Gulf coasts. In these fisheries, harvest data can be much more difficult to collect and report on a timely basis than in most commercial fisheries. Therefore, alternative management mechanisms may be useful.

While the Councils are actively exploring the use of the flexibility included in the revised National Standard 1 Guidelines, we recognize additional measures may be necessary—particularly for some recreational fisheries. Increasing flexibility further will require a multipronged approach focusing on both science and effective management tools and with involvement from a wide host of stakeholders including Congress. NOAA Fisheries is committed to ensuring regional fishery management councils have flexibility to tailor their management plans to maximize fishing opportunities and develop regional solutions to regional problems while preventing overfishing and maintaining stocks at sustainable levels.

Question 4. Improving fishery data: Mr. Oliver and Dr. Quinn, several fisheries have been described as data poor and data deficient. What are the best ways by which we can improve the quality of our fishery data and monitoring of fisheries?

Answer. While NOAA Fisheries has strong data collection and monitoring programs in place for fisheries in Federal waters, the need for annual catch limits has highlighted the fact that several fisheries have limited data with which to inform management. To inform management, catch monitoring should be in place for all managed stocks, paired with some data collection on biological and stock-specific attributes.

Overall, NOAA Fisheries has strong catch monitoring programs in place for its managed species. Recent technological improvements, such as electronic reporting, have improved the timeliness of fishery data. NOAA Fisheries, through the Marine Recreational Information Program, continues to improve recreational fisheries data collection. NOAA will continue to work with State partners and others to expeditiously review and certify new and alternative methods for the collection of recreational fisheries data and support methods that provide statistically defensible estimates of catch and effort. Looking forward, there is broad agreement within NOAA Fisheries and among Survey scientists that smartphone apps can facilitate the reporting and quality control of fishing effort and catch data. We recognize the role of state reporting programs and intend to find ways over the coming year to better integrate State data and collection programs into the fishery management process.

The next tier of data, after establishing catch monitoring, is to collect basic biological data on fish species and stocks. This information may come from numerous sources, including biological sampling of landed fish, cooperative research, and sampling by on-board observers. NOAA Fisheries also collects biological data using fishery-independent surveys on board NOAA ships and charters. Biological data can inform which species are longer-lived or more vulnerable to overfishing and the availability of biological data varies greatly by species. Many of the species described as “data limited” are species with little biological data, often due to the fact that they are not frequently caught (which allows for less sampling), are in regions with limited monitoring capacity, or are distributed in habitats that make it difficult to perform surveys (such as reefs). Biological data collection programs could be improved in efficient ways with advanced sampling technologies, such as autonomous or towed platforms supporting cameras or sonar, which could expand current ship-based surveys in areas that are difficult to sample with conventional gear.

As part of its next-generation stock assessment framework, NOAA Fisheries is supporting a prioritization protocol for fish stock assessments, meant to efficiently determine the right level of data and assessments for fish stocks, depending on factors such as commercial and recreational importance, fishing pressure, and biological vulnerabilities of species. The regional prioritization process is ongoing, and will inform NOAA Fisheries on the highest priority data gaps to address through further data collection or studies, especially new fishery-independent surveys using conventional or advanced technologies.

Question 5. Environmental Stressors: We live in a changing world with impacts to our ocean and coastal ecosystems from pollution run-off, climate change, harmful algal blooms, and other environmental stressors. In the testimony and questions, the need for data and more data was made clear. In addition to and in conjunction with collecting more data, what are the best ways to account for all of these various stressors when managing fisheries as important biological and ecological resources? In what ways can we be strategic to collect the data that we need to manage the stressors faced by different fisheries around the country?

Answer. Effective fisheries management relies on information regarding changes and impacts of these changes on fish stocks and fisheries. In order to understand the impact of environmental stressors on fish populations, we will continue to monitor of fish populations (abundance, distribution) and track relevant environmental data (temperature, salinity, pollutants, food webs, habitat status etc). NOAA Fisheries has begun to perform fish species vulnerability assessments to identify which species, fisheries, and fishing communities may be most vulnerable to environmental change and we are actively working to include habitat and protected species vulnerability assessments. With continued data collection and analysis, NOAA Fisheries is developing tools that can inform fisheries management. This includes the development of ecosystem indicators that can be tracked and reported alongside stock assessments, often in the form of ecosystem status reports. NOAA Fisheries is also improving its efforts to incorporate these environmental indicators into the assessment models to improve understanding and prediction of future changes.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. EDWARD MARKEY TO
CHRIS W. OLIVER

Question 1. Mr. Oliver, the Secretary of Commerce recently dismissed the findings of the Atlantic States Marine Fisheries Commission to allow overfishing of Summer Flounder in New Jersey. This could negatively impact not only summer flounder stocks but also all of the other fishermen from other states who play by the rules. It sets a dangerous precedent that states can make management decisions based on politics instead of science.

Mr. Oliver, on July 11, 2017, you sent a letter to the Atlantic States Marine Fisheries Commission (the Commission) allowing New Jersey to bypass the regulations to end overfishing of summer flounder. These regulations are followed in Massachusetts, Rhode Island, Connecticut, New York, Delaware, Maryland, Virginia, and North Carolina. How was this decision reached? Please provide any and all scientific analysis that led the Commerce Department to a different conclusion than the Commission's technical advisors.

Answer. The Department of Commerce found that the management measures implemented by New Jersey for the 2017 recreational summer flounder fishery to be compliant with the intent of the measures contained in the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup, and Black Sea Bass Interstate Fishery Management Plan. As a result, a moratorium on summer flounder fishing in New Jersey state waters was not required.

Question 2. Mr. Oliver, Right Whales are one of the most endangered species. According to your department's website, they are the rarest large whale species and among the rarest of all marine mammal species. There have been multiple Right Whale deaths in recent months including 10 in the Gulf of St. Lawrence in Canada this summer and one off the coast of Cape Cod in April.

What actions is NOAA taking to understand why Right Whales are dying?

Right Whales migrate through many different countries' waters. Can you commit to working with the State Department to coordinate with the Canadian government on avoiding Right Whale deaths and trying to rebuild the Right Whale population?

Answer. As part of NOAA's long-term commitment to North Atlantic right whale conservation, NOAA Fisheries scientists and managers have been actively studying the population to determine status, trends, and threats, monitoring the effectiveness (compliance, implementation, etc.) of U.S. regulations already in place to protect the whales from entanglements and ship strikes, and providing emergency response to animals in distress. A new peer-reviewed paper being published by NOAA Fisheries scientists indicates the population was already in decline prior to the Unusual Mortality Event (UME) declaration, and estimates approximately 460 animals remained in 2015 prior to the 2017 deaths. Thus, the 12 recent mortalities since June 2017, plus an additional death caused by a ship strike in Cape Cod Bay in April, represent a loss of 3 percent of the total population.

NOAA Fisheries is committed to work with the State Department and Canadian officials and scientists to avoid future right whale deaths and attempt to rebuild the population.

Prior to the first report of a dead North Atlantic right whale on June 7, 2017, in Canadian waters, NOAA Fisheries and our partners from the U.S. marine mammal research and stranding/disentanglement network communities were already collaborating with Canadian colleagues at Canada's Department of Fisheries and Oceans (DFO) and the Canadian stranding/disentanglement organizations. NOAA Fisheries had already scheduled aerial surveys to help document the growing concentrations of whales being reported in the Gulf of St. Lawrence in recent years, and once on site provided technical guidance and expertise (both in-person and remotely) for responding to both the dead-stranded whales, as well as the entangled live whales.

To help organize and strengthen the already existing collaborations between U.S. and Canadian experts, NOAA Fisheries declared the North Atlantic right whale mortalities an official UME on August 25, 2017 to address the 12 known dead whales since June 7, 2017 (10 found in Canada and 2 found in the U.S.), and any future cases. The declaration of the UME brings enhanced scientific focus and resources to assist the investigation, including the significant expertise of the Working Group on Marine Mammal Unusual Mortality Events and a special Investigative Team formed specific to this event. Declaration of the UME also provides additional emergency funding to support the investigation through the UME Contingency Fund, which is available exclusively for UMEs.

The UME declaration was made in close coordination with Canadian colleagues from DFO and the Canadian marine mammal stranding network who have been working to investigate the mortalities occurring in their waters since June. Our

UME investigation will be trans-boundary and will include experts from both nations to better understand this event and identify conservation and management actions that could be taken to assist right whale recovery. NOAA Fisheries will also coordinate with Department of State as appropriate.

In addition to working collaboratively with DFO on the specific UME investigation, NOAA Fisheries and DFO have established a Bilateral Working Group to discuss ways both countries can increase coordination and cooperation to further North Atlantic right whale conservation efforts. The Bilateral Working Group will identify science and management gaps that are impeding recovery of North Atlantic right whales throughout their range. Additional working groups with scientific experts are planned to collaboratively develop solutions to these challenging science and management gaps, and will complement and help inform the bilateral government efforts.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. GARY PETERS TO
DR. JOHN M. QUINN

Question 1. Conflicts between MSA and other statutes: Dr. Quinn, in your written testimony, you describe conflict with MSA and other statutes such as the Antiquities Act and the Endangered Species Act. Can you give an example of conflicts between MSA and these other statutes? Why should MSA be the only entity to issue and promulgate rules related to fisheries?

Answer. Senator, the MSA is the statute that Congress adopted specifically to realize the benefits from commercial and recreational fisheries that are managed using sound conservation and management principles. Fisheries contribute significantly to the economy of the Nation and science-based management decisions are needed to ensure their sustainability. Fishery management decisions carefully balance the economic, social, and biological impacts for the greatest benefit to the Nation. They must take into account all applicable law, such as the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), Coastal Zone Management Act (CZMA), etc. The Act's emphasis on a strong public process is one of its strengths and helps to make sure that all points of view are considered.

Fisheries, whether pursued for recreation or profit, are complex. Congress developed the MSA to address these complexities, including the decision-making process to include myriad stakeholders but also the substantial ecological effects of fishing. These range from increasing fishing mortality to impacts on habitat and sensitive species such as turtles and marine mammals.

Developing Federal fishery regulations under the MSA section 302 process ensures consistency and transparency in Federal fisheries management, full consideration of impacts to fishing communities, and consistency with the MSA National Standards, while also ensuring consistency with other Federal statutes such as MMPA and the ESA. Currently, regulations directly impacting federally managed fisheries may be promulgated under other Federal laws such as the MMPA, ESA and National Marine Sanctuaries Act (NMSA). Such avenues for developing fishing regulations circumvent the transparent Council process established under MSA and lack considerations of the National Standards. This can lead to unnecessary socioeconomic impacts on fishing communities while having limited conservation benefit on the resources.

Other statutes are designed to meet other purposes. As a result, decisions reached using these statutes can be narrowly focused on a specific objective and sacrifice net national benefits. For example:

- The Antiquities Act of 1906 has allowed Presidents to circumvent MSA by proclaiming Marine National Monuments, which are a type of marine protected area (MPA). MPAs are a common tool employed by the Regional Fishery Management Councils to manage fisheries within their jurisdiction. The establishment of the marine national monuments does not require the use of best scientific information available, completion of analyses required by NEPA nor a prescribed public process. Since 2006, four marine national monuments have been established in the Western Pacific Region (two of which were subsequently expanded), together closing more than 50 percent of U.S. waters in this region to domestic commercial fishing. The closures are unnecessary as the Western Pacific Council has been managing and protecting these waters for over 40 years, resulting in many areas deemed pristine prior to the monuments being established. Moreover, Council measures are required to prevent overfishing so the use of the Antiquities Act to manage fisheries is at best duplicative and at worst a political circumvention of the MSA.

Our experience with marine monument designations to date is that they are counterproductive to domestic fishery goals, as they have displaced U.S. fishing effort to the high seas where American fleets must compete with foreign fisheries that are less regulated and monitored than the U.S. fleets. The establishment of Marine National Monuments under the Antiquities Act increases the Nation's reliance on foreign fisheries imports. Foreign fisheries that provide these imports are rarely as well-managed as U.S. fisheries, resulting in increased ecological damage. The U.S. economy suffers from a loss of fisheries employment. This has been a particular problem in the Western Pacific Ocean, where over half the Exclusive Economic Zone is a marine monument.

Over the past 40 years, Congress has been reauthorizing the MSA and its regional, bottom-up management approach, which has resulted in the United States being a global leader in effective fishery conservation and management. Designations of marine national monuments that prohibit fishing have disrupted the ability of the Councils to manage fisheries throughout their range as required by MSA and in an ecosystem-based manner.

- The MMPA False Killer Whale Take Reduction Plan modified gear requirements and a longline fishing prohibited area for the Hawaii longline fishery that is otherwise managed under Pacific Pelagic Fishery Ecosystem Plan (Pelagic FEP) developed by the Western Pacific Fishery Management Council pursuant to the MSA. Modification of the longline prohibited area originally established under the Pelagic Fishery Ecosystem Plan circumvented the transparent Council process established under MSA section 302. Further, the National Marine Fisheries Service (NMFS) has discretion during the rule-making process to modify draft Take Reduction Plans recommended by MMPA Take Reduction Teams, whereas fishery management recommendations made by the Council cannot be modified by NMFS.
- Several Councils experienced conflicts with the ESA. The development of biological opinions and management recommendations under the ESA can result in recommendations that are not reasonable or effective. The results of these biological opinions involve species protected under the ESA and have historically taken precedence over the MSA. Thus, immediate actions are taken despite the impacts to the fisheries and supporting communities. Because the NMFS staff completing Biological Opinions may not fully understand how an affected fishery operates, the resulting regulatory changes often require "remedial" measures that are ineffective or are impracticable for fishery operations to implement. As an example, the ESA process delayed fishing opportunities for black sea bass in the South Atlantic, unnecessarily delaying a fisheries opening. In the North Pacific, the development of the biological opinion on Stellar Sea Lions was criticized for the lack of transparency during development of the measures that affected fisheries.
- The management of fisheries within marine sanctuaries using the National Marine Sanctuaries Act can lead to regulations that are not consistent with the MSA. This statute does not require that actions balance the benefits of a measure with its costs. In New England, at times the sanctuary program has promoted specific fishery measures, raising questions about the position of the Department of Commerce.

Question 2. During the hearing, you made the point that the current MSA has been largely successful and that it only needs to be tweaked in certain areas. Much of the hearing focused on topics and aspects of fisheries management that do need to be refined. As we move to improve fisheries management, we also want to be cognizant of what works. Can you describe key aspects of the current fisheries management structure that we should not modify and make sure would not be impacted as we seek to make modifications and improvements elsewhere in MSA?

Answer. There are many aspects of the MSA that are working well. Fundamentally, the National Standards provide a strong basis for management decisions and this strong foundation served us well. One of the most important reasons for the MSA's success is the use of the Regional Fishery Management Council system. This ensures that local conditions are taken into account, but decisions are still made within the framework of the National Standards. It also provides the opportunity for public participation in the management system. The partnership of the Regional Fishery Management Councils with the Federal government has proven very effective. The National Marine Fisheries Service provides tremendous analytic and policy support to the Councils through its science centers and regional offices. This relationship, while not without its occasional tensions, promotes a rigorous approach to decision-making that benefits the Nation.

This emphasis on science-based decisions is a key factor in our management success. The critical role of the Scientific and Statistical Committees should also be retained, as they evaluate the best scientific information available that guides Council decisions. Both of these factors support a strong requirement that management alternatives must be thoroughly analyzed for their impacts.

Another strength is that the MSA allows Councils to use a wide range of management measures that can be tailored to regional conditions. Catch share programs are an example: while they can be controversial in some fisheries, in others they have proven to be an effective tool for restoring economic and social stability, enhancing safety at sea, and allowing year-round fishing seasons. The decision to implement a catch share program should be at the discretion of the Regional Fishery Management Council and Secretary of Commerce. The provisions currently in the MSA provide adequate guidance to ensure that catch shares are enacted only after careful deliberation and consultation with stakeholders. The MSA should not constrain a Council from considering a particular management approach, nor should it mandate any specific measure.

It is important to recognize that the protections afforded by the MSA are necessary. These protections ensure that fisheries throughout the country provide tremendous benefits. They are the reason the red snapper fishery is, once again, the most popular offshore sport fishery in the Gulf of Mexico. While it is possible for a council to develop amendments that give states greater autonomy, proper management of red snapper requires continued oversight by the fishery management council under the provisions of the MSA.

Many Councils successfully use Exempted Fishing Permits (EFPs), allowed under section 318 of the MSA, to conduct research that directly benefits fisheries. The current process for these permits does not need to be changed.

Question 3. Improving fishery data: Mr. Oliver and Dr. Quinn, several fisheries have been described as data poor and data deficient. What are the best ways by which we can improve the quality of our fishery data and monitoring of fisheries?

Answer. I am going to organize my response into two sections: one that deals with recreational fisheries, and the other that addresses commercial fisheries. While either component can have data poor fisheries, solving their problems may take different approaches.

For the recreational fisheries, a critical problem is the design of a data collection system that can address 'rare events' that may reflect inadequate sampling. Why a species is considered to be data poor or data deficient is an important distinction in determining if an improved data collection program will be successful. Some species are infrequently encountered by both anglers and fishery-independent sampling programs because the fish population is small and/or sparsely distributed. No reasonable increase in data collection efforts may resolve or significantly improve their data-poor status. Many of these data-poor species are incidentally caught and may never become target species or comprise a large proportion of the harvest.

Others species may be data deficient due to the historical absence of funds to conduct comprehensive fishery-independent sampling programs. In these cases, the appropriate solution is to increase fishery-independent sampling intensity, in both space and time, to ensure adequate coverage of the environment. Using a variety of gear types, such as longline and vertical line gear, trawls, traps, cameras, and others could provide observations on the full spectrum of life stages of the species in question. Expanding fishery-independent sampling programs not only helps to elucidate the current health of those data-poor species, but also enhances the knowledge of those species designated as data rich.

The South Atlantic Fishery Management Council is working with its partners to develop an electronic permit and logbook for private recreational fishermen, but there is a need for better integration of this program with MRIP. Frequent changes to MRIP have created uncertainty in the Gulf of Mexico Fishery Management Council's management efforts. In the Western Pacific, data collection programs for non-commercial fisheries do not provide adequate coverage for the broad spectrum of fishing activities.

With commercial fisheries, there are usually comprehensive systems established to collect landings and discard data using a variety of collection methods tailored to each fishery. Because of cost, sometimes these data are not collected in enough details (in terms of time or space) to support management options. Improvements in these systems can be expensive—particularly in the case of at-sea monitoring using observers or electronic monitoring. The MSA limits the approaches that can be used to fund observer coverage, making it difficult to improve these programs. Data-poor situations can also refer to a lack of detailed biological information on age and growth that is needed to describe population dynamics. It takes extensive resources to collect the data and do the studies necessary to develop this information.

Some species are not easy to survey because they are not caught by, or may not be accessible to, traditional survey gear.

In a changing environment, NMFS and the regional science centers need adequate funding to address unforeseen issues that arise; there is no single data collection, research or monitoring program that can anticipate all of them.

Each region has unique fisheries and can be monitored in different ways. The cultural importance of fishing should be recognized even if it is not commercially valuable in terms of money. Fisheries should be monitored based on their importance, and the data collection system should be designed to capture and monitor this information.

If significant investment is to be made on fishery data collection and monitoring, the Councils should be involved in the development process because the management measures that the Councils generate should be monitored in terms of effectiveness. NMFS as the implementing agency and the science provider must involve the Councils in monitoring the management measures and include the performance of the measures in the Stock Assessment and Fishery Evaluation (SAFE) reports.

Question 4. Environmental Stressors: We live in a changing world with impacts to our ocean and coastal ecosystems from pollution run-off, climate change, harmful algal blooms, and other environmental stressors. In the testimony and questions, the need for data and more data was made clear. In addition to and in conjunction with collecting more data, what are the best ways to account for all of these various stressors when managing fisheries as important biological and ecological resources? In what ways can we be strategic to collect the data that we need to manage the stressors faced by different fisheries around the country?

Answer. All Councils are increasing the use of Ecosystem Based Fishery Management (EBFM) approaches. Understanding the relationships between different elements of the ecosystem is vital to dealing with the changes that are already occurring. Because of the differences between regions (in terms of fisheries, data, ecological conditions, etc.), a formulaic approach to EBFM would not be helpful. There is some evidence that the legal and policy framework adopted by the MSA will need to evolve to allow the use of true EBFM approaches. As an example, the ability to manage stock complexes can be constrained by the MSA emphasis on individual stocks.

Oceans and coastal ecosystems are changing at a rapid rate and face emerging challenges from coastal development, changing climate, and increasing demand for marine resources. In large, complex systems, natural and anthropogenic impacts are inevitable, and mitigation through management, conservation, and restoration is critical. However, our ability to respond to disturbances is limited by our knowledge of the current and historical condition of ecological and fishery resources. Therefore, it becomes necessary to monitor the progress of restoration activities. Long-term fishery-independent monitoring of natural resources is the most powerful and efficient mechanism to collect these data. While these programs exist in various forms, a consistent national program (in terms of sampling effort, gear types, and geographic coverage) is lacking. Improvements would require a dependable funding mechanism and improved coordination between state and Federal agencies to ensure that data collection efforts are meeting the long-and short-term needs of resource managers. Fishery management cannot depend on fishery landings data alone to provide reliable indicators of marine resource impacts from climate change or other non-fishing impacts. Improvements in the fishery-independent data provide the information necessary to resolve these uncertainties and provide a foundation to support robust decision making by resource managers. A strategic approach to collecting data on environmental stressors is to conduct a productivity-susceptibility analysis (PSA), since this will help identify where in the ecosystem stressors are likely to have the most impact on fish stocks. For example, coastal stocks will be vulnerable to processes within the near-shore marine ecosystems that are most at risk from both natural and anthropogenic forcing. The first step in accounting for stressors is to incorporate environmental parameters into stock assessments for federally managed species. Various groups around the country are collecting many data streams for these stressors.

Environmental stressors and climate have multiple and complex interactions with aquatic ecosystems. Not all fish stocks will respond negatively to variations in these parameters; some indeed may gain a competitive advantage from proximal factors in the environment, promoting range expansion through increased habitat or possible niche availability as other stocks decline. The bottom line is non-fishery related influences on stock abundance cannot be over-emphasized, especially if they cause stock abundance to decline below National Standard 1 overfishing reference points through no fault of the fishery or fisheries dependent on this resource. Experience in the Western Pacific Region has shown how environmental forces can cascade

through multiple levels within a marine ecosystem and create order of magnitude changes in abundance and recruitment. Parsing out the true reasons for stock abundance dynamics is an extremely important aspect of fisheries management, and fishery managers will likely always be playing catchup.

Offshore stocks such as tunas, billfish and tuna-like species may be less influenced by coastal processes but respond to multi-decadal cycles such as El Niño, Pacific Decadal Oscillation, and the Atlantic Multi-Decadal Oscillation. These large scale oceanic cycles can have major influences on recruitment and hence abundance of these type of stocks. Indeed, some species of fish may have centennial scales of abundance and scarcity, and research that for potentially 70–80 percent fish species, productivity is fully or partially independent of stock size.



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