COOPERATIVE RESEARCH AND HOW IT RELATES TO THE REAUTHORIZATION OF THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

OVERSIGHT FIELD HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES CONSERVATION, WILDLIFE AND OCEANS

OF THE

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C O N T E N T S

OVERSIGHT FIELD HEARING ON COOPERATIVE RESEARCH AND HOW IT RELATES TO THE REAUTHORIZATION OF THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Tuesday, December 11, 2001
U.S. House of Representatives
Subcommittee on Fisheries Conservation, Wildlife and Oceans
Committee on Resources
Ocean City, Maryland

The Subcommittee met, pursuant to call, at 10 a.m., in the City Council Chambers, City Hall, 301 Baltimore Avenue, Ocean City, Maryland, Hon. Wayne Gilchrest [Chairman of the Subcommittee] presiding.

Mr. GILCHREST. If I could have your attention just for a second, Mayor Mathias is here this morning, and he wants to welcome all of us and say a few words about the beautiful weather we are having today.

[Laughter.]

Mr. GILCHREST. Mr. Mayor.

STATEMENT OF THE HONORABLE JIM MATHIAS, MAYOR OF OCEAN CITY, MARYLAND

Mr. MATHIAS. What is that stuff anyway?

[Laughter.]

Mr. MATHIAS. I just want to take the opportunity, first of all, to welcome, Congressman, all of the folks. It makes you know how important fisheries are.

Would you like for me to use the microphone? I can do it that way. Are these turned on yet? Yes, that works.

Again, I just wanted to welcome you, Mr. Congressman, and all of the folks and let you know how important the fishery is to us in Ocean City, a balanced fishery, a recreational fishery, as well as commercial fishery.

And if you look around this building, I am very proud for the town to host you here today because we are actually refurbishing this building. This building was built in 1915, back in the time when fishing was the foundation for Ocean City. And a lot has changed since then, but one thing does remain constant, and that

is the value that we put on fishing here, the value that we put on families in Ocean City.

I am particularly proud to host you this year because Ocean City became an All America City this year, and I thought when we were down there in June that I and we understood what an All America City was all about. But it took on an entirely different meaning 3 months ago on September 11th.

And as we gather here today on that anniversary, as we begin to do our daily work, I would like to ask for a moment of silence for all the victims and the families and the folks who have been affected and continue to be affected. Because as we all know and the Congressman knows, as he fought in Vietnam for our freedoms, freedom is not free, and you never know when you have to make that contribution to keep freedom the foundation of our country.

And if we could do that today in this building that is storied in our American history and Ocean City history, I would be very proud.

[Pause.]

Mr. MATHIAS. We ask that God be with the families and allow those families of the victims to understand that their lives were not in vain, and our military that are out today across the world, continuing to insure our freedoms, liberty, and justice, we ask that God travel with them, be with them and their families throughout this time and throughout our holiday season.

And I ask that we be enlightened today with our judgment and wisdom in order to protect our fisheries and allow both the recreational opportunities and the commercial opportunities to abound.

God bless you. Have a wonderful holiday season. We are proud to have you in Ocean City, and enjoy yourself.

Thanks.

Mr. GILCHREST. Thank you, Mr. Mayor.

[Applause.]

Mr. MATHIAS. Thank you, Jim.

STATEMENT OF THE HON. WAYNE GILCHREST (CHAIRMAN), A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. GILCHREST. The Subcommittee will come to order.

I want to thank all of you for coming this morning and for the witnesses that have traveled here to Ocean City.

A short follow-on to the Mayor. The President spoke this morning in the White House on the issue of September 11th and on the issue of America's effort and resolve to eliminate the terrorists not only in Afghanistan, because it will not end in Afghanistan, but throughout the world wherever there are terrorists who will cause the kind of mass destruction and fear and sorrow that we saw just a few months ago.

And it is difficult for us to understand the mindset of the madness that perpetrates those types of barbaric acts, and we may never comprehend that type of mentality. But we will and we do understand unity of purpose to bring peace and justice to this community, this international community.

And the President spoke eloquently this morning, as did the Mayor of Ocean City, for us to keep those thoughts in mind and go about our responsibilities and duties and life with a sense of quiet resolve that we will prevail.

This morning's hearing, the purpose of our hearing is to gather information about the Magnuson-Stevens Act, and some time in the spring timeframe is our best guess that we will on the House side reauthorize the Magnuson Act.

For the past number of months, basically since January, we have been holding hearings on all of the aspects of America's fisheries, from essential fish habitat, which some in this room this morning have spoken to me about, to the councils and the reorganization, to dealing with collecting data, which is much of what we will talk about this morning, a whole range of issues.

The purpose of reauthorization the Magnuson Act is to insure that the United States can participate in a very healthy, viable, profitable fishing industry, whether that's the commercial aspect, the recreational aspect, charter board captains, et cetera.

The other purpose is to insure that the areas under the jurisdiction of the United States in the oceans remain ecologically viable so that when there is a hearing in this hearing room in Ocean City 100 years from now, and there likely will be and some of your descendants will likely be here for that hearing, there will be more fish in the sea than there is today.

And one of the main purposes for this hearing is to understand in a cooperative way how the Federal Government, namely, National Marine Fisheries Service, the various state governments around the country, the various fisheries commissions around the country, the commercial fishermen and the water men and the recreational fishermen and the charter board captains and the scientific community, basically the public and the private can join together to work to collect the data in a timely fashion, in an efficient way, so that we can continue to fish and harvest, have our businesses more predictable, have the habitat for the ocean's marine life continue to improve.

This can only happen with a sense of cooperation from everybody that is involved in the process, and so this morning, while I am going to ask unanimous consent, I do not think there will be an objection because you have to be a Member of Congress to object.

[Laughter.]

Mr. GILCHREST. So I am going to ask unanimous consent that my full statement that was very well written be submitted to the record, and we will move along here this morning.

[The prepared statement of Mr. Gilchrest follows:]

Statement of Hon. Wayne Gilchrest, a Representative in Congress from the State of Maryland

Ladies and Gentlemen, welcome to the Subcommittee on Fisheries Conservation, Wildlife and Oceans' hearing on cooperative research issues and the reauthorization of the Magnuson–Stevens Fishery Conservation and Management Act.

In 1996, Congress passed the Sustainable Fisheries Act. This legislation required or authorized a number of new initiatives for Federal fisheries managers. These initiatives included: describing and identifying essential fish habitat, reducing bycatch, and identifying and rebuilding overfished fisheries.

In addition, although not talked about as much as those I just mentioned, Congress also gave the National Marine Fisheries Service the authority to enter into agreements with private vessels to conduct research.

Due to the limits on the number of fishery research vessels, limits on funding, and limits on personnel, the National Marine Fisheries Service cannot gather all of the information that fishery managers should have when making decisions on harvest levels and other management decisions. Congress also recognized that by bringing stakeholders into the process of gathering the information on which management decisions are made, they would become more a part of the management decisions.

The Subcommittee is now working on the reauthorization of the Magnuson–Stevens Fishery Conservation and Management Act. We have held four hearings this year on various aspects of this reauthorization. At one of these hearings, we heard testimony on the need for more information—not only on individual species, but also on how each of these species interacts with others. Without this information, the idea of ecosystem-based management will be very difficult.

So how do we get all of the information the fishery managers need? Congress felt that those in the fishery—commercial, charter, recreational—as well as those in the academic institutions and fishery managers at the state level, should be involved.

Since the Sustainable Fishery Act passed in 1996 and the authority to hire private vessels was enacted, Congress has been interested in how this authority has been implemented, how the information gathered in cooperative research projects has been used in making management decisions, and how this authority works.

I hope today's hearing will provide an opportunity to hear how this authority has been implemented, what changes need to be made to make this stakeholder involvement work better, and what new authorities should be included in any Magnuson–Stevens Act reauthorization.

I look forward to having a very frank and useful discussion on these issues.

Before I recognize our first panel, I would like to thank the Ocean City City Council for the use of their Council Chambers.

I would now like to recognize our first panel.

Mr. GILCHREST. The Mayor says we can stay as long as we want, but there is another meeting here at one o'clock. So my guess is we will finish some time between 12 and one.

The first panel we have this morning, Dr. Rebecca Lent, Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service; Dr. Michael Sissenwine, Director, Northeast Fisheries Science Center; Dr. Anne Richards, principal investigator, Monkfish Cooperative Survey, Northeast Fisheries Science Center.

Welcome this morning. We appreciate you traveling to this really beautiful town.

And, Mayor, it is great to be here in December. Not much traffic.

[Laughter.]

Mr. MATHIAS. We are working on that.

Mr. GILCHREST. Basically at a congressional hearing in Washington, the audience does not get to ask questions or make remarks, but I think what we may do when we are finished with the two panels, we will set aside a little time for any comments or questions that people in the audience may have.

And if you have a burning question to a witness, we might be a little flexible in that category as well.

But, Dr. Lent, you may begin.

STATEMENT OF DR. REBECCA LENT, DEPUTY ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE

Ms. LENT. Thank you, Mr. Chairman.

It is nice to be back in Ocean City in the very building where we have held a number of public hearings on highly migratory spe-

cies issues and saw some familiar faces out there in the constituents here today.

You have seen the headlines that talk about the conflicts between the Fisheries Service and the fishing industry. That is part of our regulatory process in our situation.

The good news is we do have a number of good collaborative research efforts going on with the fishing community. They are collecting data. They are conducting research on new gear types and other kinds of collaborative work. It is being done all over the nation.

Today we have a focus on New England with our two scientists here with me today.

I am going to go over just some of the highlights of the program and a couple of the areas outside of New England where we are doing work. We have been doing this kind of collaborative research since our days at the Bureau of Commercial Fisheries and more actively over the last decade.

Again, the big challenge is overcoming the conflicts that are part of our rural and regulatory process and developing mutual understanding and trust between fishermen and scientists. I know that every time I have been out on a fishing boat I have learned a lot, and I know that is true for our scientists as well.

We found out in the years of this program that there is no one side fits all. It is different in every region and every fishery.

We have also noted that there are three fundamental elements for all of these programs for successful research. The first is a good constituent outreach to all of the involved constituents.

Second, very careful development of technical and scientific protocols when we are working in these collaborative projects, and also using pilot studies to develop good testing and refinement.

So these are some of the three fundamental aspects that we are looking at.

The first time, as you know, we received specific funding for cooperative research was in fiscal year 1999 for the northeast, and the current and the past fiscal year we did receive funding as well for the national program.

Just doing a quick overview of some of our programs, in Alaska we have the sablefish survey that is conducted by the Alaska Long Line Fleet. Those vessels are basically chartered, but the crew is allowed to keep their catch. This has been done for a number of years. These data are used in stock assessment. So it is making an important contribution.

We also are using the fleet's echo sounders in a pollock fishery to develop a potential new measure that we can use in stock assessment. We will be evaluating that.

Bycatch, as you know, is a very big issue in fishery management. We are working on a halibut excluded device. You have heard of the TED. You have heard of the BIRD. Now there is the HEAD, and that is being done in the flat fishing codfish fishery with our fishermen in Alaska. And this is pretty critical to see if we can take care of that bycatch because we are subject to an international quota on halibut.

Another gear research that is underway is with the bottom trawlers in Alaska. This is in collaboration with the Navy. As you

know, habitat is a big part of our work. It is important to know the impacts of the trawl fish fishery on the habitat.

We will be doing some controlled trawling and taking measurements, going back to those same areas in future years to see what's happened to the habitat there as a result.

Right here on the East Coast, and I know this is of interest to folks like Rich and Mark who were here today. We have done the Cooperative Shark Program for a number of years, actually nearly 40 years; 6,000 recaptured sharks. This is really important information to know where these sharks are going, where they are migrating and how much they grow. And we have got nearly 7,000 volunteers helping us with this shark counting program.

The highly migratory species tagging program, some of the most exciting work we have been doing where we have been working in collaboration with recreational fishermen as well as commercial fishermen.

We have had tags that range from the very conventional spaghetti tags where you just have the Point A and Point B to archival tags and pop-up tags such that you don't have to catch the fish again. The tag actually catches, comes up, downloads data to the satellites, and you get an E-mail and you find out where your fish has been, how much it has gone up and down in its behavior.

This has been really critical for international management. We had some very dramatic moments at the international meeting last November where we insisted that the Europeans cut back on their fishing in the Eastern Atlantic because it is affecting our bluefin tuna catches right here, right here in Ocean City.

And, Mr. Chairman, to complete this quick overview of the highlights of the cooperative program, I wanted to let you know that we have been working through the Chesapeake Bay office to work on projects such as moisture restoration and working with our partners, such as University of Maryland, Maryland DNR, Atlantic States Cooperative Programs, doing data collection, funding a number of projects that are aimed at ecosystem research, which is the new push we want to have, is some ecosystem management.

I will just finish up with some of the lessons learned and challenges for the future. We know that we are the regulators. So it is always going to be a challenge for us to make sure that we are doing a good job of reaching out to our constituents and working with them.

We think we can use some of the successful pilots to expand the program, work with our constituents, work with our Regional Fishery Management Councils to design the kind of research that we are going to need and working in collaboration with fishermen.

We are committed to this program, again, not just for the science that it provides, but for everything that we learned from each other, both ways, the scientists and the fishermen working together.

I thank you, Mr. Chairman, and following the testimony of my colleagues, I will be happy to address your questions.

[The prepared statement of Dr. Lent follows:]

Statement of Rebecca Lent, Deputy Assistant Administrator for Regulatory Programs, NOAA Fisheries, U.S. Department of Commerce

Good morning. My name is Rebecca Lent and I am the Deputy Assistant Administrator for Regulatory Programs for NOAA Fisheries. Thank you for the opportunity to appear before you today. I am pleased to be able to share with you some of the programs that we in the National Marine Fisheries Service (NMFS) are working on in collaboration with the fishing industry as well as with others interested and concerned with the future of our living marine resources.

Despite headlines that may make it appear that the Federal government and the fishing industry are often at odds, there are a number of areas where scientists, fishing people, commercial vendors, and a host of others are working together to gather information about fisheries, to survey fishing grounds, and to strengthen the scientific basis for managing our Nation's living marine resources. The National Marine Fisheries Service has a long history of scientific collaboration and is actively pursuing cooperative and collaborative research in all regions of the country. In the Northeast, scientists and managers are working to develop the mechanisms required and the close collaborative relationship with industry and other constituents needed to identify and fund cooperative research. This morning you will be hearing much more about the New England programs. Dr. Michael Sissenwine, Director of the NMFS Northeast Fisheries Science Center, will provide an overview of the work ongoing in the Northeast, and Dr. Anne Richards, Project Leader for the Monkfish Cooperative Survey, will share her experiences in developing a collaborative survey program with industry.

In my testimony, I will highlight some of NMFS' long standing cooperative research efforts as well as outline some new projects under development under the newly funded National Cooperative Research Program. I also will address some of the key elements of a successful and scientifically valid cooperative research program, and touch on some of the challenges we are working to resolve on the road to effective working relations with industry.

History of Cooperative Research

Since the days of the Bureau of Commercial Fisheries, and more actively over the last decade, NMFS has worked with commercial and recreational industry representatives, academic researchers, commercial vendors and environmental groups on a variety of approaches for involving stakeholders in the collection of data for the purpose of improving fisheries management. These efforts have been developed in response to local needs and circumstances and have been undertaken in virtually every NMFS region across the country. We have learned some lessons and we continue to search for improvements in performance.

We know that involving the fishing community in data collection requires cooperation among parties with different interests and, often, a history of past conflicts. One of the primary objectives of entering into cooperative or collaborative research and data collection projects, however, is not only to obtain accurate data but also to gain the investment and trust of all participants - scientists, managers, and harvesters of the resource - and to build upon that foundation.

We have learned that the variations across fisheries make it difficult to apply standardized approaches across all regions and fisheries. We also have learned that improving data gathering capability requires some or all of the following elements:

1) consistent outreach to industry and other interested constituents;
2) careful development of valid technical and scientific protocols; and
3) the testing and refinement of these lessons in well-designed pilot studies.

National Cooperative Research Program

Funding specifically identified for cooperative research within the National Marine Fisheries Service first appeared when Congress allocated money for the Northeast in fiscal year 1999 as part of Disaster Relief money to assist in efforts to involve fishing communities in both the planning and conduct of research. To aid in the development of a program for cooperation, the Northeast Regional Fisheries Office established an Office of Cooperative Programs Coordination. At the same time, the New England Fishery Management Council established a "Research Steering Committee" consisting of fishing community representatives, scientists, Council members and government officials to set priorities and plan for long-term cooperative research efforts. More on the background of the Northeast's Cooperative Research Program will be presented later.

Beginning in fiscal year 2001, NMFS also received specially designated funding for a National Cooperative Research Program. The program is being developed to continue to expand and refine cooperative and collaborative research programs with NMFS constituents to improve data collection and analysis, fishing methods and

gear technology, while building improved working relations with fishing communities. The fiscal year 2002 appropriations provides $16.7 million specifically for cooperative research programs, of which $2.75 is for the National Cooperative Research Program to continue these activities. This significant commitment of funding by the Congress further highlights the importance of this research.

To illustrate our cooperative research program, and to showcase some of the work done by NMFS scientists in concert with the fishing community, I would like to walk you through some of our outstanding projects.

Recent and Ongoing Examples of Cooperative Research Programs

On the West Coast, we have had programs that use commercial fishing vessels for data collection for many years. In Alaska, for example, annual resource assessment surveys use chartered commercial fishing vessels, fishing companies test fishing gear for both commercial and Federal work, and government scientists participate in industry-funded research. We are also developing a new program thrust focused on developing a coast-wide grants program that will be available for constituent identified research, information sharing, and gear improvement.

To cite some specific and long standing work, I would like to highlight efforts that the Alaska Fisheries Science Center (AFSC) has undertaken in recent years. Participation of commercial fishing vessels in the Center's annual resource survey effort has long been a keystone to annual groundfish stock assessments for Alaska fisheries. Most recently, the industry is involved in identifying and participating in both sablefish and pollock research projects.

Fish Surveys - Sablefish Survey

The sablefish survey is an annual survey developed at the urging of the Alaska longline fleet. NMFS has been conducting the survey for a number of years and fishing vessel owners, captains, and crew have worked with NMFS scientists to design the gear and on deck sampling procedures. The vessel captains have played a critical role in improving the surveys. NMFS charters the vessel but the vessel captain and crew are allowed to retain the catch. The data are used in preparing annual stock assessments and are used to allocate catch geographically. The sablefish effort also involves transcribing the voluntary logbook data submitted by the Alaska Longline Fishermen's Association, and the Petersburg Vessel Owner's Association into a computerized database and aging the sablefish otoliths collected from fishermen by the International Pacific Halibut Commission.

Pollock Survey

For pollock, the At–Sea Processors Association and the Pollock Conservation Cooperative initiated an acoustic data collection project for pollock using the fleet's echosounders. They funded a collaborative project with scientists from academia (University of Alaska), industry, and the NMFS Alaska Fisheries Science Center. NMFS funding is supporting the purchase of acoustic recording equipment which is designed to be interfaced with ship board echosounders. The collaborative team will be responsible for analyzing the data and evaluating the utility of the data collection system (for pollock stock assessment and pollock distribution).

Bycatch research is another ongoing cooperative research effort in Alaska. One shining example is the work of Alaska Fisheries Science Center scientists and industry on the halibut excluder device for the cod fishery.

Halibut Bycatch Reduction Research

While halibut bycatch in the flatfish and cod fishery is not a species-depletion problem, it does draw sharp criticism because it reduces the quota available to the halibut longline fleet. Collaboration among the Groundfish Forum, Alaska Draggers Association, At–Sea Processors Association, and a number of the local commercial net builders has resulted in gear designs to reduce the incidence of a number of species, e.g., halibut in trawl fisheries, cod in flatfish fisheries, and juvenile pollock in pollock fisheries. Prototypes have been built and tested under experimental conditions aboard chartered fishing vessels under the direction of AFSC scientists. Successful designs are then tested under commercial fishing conditions using exempted fishing permits in collaboration with Groundfish Forum staff and AFSC scientists. The cooperative research funding for the AFSC in fiscal year 2001 was targeted at funding a vessel charter and fuel to conduct the initial experimental trials of a new design of fish excluders for Alaska's trawl fishery.

Bottom Trawl Effects Research

In another area of gear research, AFSC scientists have been studying the impact of bottom trawl fishing on the Bering Sea seafloor for the past 4 years in cooperation with commercial trawlers and more recently with Groundfish Forum staff. U.S.

Navy scientists are also participating in this project. The work includes conducting controlled trawling over selected stations within long established trawl closure areas located in the eastern portion of the Bering Sea. The invertebrate catches from the trawl tow are enumerated by species. Side-scan traces of the trawl path are collected, the exact position of the tow is recorded, and bottom infauna samples are collected. The study area will be sub-sampled in future years to document the long-term recovery of the habitat in addition to the short-term trawling effects.

East Coast Ecological Studies

Both the Cooperative Shark Program and the Highly Migratory Species Tagging Program have been ongoing efforts on the East Coast that collect data on the ecology of the species.

The Cooperative Shark Program is carried out under the Northeast Fisheries Science Center's Apex Predator Investigations which began in 1962 with the cooperation of 100 volunteers. Since that time, more than 149,000 sharks have been tagged and more than 6,000 recaptured through the efforts of the now 6,500-strong volunteer network comprised of mostly rod-and-reel recreational anglers. The tagging program provides useful information on shark movements, migration, age and growth, mortality, and behavior for these far-ranging species.

Highly Migratory Species Tagging Programs

NMFS' Highly Migratory Species (HMS) management program has undertaken several tagging programs in cooperation with State level and academic researchers that have involved the cooperation of recreational and commercial fishermen. In addition to the conventional "spaghetti" tag programs for large pelagic fishes (operated out of the NE and SE Science Centers), the HMS program has incorporated state-of-the-art tagging technologies. These technologies include acoustical tags to track tunas caught by hook-and-line to investigate post-release mortality; archival tags to provide detailed information on bluefin tuna movements between initial release and recapture; satellite pop-up tags to assess migratory patterns of HMS over predetermined time periods that are not dependent on recapture; and, most recently, pop-up archival tags to help discern short-term and long-range movements of bluefin tuna, spawning site fidelity, and ocean wide stock mixing potential. Such ecosystem level tagging research is important for improving current HMS stock assessments and formulating international management programs to rebuild overfished stocks. The cooperation and involvement of recreational vessels, charter boats and commercial seine and harpoon boats have greatly facilitated the expansion of tagging research.

Lessons Learned and Challenges for the Future

While many examples of successful cooperative research projects exist, not all efforts have succeeded in quelling the tension created by NMFS' duel scientific and regulatory roles. The burdens of regulatory requirements can put a strain on even the best planned cooperative efforts. One of the areas we are working on concerns the rules and regulations governing "exempted or experimental fishing permitting" and "scientific research." We are reviewing our regulations and policies to ensure that we have in place the most comprehensive, consistent, and yet streamlined procedures for undertaking this kind of cooperative research and data collection.

We are also working to expand the opportunities in cooperative and collaborative research by sharing the successes reached in areas such as the Northeast and Alaska and using them as pilot programs. We plan to continue building upon these efforts in the future.

We are working to improve the coordination of regional cooperative research programs. The communication of lessons learned, and the development of scientifically valid protocols are areas that we are working to enhance.

Planning efforts are underway on both Coasts to develop strategic plans for both short term projects and long-range programs that involve constituents in the design and implementation of research surveys, and various types of gear development and conservation engineering efforts.

In addition, support is required across the country for the participation of NMFS scientists in the development of surveys for data collection on important species, as well as in the expansion, review, and refinement of programs in collaboration with stakeholders. We are working to secure the necessary resources to support these efforts.

NMFS remains committed to cooperative research programs—not just for the valuable data and information that are obtained—but, perhaps most importantly, for the opportunity provided through this program for increased dialogue and understanding between scientists and the fishing community.

Mr. Chairman, this concludes my testimony. Again, thank you for the opportunity to be here today. I look forward to answering any questions you or other members of the Subcommittee may have.

Mr. GILCHREST. Thank you, Dr. Lent.
Dr. Sissenwine.

STATEMENT OF DR. MICHAEL P. SISSENWINE, DIRECTOR, NORTHEAST FISHERIES SCIENCE CENTER

Mr. SISSENWINE. Yes, Mr. Chairman, thank you for giving me the opportunity to testify in support of cooperative research. I would like to make a brief oral statement, and I request that my longer written testimony be entered into the record.

My testimony is based on my experience as the Director of the Northeast Fisheries Science Center, headquartered in Woods Hole, Massachusetts.

Let me start by repeating Rebecca's comment, Dr. Lent's comment, that cooperative research with the fishing industry is not a new idea. In fact, in the 1920's and 1930's, scientists from my laboratory worked with the fishing industry to establish what was known as a study fleet of vessels that cooperated to provide detailed information on fishing operations.

I actually have a handwritten log book from the 1930's from one of those vessels that is quite interesting to look at.

In recent years, there has been renewed interest in cooperative research for several important reasons. In particular, cooperative research can increase the precision and expand the scope of NOAA's resource surveys. It can provide supplemental information about fishing operations. It can use knowledge gained fishing to help design and implement research on fish migrations and on bycatch reduction, and it can build mutual understanding an respect among scientists and fishing people.

In the northeast region, there are four ways cooperative research is planned and implemented. I refer to these as bottom up planning among scientists in the fishing industry, the research partners program, the New England Consortium Cooperative research, and the research set-aside program of the Mid-Atlantic Fishery Management Council.

There are several examples of bottom-up planning among scientists in the fishing industry. In the late 1990's, a critical research need was to estimate the efficiency of a hydraulic dredge used to survey surf clams. A high intensity survey conducted by fishing vessels was imbedded within the normal National Marine Fishery Service standardized research vessel surveys.

The results of the study were submitted to the Stock Assessment Review Committee, which is known as the SARC, which is used in the northeast region to peer review all of the advice, the stock assessment advice, that is used for fisheries management.

The new assessment showed that the surf clam resource was healthy and an increase in the total allowable catch resulted.

Following this successful cooperative research on surf clams, major cooperative surveys were conducted for scallops in 1999 and in 2000 and for monkfish this year. As a result of the scallop surveys, scallopers were able to earn tens of millions of dollars of addi-

tional revenues, and in fact, made New Bedford the U.S. port with the highest gross earnings.

My colleague, Anne Richards, will tell you more about the results of the monkfish survey which was just reviewed by the SARC.

There are several other examples of cooperative research in the northeast region, such as work on herring, helix squid, and sharks, and currently a cooperative research project concerning tagging of black sea bass is being considered, which I understand is of a particular interest to the Chairman.

In addition to these examples of cooperative research, the northeast region is fortunate to have a program called the Research Partners Program. The partners are the National Marine Fishery Service, the New England Fishery Management Council, state agencies, the fishing industry, and academics.

The program has been supported by more than $25 million that Congress has made available since fiscal year 1999. There are 18 short-term research projects that have been selected for funding, and in addition, the Research Partners Program intends to support long-term projects on study fleets, industry based surveys, and fish tagging.

Congress has also funded the New England Consortium to support cooperative research. Since 1999, $12 million has been provided. The consortium is led by the University of New Hampshire, and its steering Committee of 25 scientists and fishing people select projects.

The final vehicle to support cooperative research in the region is the research set-aside program of the Mid-Atlantic Fishery Management Council. The research set-aside program allows 3 percent of the total allowable catch of several important species to be set aside as compensation for research. The program begins this year.

The more experience we gain with cooperative research, the more we learn about how to make it successful. I believe to be successful it must be collaborative throughout, from the planning right through to the analysis of results. It must be conducted by people with open minds. This is not business as usual.

It must be pursued with realistic expectations. It should be subjected to peer review. There must be adequate financial and personnel resources to support the cooperative research without diverting people and resources from ongoing scientific programs, and there should be immediate feedback to the participants.

I'd like to conduct my oral testimony by stressing that I think there is great potential for cooperative research. There is a strong commitment by the National Marine Fisheries Service scientists and managers and by the fishing industry. Congress has provided funds. Fisheries Management Councils are engaged.

Cooperative research builds mutual understanding and respect. I am optimistic about its future.

This concludes my oral statement, and I will be happy to answer questions later on.

Thank you.

[The prepared statement of Dr. Sissenwine follows:]

Statement of Dr. Michael Sissenwine, Director, Northeast Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce

Chairman Gilchrest, Members of the Subcommittee on Fisheries Conservation, Wildlife and Oceans, and other participants, it is an honor to testify today on the topic of cooperative research. I want to thank the Subcommittee for providing me with the opportunity to encourage research cooperation among fishing people (both commercial and recreational), National Marine Fisheries Service scientists, and other scientists. I will testify based on my experience as the Director of the NOAA Fisheries, Northeast Fisheries Science Center. The Center's headquarters are located in Woods Hole, MA. It also has laboratories in Narragansett, RI; Milford, CT; Sandy Hook, NJ; and at the Smithsonian Institution in Washington, DC.

I will address four topics: (1) the history of cooperative research, (2) reasons why cooperative research is valuable, (3) examples of cooperative research, and (4) success factors for cooperative research.

History of Cooperative Research

In many ways, people who fished were the first fishery scientists. There is evidence of fishing in the prehistoric record of humans, as well as in the earliest recorded history, such as records from 6,000 years ago of Phoenicians trapping giant bluefin tuna. Fishing people are students of fish distributions, the factors that influence fish movements, and what fish eat. They learned long ago that there are cycles in the abundance of fish, and they correctly presumed that this reflected climate change.

There are key differences in the ways modern scientists and fishing people gather information about fish populations and marine ecosystems. Scientists make systematic observations in standardized ways, using statistical and mathematical models to interpret them. Additionally, they document their observations and results for others to evaluate and use, developing a statistically robust and representative database describing fish populations over time. Fishing people also use elements of these scientific methods, usually informally, but their primary reason for doing so is to catch fish. However, since there are many more fishing people than scientists, and they spend a tremendous amount of time on the water, their contribution to science can be very valuable.

Early fishery scientists were well aware of the importance of cooperative research. They learned as much as they could from fishing people who, over many generations, had made millions of observations at sea. One of the best known scientific works about fish of the Northeast region is the book, Fishes of the Gulf of Maine, by Henry Bigelow and William Schroeder, published in 1953. The first version of the book was published in 1925, and scientists in the Northeast Fishery Science Center (NEFSC) have just finished revising and updating it for a new edition to be published in the near future. Henry Bigelow and William Schroeder were early Woods Hole scientists who recognized the value of observations by fishing people, which were documented in their book. For example, they wrote:

> "We wish to express our hearty thanks to the many commercial fishermen and to the many salt water anglers of our acquaintance who have met our inquires in the most cordial way and who have supplied us with a vast amount of first-hand information on the habits, distribution, and abundance of the commercial and game fishes, which could be had from no other source. The preparation of this book would have been out of the question without their help.

In an attempt to convey the abundance of skates, Bigelow and Schroeder wrote:

> "Again, on a trip to the northeastern part of the bank, September 1929, on the otter trawler Kingfisher, 37 hauls yielded from 0 to 105 skates per haul (total 459) and 42 trawl hauls by the Eugene H, fishing from Nantucket Lightship to the south-central part of Georges Bank in late June 1951 caught an average of 146 skates per haul (total, 6,130 skates) which works out at about 9 to 10 skates per acre."

Fishes of the Gulf of Maine is about the natural history of fish, a key consideration in sustainable fisheries management. However, fishery management also requires stock assessments that track change in fish populations and forecast abundance. One of the first stock assessments was for Georges Bank haddock. As early as the 1920s and 1930s, Woods Hole scientists recognized the importance of systematically documenting observations made from fishing vessels for use in assessments. They established what was known as a "study fleet" of vessels from the once mighty Boston haddock fleet. The study fleet was made up of selected fishing people who agreed to cooperate with scientists so that their catch rates and related observations

could be tracked over time. The spirit of cooperation was very strong, as indicated by a letter written in 1933 by the Captain of the fishing vessel Breeze, who wrote "...let us know if you would like any further information, and if our present data is proving of any interest. It certainly takes up some of my dead time, which is a great help to me.

Cooperative research between NMFS scientists and the fishing industry has been alive and well throughout the 130 years of history of federal marine fisheries science. However, it has recently received increased emphasis. In the Northeast Region, a very successful cooperative survey of surfclams in the late 1990s marked the beginning of this new era of cooperative research. The cooperative survey of surfclams followed an unsuccessful legal challenge to the NMFS stock assessment of surfclams. The cooperative survey clearly demonstrated that cooperation between NMFS scientists and the fishing industry was much more productive for everyone than was a confrontation. I will provide additional information regarding cooperative research on surfclams later in my testimony.

Reasons Why Cooperative Research is Valuable

The cornerstone of stock assessments in the Northeast region is long-term standardized resource surveys conducted by NOAA fishery research vessels. The Northeast Fishery Science Center has conducted these surveys since the early 1960s. Since then, the approach has been emulated around the world. The primary purpose of the surveys is to track changes in marine ecosystems, including fishery resource species, over time. Long time-series of information on trends in marine ecosystems are a key to sound, scientifically based stewardship, including fisheries management. The importance of long-term standardized surveys was again emphasized in discussions among the world's leading fishery scientists a few weeks ago at a conference sponsored by the new University of Miami Center for Sustainable Fisheries.

Let me emphasize that I do not believe cooperative research can be an alternative to, or substitute for, long-term standardized resource surveys conducted by research vessels. Fishing vessels are not designed or equipped for long-term standardized surveys over vast areas, where numerous ecosystem variables are measured simultaneously. It is also my experience that the fishing industry's interest in cooperative research is generally focused on specific issues that are of current concern. However, cooperative research can still make valuable and unique contributions to the science underlying fishery management. In particular, cooperative research can: (a) be used to increase the precision and expand the scope of resource surveys; (b) provide supplemental information about fishing operations; (c) use the knowledge gained from fishing to help design and implement research; and (d) build mutual understanding and respect among scientists and fishing people.

Increasing the precision and expanding the scope of resource surveys: Resource surveys conducted on board NOAA research vessels cover virtually the entire continental shelf from a depth of 15 meters to 200 meters. This is an area of more than 200,000 square miles. Hundreds of species are sampled and many ecosystem variables are measured simultaneously. By necessity, there is a compromise between the comprehensiveness of the surveys (in terms of area and species covered, and ecosystem variables measured) and precision of information for any specific species and geographic location. At any point in time, it is likely that fishery managers will want more precise information for a particular species in a specific geographic area than can be provided by our broad, multipurpose, ecosystem surveys. However, management priorities change over time, which highlights the importance of maintaining long-term, multipurpose surveys. Cooperative research is potentially a powerful way to fill short-term information gaps without sacrificing the long-term benefits of our multipurpose surveys.

While the Northeast Fisheries Science Center's surveys cover a large geographic region, there are still some important geographical regions that we do not survey, such as some inshore waters. In Massachusetts, we cooperate with the state to survey these waters. Other states conduct surveys on their own research vessels. Cooperative research with the fishing industry is another option for gaining valuable resource survey information inshore, which is an approach being pursued in Maine.

In recent years, fisheries have been expanding to waters deeper than those surveyed by the NEFSC. Cooperative research with the fishing industry can fill this information gap, as was the case with the cooperative monkfish survey. I will discuss this project again later in my testimony. Dr. Anne Richards from the NEFSC is also a member of this panel, and she will provide you with additional information about the monkfish cooperative research from her perspective as a participant.

Providing supplemental information about fishing operations: Most fishing vessels in the Northeast Region (and throughout the country) are required to submit logbooks containing data that describe their fishing operations and what they catch.

While information gathered through logbooks is potentially valuable, it also has many shortcomings. It is difficult to judge its accuracy. It is not practical to collect data on a fine spatial scale, such as the catch at each geographic position where fishing takes place (that is, it would be burdensome to require such data from all vessels). We use scientific observers as an alternative way of collecting high- quality information about at-sea activities. While an observer program is an excellent approach, its high cost limits the number of fishing trips that can be observed.

Cooperative research can be a good compromise for data collection: more precise than logbooks, and less costly than scientific observers. Cooperative projects can also collect biological samples from the fish that are landed. These samples can be used to track changes in stock composition, such things as age composition and growth rates. In the Northeast region, we are reviving the idea of study fleets, such as those used in the earliest haddock assessments. The approach is to identify those people in the fishery who are interested in participating, who will provide more and better data than what is presently gathered in logbooks. Since it is in everyone's best interest to improve the scientific basis of fisheries management decisions, the cooperators can be motivated to work together to design a data collection and transfer system that is both practical for fishermen and useful for science. Fishing industry participants should be provided with the needed training and tools (for example, computer software to record observations) to be effective collaborators. They should remain engaged throughout the process, from planning to the final interpretation of results. I will say more about current efforts to establish modern study fleets later in my testimony.

Using the knowledge gained from fishing to help design and implement research: The fishing industry has valuable knowledge and experience that can make the difference between success and failure for some types of research. In particular, research on fish migrations and on the performance of fishing gear can benefit from a cooperative approach. Successful fishing requires knowledge about fish migrations (fishing vessels try to anticipate and follow migrations). Scientists and managers want to take more information about migrations into account when defining boundaries between management units, or when designing area closures to conserve fish. Cooperative tagging studies with the fishing industry have the potential to provide such information.

Bycatch that leads to wasteful discarding is one of the most perplexing problems facing the fishing industry and fishery managers. One potential solution to the problem is conservation engineering: designing fishing gear that is selective for target species and results in less bycatch. Since the people who make a living by catching fish are the experts on the performance of fishing gear, it is our belief that cooperative research is the only way to be successful in conservation engineering.

Building mutual understanding and respect among scientists and fishing people: I cannot overstate the value of cooperative research as a vehicle for sharing knowledge and building mutual understanding and respect. When people work together on a problem that they both want to solve, they learn from one another and get to know each other. Our overwhelming experience has been that people working together learn to understand each other's perspectives, regardless of personal backgrounds. Owing to this, I believe those who participate in cooperative research will be more responsible in fisheries and fisheries management for the rest of their careers, regardless of their roles.

Examples of Cooperative Research

In the Northeast Region, there are four ways in which cooperative research is planned and implemented. I refer to these as: (1) bottom up planning among scientists and the fishing industry, (2) the Research Partners Program, (3) New England Consortium Cooperative Research, and (4) the Research Set Aside Program of the Mid–Atlantic Fishery Management Council. The amount of cooperative research activity in the Northeast region is too extensive for me to do it justice in my testimony, but I will try to give you a brief introduction.

Bottom up planning among scientists and the fishing industry: There are several important examples of the fishing industry, NOAA Fisheries scientists, and academic scientists taking the initiative to plan and implement cooperative research to fulfill their mutual desire for more scientific information to help solve a fishery management problem. I will briefly describe some of these examples.

In the late 1990s, neither NMFS scientists nor the fishing industry was satisfied with the surfclam assessment. The problem was an inconsistency between the results from two consecutive NMFS surveys of surfclams in the mid–Atlantic area. The fishing industry proposed using their vessels in a cooperative research study to investigate the inconsistency. The critical research objective was to estimate the efficiency of the hydraulic clam dredges used to survey the resource. An innovative

experiment was designed and implemented. High intensity "depletion studies" conducted by fishing vessels were embedded within a standardized resource survey conducted by a NOAA research vessel. These depletion studies measured dredge efficiency by tracking the rate of decline in the catch rate when fishing tows were repeated in a very small area (as small as modern electronic navigation would allow.) The more rapidly the catch rate declined, the more efficient the hydraulic dredge must be. The actual estimates of efficiency were made using a sophisticated statistical model that was developed specifically for this cooperative research study. In addition to scientists from the NEFSC center, Rutgers University scientists participated in the study. The results of the study were submitted to the Stock Assessment Review Committee (SARC) used by the Northeast region to peer-review stock assessments and prepare fishery management advice. Results of cooperative research in the Northeast region (including the sea scallop and monkfish cooperative research discussed next) are routinely submitted to the SARC for review before they are used as the basis for fishery management advice. In the end, there was a new assessment of surfclams in which both the fishing industry and scientists were confident. The assessment showed that the surfclam resource was healthy, and a small increase in the total allowable catch resulted.

Following the success of cooperative research on surfclams, the scallop fishing industry and scientists from the University of Massachusetts proposed a survey to estimate the abundance of sea scallops inside groundfish closed areas off New England. NEFSC surveys showed that the resource had rapidly rebuilt inside the areas on Georges Bank and Nantucket Shoals that were closed to groundfish and scallop gear in 1994. However, before scallopers could be allowed access to these valuable sea scallop beds, more detailed information was necessary to devise how, when, where, and for how long an opening could occur. First, an estimate of actual biomass was required, as well as information on the size composition and spatial distribution of sea scallops. This would establish how much could be removed from the stock without overfishing. Next, there needed to be an estimate of groundfish bycatch that would occur during scalloping and an understanding of where the sea scallops were distributed relative to essential fish habitat and habitat of critical concern in the closed areas. This would establish where and when the scallop fishery could occur. Finally, there needed to be an estimate of dredge efficiency—this would govern how long an opening was likely to last.

In the summer of 1999, NEFSC scientists, the scallopers, and academic scientists from Rutgers University, the Virginia Institute of Marine Sciences, and the University of Massachusetts designed and implemented a cooperative survey of sea scallops in one of the Georges Bank closed areas. The survey provided the most intense sampling of the area to date. The same type of depletion studies that were successful for surfclams were conducted as part of the sea scallop cooperative research program. All of the scientific objectives of the cooperative research were fulfilled. As a result of this work, managers devised a controlled sea scallop opening in a portion of the surveyed closed area, one that prevented overfishing, avoided impact on habitat of particular concern, and limited bycatch so that groundfish stock rebuilding was not jeopardized.

Similar cooperative sea scallop surveys in other groundfish closed areas were conducted in the summer of 2000, and additional controlled sea scallop openings in these areas were allowed. As a result, the industry gained tens of millions of dollars of additional revenues, while the sea scallop resource has continued to rebuild to unprecedented abundance. In 2000, New Bedford had the highest gross earnings of any port in the United States, largely from sea scallops. Many people attribute the remarkable turnaround in the fortunes of the scallop industry to cooperative research.

Our most recent experience with cooperative research concerns monkfish. Until recently, the monkfish were of minor economic importance and most of the catch was not well documented. Owing to development of an international market, however, the monkfish fishery has become one of the most valuable finfish fisheries in the region. Poor documentation of the historical catch made it difficult to interpret standardized resource survey data by using the usual stock assessment methods. In addition, resource survey coverage was sparse in the deep water on the edge of the continental shelf, an area where part of the monkfish fleet routinely fishes. As a result of shortcomings in other data, the assessment was heavily influenced by the rapid decrease in the size of monkfish taken in resource surveys, raising concern about whether the multipurpose standardized fishing gear used in the federal survey was suited to catching large monkfish. The present management plan calls for severe restrictions in the near future in order to rebuild the stock, so there was plenty of incentive to cooperate on improving the assessment to provide a clearer picture of stock status. NEFSC scientists worked with the fishing industry to design

and implement a pilot survey on a commercial fishing vessel in 2000, and a comprehensive survey was conducted this year. The SARC just completed its review of the results, and found the cooperative survey data useful and informative. Specifically, the results helped the panel to more precisely assess the current status of the monkfish stocks. I will leave it to Dr. Anne Richards, who had first hand experience with the monkfish cooperative research, to tell you more about it.

Cooperative research surveys of surfclams, sea scallops in groundfish closed areas, and monkfish are examples of cooperative research that has received the most attention, probably because the research responded to controversial fishery management problems. However, NEFSC scientists and the fishing industry have been, or are, involved in several other cooperative research efforts. For example, there is an ongoing cooperative research effort to develop acoustic survey methods for sea herring; scientists from the State of Maine's fisheries agency also participate. NEFSC scientists worked with Rutgers University scientists and the fishing industry to study the feasibility of "real time" fishery management of the Illex squid fishery. NEFSC scientists are currently working with the fishing industry to study the feeding habits of cod, in order to gain a better understanding of where this important species fits in the marine food web. A physical oceanographer from the NEFSC is working with the lobster fishing industry to deploy environmental sensors on lobster pots. The cooperative shark tagging program has been conducted by the NEFSC with anglers and commercial fishermen since 1962, resulting in the world's largest database on movements of Atlantic sharks. All of these cooperative research projects provide valuable information and build mutual respect and understanding.

Research Partners Program: This program is administered by the Northeast Regional Office of the National Marine Fisheries Service. The other partners are the New England Fishery Management Council, state agencies responsible for marine fisheries, the fishing industry, academic and private marine science organizations, and the NEFSC. The program is supported by more than $25 million that Congress has made available to support cooperative research related activity in New England since fiscal year 1999.

The New England Fishery Management Council established a Research Steering Committee to develop an overall strategy for cooperative research, set priorities, and recommend specific cooperative research projects for funding. The Research Steering Committee has14 members including fishery council members and staff, NMFS staff, fishing industry representatives, environmentalists, a representative of a state fisheries agency, and scientists. So far, 18 cooperative research projects have been reviewed and recommended for funding by the Research Steering Committee. These projects include:

- a task force for cod tagging;
- a task force for bycatch reduction research;
- a task force for study fleets and industry-based surveys;
- research on the stock structure of silver hake;
- gear selectivity and bycatch reduction for silver hake fishing;
- shrimp fishing gear selectivity and bycatch reduction;
- industry-based inshore survey in Maine;
- high resolution industry-based survey by New Bedford fishing vessels;
- a study of the impact of mobile fishing gear on smooth bottom habitat;
- design of an internet-based logbook;
- planning for a monkfish gillnet survey and study fleet; and
- consideration of the potential bycatch of cod and haddock in a groundfish closed area fishery for yellowtail flounder.

All of these projects are considered short term. In addition, the Research Partners Program intends to support long-term programs for study fleets, industry-based surveys, and fish tagging. Planning for study fleets is the most advanced of these long-term programs.

A Steering Committee, made up of scientists, fishing people, representatives of the New England Fishery Management Council, and NMFS staff is driving the development of a groundfish study fleet that will use modern technology to collect, record, and transfer fishery-based data. At a workshop in October of this year, the committee and others assessed the current state-of-the-art in electronic data capture systems and the use of selected industry vessels for the collection of high quality fishery-based data. The results of this workshop documented the state of such projects throughout the United States and in the Canadian Maritime provinces. The Steering Committee is now developing three pilot projects to test the feasibility of an electronic data collection system (using vessel tracking and other technologies to capture timely, high quality data for use in stock assessments and fishery management). They intend to begin preliminary data collection in Spring 2002.

Northeast Consortium Cooperative Research: In addition to providing funding for the Research Partners Program administered by the Northeast Regional Office, Congress has provided $12 million, beginning in fiscal year 1999, for cooperative research to be administered by the Northeast Consortium. Several years ago, a group of fishing people and academic scientists began working together to plan and conduct research on a relatively small scale. When Congress provided funding, the Consortium was formalized among the University of New Hampshire, University of Maine, Massachusetts Institute of Technology, and the Woods Hole Oceanographic Institution. A 25-member steering committee of scientists (including some from the NEFSC) and fishing people was established to recommend projects for funding by the Consortium. The Consortium encourages fishing vessels primarily from Maine, New Hampshire, and Massachusetts to conduct cooperative research in the Gulf of Maine or on Georges Bank. The Steering Committee established the following priority areas for cooperative research:

- selective fishing gear research and development;
- evaluation of closed areas and closed area management systems;
- fish habitat;
- commercial harvest and species sampling; and
- oceanographic and meteorological monitoring .

Sample topics from the 29 projects funded so far by the New England Consortium include:

- selectivity of demersal hook fishing;
- movements of groundfish in closed areas;
- cod bycatch reduction in a flounder fishery;
- an inshore trawl survey in the Gulf of Maine;
- testing low profile gillnets to reduce cod bycatch;
- outreach and education in support of cooperative research;
- effects of using herring for bait on the growth rate of lobsters;
- comparison of environmental contaminants on Georges Bank and Stellwagen Bank;
- fishing vessel surveys of coastal herring aggregations; and
- development of stock assessment methods for the deep-sea red crab fishery.

Research Set Aside Program of the Mid–Atlantic Fishery Management Council: To date, most of the funds Congress has provided to support cooperative research have been directed toward New England. However, the Mid–Atlantic Fishery Management Council and the fishing industry in the Council's area of responsibility also recognize the need for more research. Therefore, the Council established an innovative way to encourage and support cooperative research. It is referred to as the Research Set Aside Program.

The Research Set Aside Program allows up to 3% of the total allowable catch of summer flounder, scup, black sea bass, Atlantic mackerel, Loligo and Illex squid, butterfish, tilefish and bluefish to be set aside as compensation for research. The program was established through a Framework action effective 10 August 2001. For the 2002 fishing year, the Council recommended a 2% set aside for summer flounder, bluefish, Loligo and Illex squid, mackerel, and butterfish; and a 3% set aside for scup, black sea bass, and tilefish.

The Council set the following priorities for the first year of the program:

- bycatch and discard reduction concerning the summer flounder, Loligo squid, and scup fisheries;
- mesh and gear selectivity for summer flounder, scup, squid, and black sea bass;
- fishing impacts on habitat;
- cooperative stock assessment surveys focusing on summer flounder and acoustical methods for mackerel; and
- improved recreational fishery data focusing on enhancing overall knowledge of recreational fisheries and evaluating the effectiveness of recreational management measures and/or data collection.

A call for proposals to respond to the research priorities was published in the Federal Register. Thirteen proposals were received and reviewed by a panel, including members of the Council's Comprehensive Management Committee. Successful proposals should be authorized to begin by early 2002.

Success Factors for Cooperative Research

To realize its full potential, I believe cooperative research must be:

- collaborative throughout, involving scientists and fishing people in defining objectives, planning research, implementing research, and analyzing results;
- conducted by both scientists and fishing people with open-mindedness, a willingness to compromise (that is, participants should not expect to do business as usual), and accept that their previous views might be incorrect;

- pursued with realistic expectations. For example, it must be understood that an assessment that depends on a time-series of relative abundance data cannot be replaced by a single collaborative survey;
- subjected to the same degree of peer review as other research that supports fishery management decisions (for example, by the Stock Assessment Review Committee);
- supported by adequate financial and personnel resources to plan and conduct cooperative research without diverting resources from ongoing scientific programs, such as the long- term standardized resource surveys conducted by NOAA research vessels; and
- able to provide immediate feedback to participants, who then have easy access (such as on web sites) to the data they provided or helped to collect, so they can see how it is being used to help inform fishery management decisions.

I would like to conclude my testimony by stressing that I think there is great potential for cooperative research to make valuable contributions to fisheries management in the Northeast. There is a strong commitment to cooperative research by NMFS scientists and managers, and by the fishing industry. There are already cooperative research successes upon which future successes can be built. Congress has provided funds to support cooperative research. Fishery Management Councils are actively engaged in planning cooperative research and applying innovative approaches for supporting it. State agencies and many non-federal scientists (*e.g.,* academics) are also enthusiastic about cooperative research. While we should not lose sight of the importance of the success factors I listed above, I am optimistic about the future.

Mr. Chairman, this concludes my testimony. I would be happy to answer any question you or other members of the Subcommittee might have.

Mr. GILCHREST. Thank you, Dr. Sissenwine.

Dr. Richards.

STATEMENT OF DR. R. ANNE RICHARDS, PRINCIPAL INVESTIGATOR, MONKFISH COOPERATIVE SURVEY, NORTHEAST FISHERIES SCIENCE CENTER.

Ms. RICHARDS. Yes. I would like to thank you, Mr. Chairman, for the opportunity to provide testimony on a cooperative research project which has been the focus of my life in the past year, which was a comprehensive survey of monkfish along the northeast coast of the United States.

My name is Anne Richards, and I am a research fishery biologist with the population dynamics branch of NOAA Fisheries in Woods Hole, Massachusetts, and I was the chief scientist for this project.

The cooperative monkfish project grew out of fishing industry concerns that there was inadequate scientific information to accurately judge the status of the monkfish populations, whether they were over fished or depleted. Although monkfish are captured in the Northeast Fisheries Science Center's ongoing trawl surveys, the net and the fishing methods are not designed particularly for monkfish, and so their catch rates and relatively low.

Members of the monkfish industry were eager to participate in the scientific process and we scientists at the Northeast Fisheries Science Center recognize that this could be a golden opportunity to learn a lot more about the biology of monkfish.

So we entered into an effort to design a survey with the industry. The primary goals of this cooperative research survey were to conduct a bottom trawl survey to characterize the size, age, and sex composition of monkfish all the way from Cape Hatteras up through the Gulf of Maine.

We wanted to estimate the abundance of monkfish in a different way than we ordinarily do in our standard surveys and also to ob-

tain a better understanding of the population dynamics of monkfish that would be able to be applied to stock assessment.

Also we wanted to gain a new basis for interpreting our ongoing Northeast Fisheries Science Center survey results for monkfish. This survey was jointly designed by scientists and industry. The scientists prepared a choice of scientifically valid sampling plan which we then presented to the industry, and we talked to them about the pros and cons of the different types of plans, and then they selected the plan that they preferred.

And then in addition they were able to add their preferred sampling locations to the ones that were determined by the scientific basis.

We chartered two monkfish trawlers to conduct the survey. One was out of Portland, Maine and the other out of New Bedford, Massachusetts. The vessels provided their crew for the ship's operations and then the scientists came primarily from the Northeast Fisheries Science Center, but also from the Massachusetts Division of Marine Fisheries and from Rutgers University.

We conducted a pilot survey a few months before the final survey was conducted. A project such as this does present a number of challenges, but many of these we addressed with additional cooperative research in addition to the standard survey tows that we did with the industry.

And a key issue that needed to be addressed is that fishing vessels vary in their capture efficiency. Thus, monkfish catch rates for each vessel needed to be interpreted in light of comparisons between the vessels and between the different nets used by one of the vessels.

A series of research tows were done to address these issues and allowed us a more solid scientific basis for understanding the data which came from these diverse vessels and nets. More than 9,000 monkfish and more than 16 and a half metric tons of monkfish were captured during the 280 tows that were successfully completed during the survey. The length of every monkfish was measured, and for more than 2,000 of them, samples were taken to determine age, sex, maturity, stage of gonadal maturation, and stomach contents.

The results of the survey were used to develop a much more comprehensive population assessment for monkfish than had been previously possible. This assessment was reviewed about 2 weeks ago in the Northeast Fisheries Science Center's 34th stock assessment review Committee meeting, and the analyses stemming from the cooperative survey provide new options for fishery managers and developing improved biological reference points among fish management and also suggests avenues for improving the performance of the fishery.

An important additional benefit of the cooperative survey was the opportunity to compare the results obtained from the fishery vessels with results from our Northeast Fisheries Science Center fishery independent trawl surveys. The comparisons both validated the Northeast Fisheries Science Center's survey data and also suggested directions that we could move in to improve our surveys in application to monkfish. So it is a long-term benefit of the work.

A less tangible but extremely valuable benefit also was the opportunity to work directly with fishermen. We could see how they worked, and we had plenty of time to talk with them out there on the bridge between tows and during tows and have long discussions, which were very interesting.

And also, in turn, the fishermen could see how we scientists work and that we are making our best efforts to et the best science we can to support the fisheries that they care so much about.

So I'd like to summarize by saying that we feel the cooperative monkfish survey was very successful. It greatly improved our scientific understanding of monkfish. It enhanced our ability to draw inferences from our own ongoing surveys at the Northeast Fisheries Science Center, and it opened valuable lines of communication between scientists and fishermen.

That concludes my testimony, Mr. Chairman. I would be happy to answer any questions.

[The prepared statement of Dr. Richards follows:]

Statement of R. Anne Richards, Ph.D., Fishery Research Biologist, National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, Massachusetts

Thank you, Mr. Chairman, for your invitation to provide testimony regarding a recently-completed initiative that brought users of the nation's fishery resources into the process of developing and carrying out cooperative research. My name is Anne Richards, and I am a research fishery biologist with the Population Dynamics Branch of NOAA Fisheries" Northeast Fisheries Science Center, in Woods Hole, Massachusetts. I will report on a comprehensive survey for monkfish that was conducted in cooperation with members of the monkfish industry and in collaboration with state resource agencies and universities.

Monkfish is currently the single most valuable wild-caught finfish in the northeast region of the United States. Monkfish landings were relatively low until the late 1980s, when they began to increase, reaching levels of 23,000 to 28,000 mt during the mid–1990s (Exhibit 1). A Monkfish Fishery Management Plan was prepared jointly by the Mid–Atlantic and New England Fishery Management Councils, and implemented in November 1999.

The cooperative monkfish research project grew out of fishing industry concerns that the available scientific information was not sufficient to evaluate whether monkfish stocks were overfished or depleted. While monkfish are captured in standard Northeast Fisheries Science Center bottom trawl surveys, the gear is not designed for them, and their catch rates are relatively low. Members of the monkfish industry were eager to contribute to the scientific process, and scientists at the Northeast Fisheries Science Center (NEFSC) recognized that an industry-based survey could provide an excellent opportunity to obtain a wealth of information on the biology and population status of monkfish. This led NEFSC scientists and a coalition of industry members to combine forces to design and conduct a collaborative monkfish resource survey.

The primary goals of the cooperative research program for monkfish were (1) to conduct a bottom trawl survey to characterize the size, age, and gender composition of monkfish in U.S. waters of the northwest Atlantic Ocean, (2) to estimate the relative density and absolute biomass of monkfish in the region, (3) to obtain improved population dynamics data for use in monkfish stock assessments, and (4) to provide a new basis for interpreting NEFSC survey results for monkfish.

The survey was jointly designed by scientists and industry. The NEFSC prepared a choice of scientifically valid survey designs, and members of the monkfish industry selected the design to use as a basis for the survey. Industry representatives then added a substantial number of sampling locations to those that were determined by the sampling design (Exhibit 2). Two commercial monkfish trawlers were chartered to conduct the survey, the F/V Mary K out of New Bedford, Massachusetts and the F/V Drake out of Portland, Maine (Exhibit 3). The vessels supplied the crew for the ships' operations and the scientific crew came primarily from the NEFSC, the Massachusetts Division of Marine Fisheries, and from Rutgers University. A pilot survey was conducted in October 2000 to test methods and the full survey was conducted during February–April 2001.

Such a project presents a number of challenges, many of which were addressed with additional cooperative research and through the use of innovative technology during the survey. For example, fishing vessels vary in their capture efficiency owing to such factors as vessel and net design, the type of electronic equipment used, and methods for the actual fishing operations. Thus, monkfish catch rates for each vessel used in the cooperative survey needed to be interpreted in light of comparisons between the vessels and between the different nets used by one of the vessels. A series of research tows was undertaken during April and May 2001 to address these issues. These "ground-truthing" tows included side-by-side fishing comparisons between vessels and nets, tows used to measure the size of the net openings as they fished, underwater videos of the capture process, and experiments to estimate the absolute efficiency of the nets. The methods used to estimate efficiency were similar to the depletion experiment method that Dr. Sissenwine described for surfclams and sea scallops in his testimony. Electronic sensors were attached to the nets on all the survey tows to determine the exact amount of time the net was in contact with the sea bed and the precise position of the ship every second during each tow. These sensor data, along with the net measurements, allowed us to estimate the amount of sea floor swept by each survey tow. Additional sensor data provided continuous temperature records along the tow path.

More than 9,000 monkfish, weighing more than 16.5 metric tons, were captured in the 284 tows successfully completed during the cooperative survey. The length of every monkfish was measured, and for more than 2,000 of them, samples were taken to determine age, sex, maturity, stage of gonadal maturation, and stomach contents. The monkfish ranged in size from 13 cm to 110 cm and in age from 2 to 10 years. The results of the survey indicate that the monkfish population consists of between 66,400 and 90,900 fish, with a total biomass of between 97,600 and 134,900 metric tons (Exhibit 4). Important biological findings included: (1) growth and maturation rates differ very little across the entire range sampled, (2) few males older than age 7 were present, while females up to 10 years old were found, (3) growth rates are rapid and weight gain increases rapidly in older fish, (4) cannibalism occurs, but at very low frequency, (5) blackfin monkfish (a highly similar species) rarely occurred in the catches.

The results of the survey were used to develop a much more comprehensive population assessment for monkfish than had previously been possible. This assessment was reviewed at the NEFSC's 34th Stock Assessment Review Committee meeting during November 26–30, 2001. The results of the assessment indicated that although fishing mortality is greater than the suggested Fmax, mortality rates are not dramatically higher than levels that would maximize yield (Exhibit 5). The analyses stemming from the cooperative survey provide new options for fishery managers in developing improved biological reference points for the monkfish Fishery Management Plan, and suggest avenues for improving the performance of the fishery.

An important additional benefit of the cooperative survey was the opportunity to compare results obtained from commercial fishery vessels with results from NEFSC fishery-independent trawl surveys. The comparisons both validated NEFSC survey data and suggested directions for improving NEFSC surveys for application to monkfish. For example, the size composition of monkfish in the southern management region as estimated from the NEFSC winter bottom trawl survey is nearly identical to that estimated from the cooperative survey (Exhibit 6), and mortality rates estimated from the cooperative survey and from NEFSC survey age data were similar. The comparisons allowed us to estimate the relative efficiency of the NEFSC winter survey net with the commercial net, which will be invaluable in future calculations of population size and biomass.

A less tangible, but extremely important benefit of the cooperative survey was the opportunity to work directly with fishermen and to build a mutual trust and respect. We were able to see first-hand how they operate, listen to their observations on the fish and fishery, and discuss our sometimes differing viewpoints. In turn, the fishermen would be able to observe how we operate and to see that NOAA scientists are making diligent efforts to manage the fisheries so important to them.

An important tool for communicating with industry members not directly involved in the survey was a web site we established: (http://www.nefsc.nmfs.gov/nefsc/READ/popdy/monkfish/). Daily e-mail updates from each of the vessels were posted on the site along with ships' cruise tracks and current positions from NMFS' vessel monitoring system. The web site was followed closely by industry members, and many e-mailed follow-up questions and comments to us.

In summary, we feel the cooperative monkfish survey was very successful. It greatly improved our scientific understanding of monkfish, enhanced our ability to draw inferences about monkfish from ongoing NEFSC resource surveys, and opened valuable lines of communication among scientists and fishermen (Exhibit 7).

Mr. Chairman, this concludes my testimony. I would be happy to respond to any questions you or other members of the Subcommittee might have.

[Attachments to Dr. Richards' statement follow:]

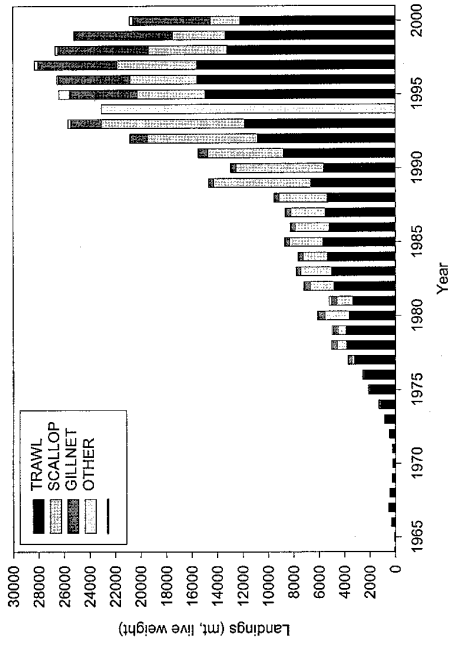


Exhibit 1. Commercial fishery landings of monkfish from the Northeast USA, 1963-2000 by major gear type.

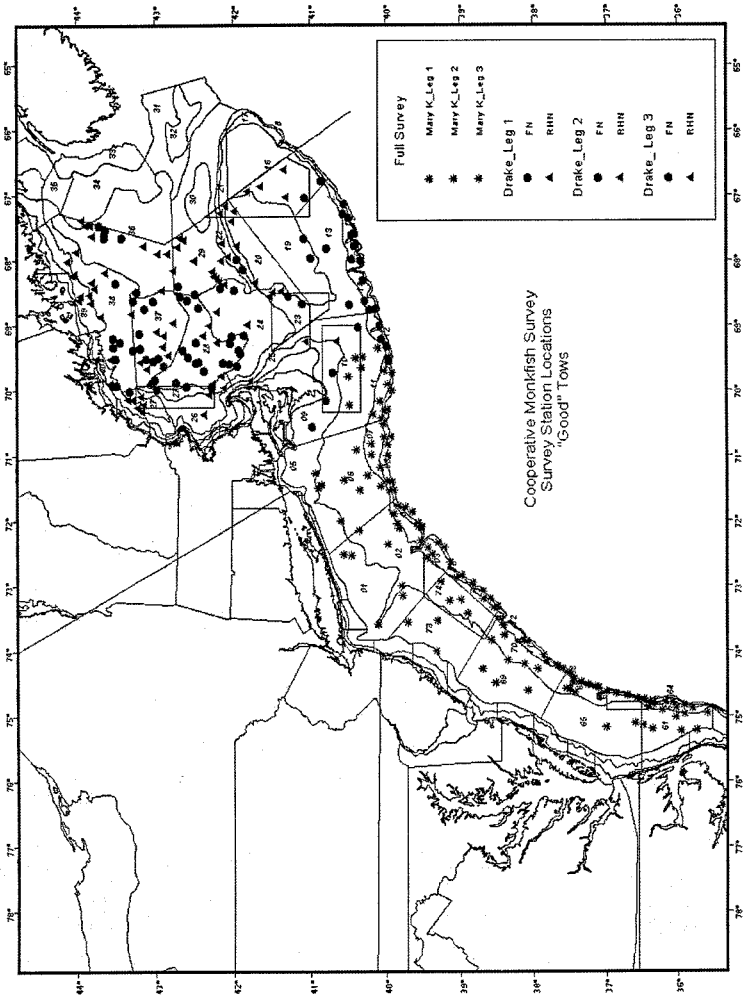
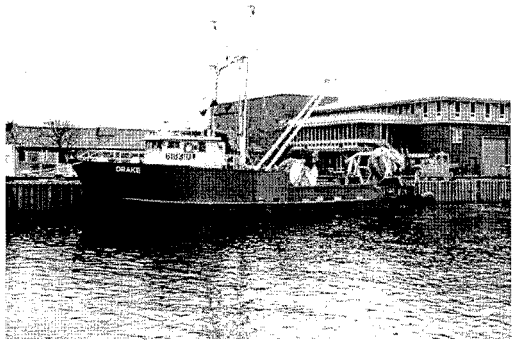
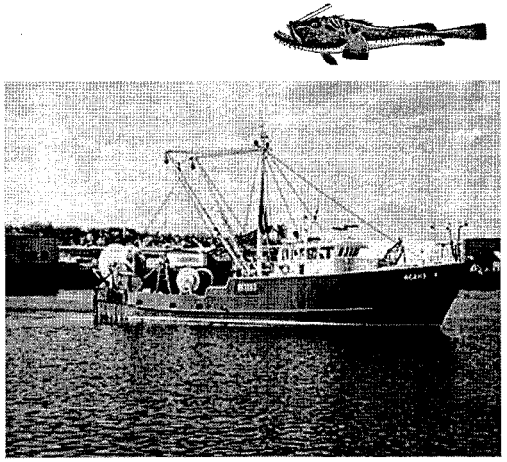


Exhibit 2. Location of sampling sites for the Cooperative Industry Survey for Monkfish conducted during 2001.



F/V Drake



F/V Mary K

Exhibit 3. Fishing vessels chartered for Cooperative Industry Survey for Monkfish, F/V Drake out of Portland, Maine, F/V Mary K out of New Bedford, Massachusetts.

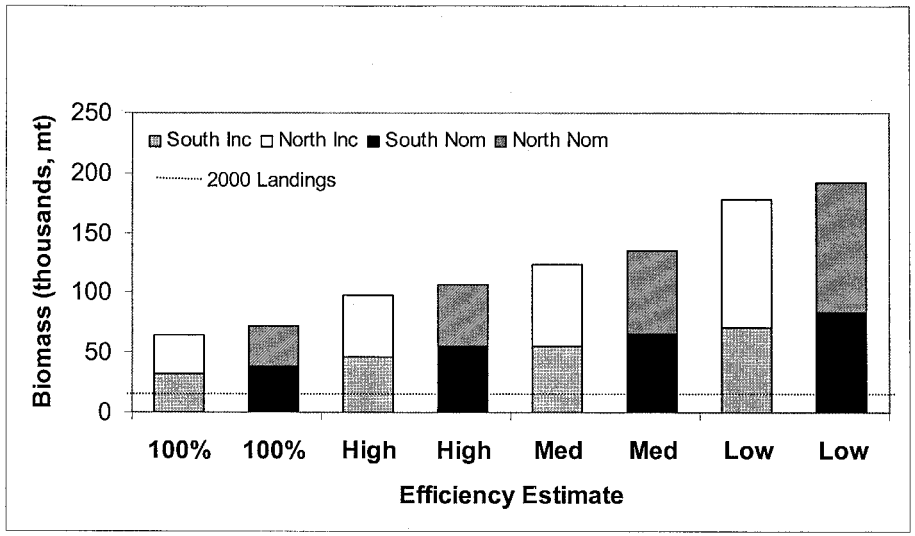


Exhibit 4. Estimates of absolute biomass of monkfish off the northeastern USA from the Cooperative Industry Survey for monkfish. Estimates range in value depending on assumptions regarding net efficiencies and methods for calculating tow distances. Also shown is commercial landings in 2000 (dotted line).

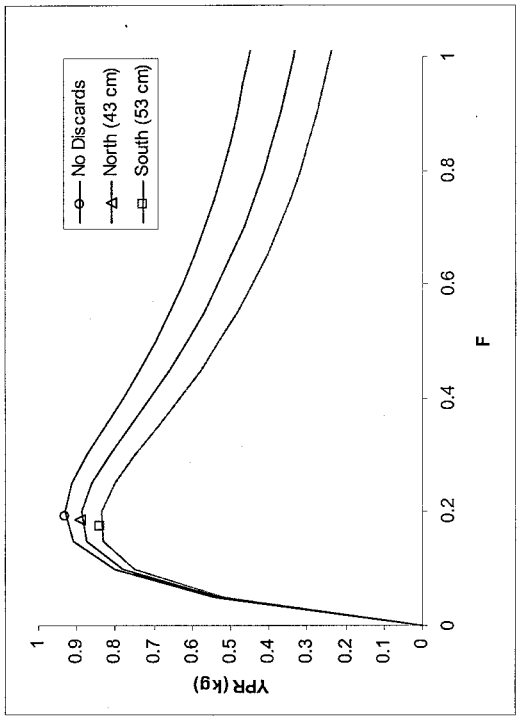


Exhibit 5. Yield per recruit curves indicating an Fmax of approximately 0.2 for monkfish. Mortality estimates reviewed at SARC 34 suggest current fishing mortality (F) is around 0.3.

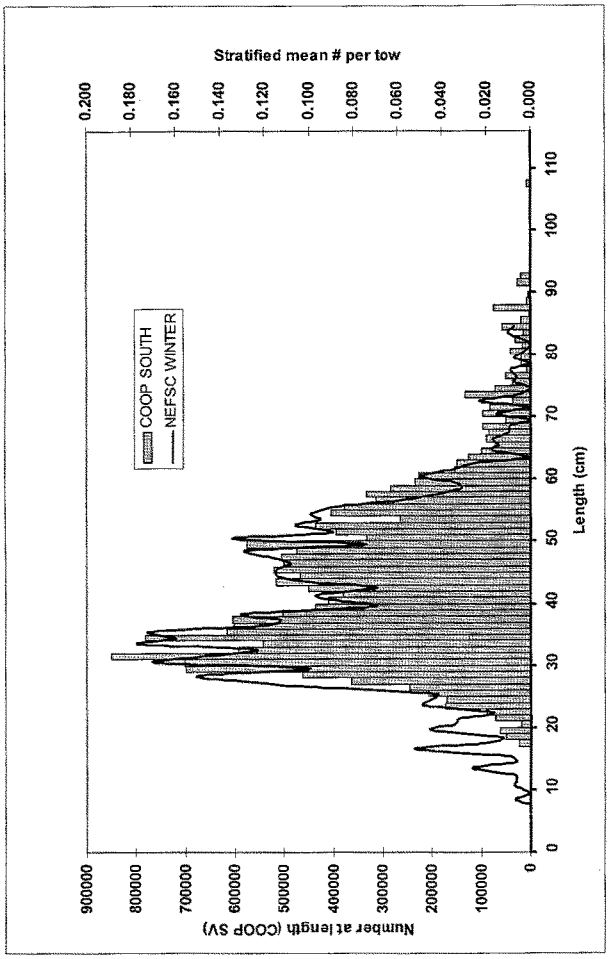


Exhibit 6. Length composition of the monkfish population in the southern management region estimated from the Cooperative Industry Survey and from the NEFSC winter bottom trawl survey.

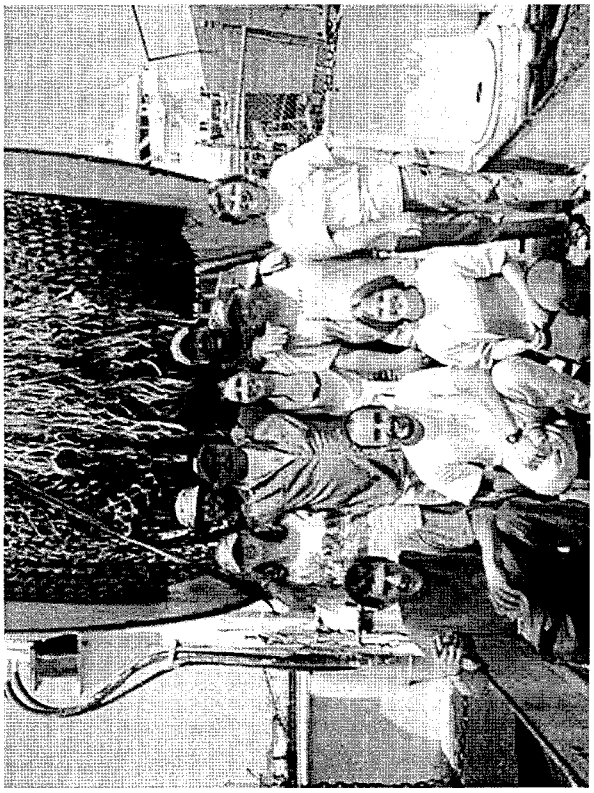


Exhibit 7. Fishing crew and scientists at end of Leg 5 of the Cooperative Industry Survey for monkfish aboard F/V Mary K.

Mr. GILCHREST. Thank you very much, Dr. Richards.

I will start with you, Dr. Richards.

Ms. RICHARDS. OK.

Mr. GILCHREST. The monkfish survey that you just discussed, can that survey be replicated in other fisheries?

Ms. RICHARDS. Well, similar surveys could be done, yes, if they were using the appropriate gears, of course, and survey design and so forth.

Mr. GILCHREST. The commercial or the industry working with the National Marine Fisheries Service or scientists, in this particular survey you used the commercial vessels?

Ms. RICHARDS. Right.

Mr. GILCHREST. How many vessels?

Ms. RICHARDS. Two vessels.

Mr. GILCHREST. Two vessels, and you had 280 tows?

Ms. RICHARDS. Yes.

Mr. GILCHREST. How long did the 280 tows take?

Ms. RICHARDS. The survey portion of the project took about—it was scheduled for 6 weeks, but because of weather, we were down to about 5 weeks.

Mr. GILCHREST. So the overall survey for the monkfish took about 5 weeks?

Ms. RICHARDS. Right, and then another 3 weeks of gear testing.

Mr. GILCHREST. And you garnered valuable data to assess the number of monkfish that are out there so that you could further come up with a better management plan for monkfish?

Ms. RICHARDS. Right.

Mr. GILCHREST. How often would you have to conduct that survey in that way in order to continue to have a management plan that would be appropriate?

Ms. RICHARDS. Well, I don't think you'd have to conduct such a survey every year. One of the values I mentioned in my testimony is that it gives us a better basis for interpretation of our own surveys which are done very year, and so perhaps a calibration survey, if you will, with commercial vessels every 3 years or something like that just would help.

Mr. GILCHREST. Would there ever be a need to go on a charger boat, a recreational boat? Would that be of any value?

Ms. RICHARDS. For monkfish?

Mr. GILCHREST. Or for any fishery.

Ms. RICHARDS. Oh, there could be, I suppose, yes, depending on the distribution of the fish and so forth, yes. It could be.

Mr. GILCHREST. I do have a question from the audience. I think what I will do though we will hold off until the end of the witnesses, and then at that time write your questions down so you insure that I get that question. Otherwise I think it would turn into a different kind of hearing. So maybe the third session we will take questions from the audience, and I am sure the witnesses will still be here.

Any comment on the monkfish survey, Dr. Sissenwine?

Mr. SISSENWINE. Yes, if you would allow me to elaborate on some of the responses that Dr. Richards just gave you. I think the design of the monkfish survey, in fact, has a lot of similarities to the surveys we conducted for scallops and surf clamps. We have learned

a lot about working with the industry to design these types of surveys, and there certainly is the potential for other applications to other species.

Generally what we view is that the industry based surveys of this nature provide a way to look at particular species in a more focused area than we are able to look at with our own long-term, multi-purpose surveys on NOAA vessels. So we consider that these are extremely valuable to supplement and give us more precise, more focused information on target species, whether it be monkfish or surf clams or scallops.

But also important to view that they have to be interpreted within the context of these much longer term and broader in terms of aerial coverage surveys that were conducting on the NOAA vessels, and that is why Dr. Richards mentioned that it may not be necessary to conduct an industry based survey like the monkfish survey every year because we now have that information which we can use to improve our interpretation of surveys we have been conducting for in some cases nearly 40 years.

You asked the question about the potential role ofrecreational charter vessels, and certainly they would not be a useful tool within the monkfish fishery, but I can think of many other alternative types of cooperative research where they could be very useful, in particular for various tagging studies we are interested in either looking at the migrations of fish or estimating the mortality rate of fish based on tagging, capture and release of fish.

In fact, some of the work, a lot of work on sharks and on highly migratory species has been done with the cooperation of the recreational industry, including the charter boat industry.

Mr. GILCHREST. Dr. Sissenwine, can you do a similar survey that was conducted with the monkfish with black sea bass?

Mr. SISSENWINE. I do not think that that would be an appropriate way to address our shortcomings in terms of information on black sea bass. We in the science center very much would like to see more detailed and comprehensive information on black sea bass, but the nature of the distribution of the fish probably does not lend itself as much to doing a cooperative survey as we think it might lend itself to doing a cooperative tagging program with the fishing industry.

And in fact, a technical group of the Atlantic States Marine Fisheries Commission, and my scientists participate on that group, have been considering and discussing the design of the cooperative program to tag black sea bass so that we could get an estimate of fishing mortality rate from those tagging studies and really very much improve the quality of information we have on black sea bass.

So I do think there is a great need and a great potential for cooperative research to really help us on black sea bass. I think it would be quite a different design from what we have done for the big offshore commercial fisheries.

Mr. GILCHREST. Do you have some idea of what the progress is on the survey for 2002 for black sea bass?

Mr. SISSENWINE. Well, I think the resource surveys that we do for multiple purposes that do provide information on black sea bass will be conducted as scheduled without any changes in plans there,

and the results are made available for the fishery management process almost shortly after the surveys are completed. So there is not really a problem with conducting those surveys or providing data.

The problem is they are just not particularly precise for black sea bass. So I think the real issue for 2002 is whether, in fact, we can get this cooperative tagging program off the ground this spring and summer so that beginning in 2002 we have new data.

With respect to progress on that, there has been a vast amount of planning done. There are people who are anxious to do it. There have been proposals submitted to get some support for the activity to the research set-aside program that I described for the Mid-Atlantic Fishery Management Council, which does set aside some black sea bass quota for that purpose, and within the agency we are also considering options we have for funding some of our own people to participate in that activity.

So while I cannot tell you at this time the deal has been signed on the dotted line, I am quite optimistic that by various means there will be support for going forward with some cooperative research on black sea bass this coming spring and summer.

Mr. GILCHREST. With the tagging program.

Mr. SISSENWINE. Yes, I think that would.

Mr. GILCHREST. Is there anything that our office can do to help facilitate that?

Mr. SISSENWINE. I think your office's encouragement to date is helping to facilitate it.

Thank you.

Mr. GILCHREST. Dr. Sissenwine, you mentioned a Mid-Atlantic Council project in your testimony.

Mr. SISSENWINE. Right.

Mr. GILCHREST. Could you give us some idea what that involves, what fisheries might be a part of that?

And I assume that Mid-Atlantic Council project has something to do with the cooperative arrangements that we are talking about here this morning.

Mr. SISSENWINE. Yes. The Mid-Atlantic Council is very anxious to encourage cooperative research among scientists in the fishing industry. Candidly, they have not been as fortunate in terms of Congress directing substantial amounts of money to support cooperative research in their area of jurisdiction.

So I think they have, in fact, been very creative and innovative by making the decision that in their fishery management process they would set aside up to 3 percent of the allowable catch for their most important species to be made available to various fishing industry people and scientists who propose, successfully propose research projects.

Mr. GILCHREST. This is the Mid-Atlantic Council?

Mr. SISSENWINE. Yes, yes. And that set aside is from important species like surf clams, summer flounder, black sea bass, squid species, and several others.

Mr. GILCHREST. You say they are or they might set aside 3 percent?

Mr. SISSENWINE. Well, they have authority to. In this current year they have decided to set aside either two or 3 percent depend-

ing on the species. They can go up to three, and the exact amount differs between different species.

We do have available those numbers. I just do not remember them at this time. And so one of our hopes it that some of the set-aside for black sea bass, either the two or 3 percent, will, in fact, be made available to support this cooperative tagging program I mentioned.

I am aware that a proposal to do that has been submitted and it is under review right now.

Mr. GILCHREST. I see. Thank you.

Dr. Lent, you mentioned expanding a pilot program. Could you elaborate on that and make some reference to what we would need to do to authorize or appropriate sufficient funds to insure the expansion of the pilot program?

And where would the pilot program be?

Ms. LENT. Thank you, Mr. Chairman.

What I meant too say is we are looking at pilots as possible opportunities that we could do in other places in the United States. We already have this program nationwide. So if we have some successful pilots that have been conducted, we would like to make sure that we try those where we also think that they could succeed.

We are looking at possible expansion of the subject. That is always subject of funding, of course, and every year we have to make decisions about how we are going to spend this money. I think that the main thing is just looking at where we have good experiences through pilot programs, where we might try other pilots in similar situations in other parts of the country.

Mr. GILCHREST. So there are no real decisions on where an expanded or where a new pilot program might be?

Ms. LENT. Every year by making the decision on where we are going to spend the money that is made available through this program we are deciding where we are going to spend the money. It could involve spending money on new efforts, depending on what the various regions and councils come up with.

Mr. GILCHREST. Is there any type of cooperative research between NMFS and the State of Maryland?

Ms. LENT. Yes, there are a number of programs. I have some lists of actual projects that we have funded through the University of Maryland and through DNR. Also in the nature of cooperative research, not necessarily under the formal program, we have the bluefin tuna tagging program with the State of Maryland where we are actually tracking recreational landings through taggings. This has been a very successful program that addressed a highly contentious issue of in season monitoring of international recreational quota.

Mr. GILCHREST. Are there any new authorities that we should consider in order to help enhance this type of cooperative research?

Ms. LENT. Well, the administration is currently developing a proposal for amending Magnuson-Stevens, and in looking at that—

Mr. GILCHREST. For what?

Ms. LENT. In developing a proposal to amend Magnuson-Stevens, and cooperative research is going to be just one aspect of many that we will be looking at. o I do not have any specific rec-

ommendations regarding legal authorities right now, but we will be working with that.

Mr. GILCHREST. Can you get those recommendations to us in the next, oh, couple of months anyway?

Ms. LENT. I am not sure what our timing is, but we will certainly get back to you.

Mr. GILCHREST. Thank you.

Ms. LENT. Thank you, Mr. Chairman.

Mr. GILCHREST. What types of information in these cooperative research activities between the scientists and the industry, what kind of information are you trying to gather when you do that?

Ms. LENT. I can give a couple of quick examples and ask the scientists to weigh in. We are looking at collecting data. We are looking at testing gear. I think one project that we are working on right now for the western Pacific is trying to get research permits so that we could charger long liners to look at ways to reduce turtle bycatch in the long line fishery and reduce turtle mortality when there is bycatch in that fishery. So that is one specific example.

Based on that, we could make—

Mr. GILCHREST. How do you do that? In the long line, does somebody from NMFS or scientists go out on one of the commercial vessels?

Ms. LENT. Yes. We have a research program that has been planned, and I will be happy to send you a copy of that. That involves testing with scientists on board fishing vessels, both a fishing vessel that is going to have the experiment and a control boat right next to it, trolling through the same area, long lining through the same area.

If we are able to get the permit, we are looking for a Section 10 permit here because we are dealing with endangered species.

And so it is a scientifically managed and overseen project, and based on those results, we could perhaps come up with regulations not just for the U.S. long line fishery, but also regulations that we could take internationally and suggest under the ICCAT, the Atlantic tuna form or under the MHLC in the western Pacific, to say, "Look. Our fishing vessels have been working with us to find ways to reduce bycatch and bycatch mortality. We cannot save turtles alone. We want to get the other countries helping us out."

So that is one specific example that is near and dear to my heart, and I will let Dr. Sissenwine give some more examples or Dr. Richards.

Mr. GILCHREST. Thank you.

Doctor?

Mr. SISSENWINE. Yes. In many ways, I think that people who go to sea to fish are in many ways the earliest fishery scientists. So they know a lot about virtually all aspects of the issues that we are dealing with.

They have been students of fish movements, fish migrations, fish behavior, what fish eat, in fact, for thousands of years. So we are often just interested in information we can garner by interacting with people and learning their views about where the fish are and why they go where they are.

This allows us to design studies for the design of closed areas, for the specification of different management units in the fishery.

So we will work with the fishing industry in studies of that nature which deal with behavior and migrations, which directly affect how the fishery management units are designed.

We are also very interested in being able to work with the industry to get more precise, more focused information that we can get from our multipurpose research vessel surveys, and that is really the example that Anne Richards described for monkfish, and it is also what we have done on some other species, like surf claims and scallops.

Another area that is very important is to get more detailed information for actual fishing operations. How successful are people in fishing, in their catching of fish? What sort of discard problems do they encounter? What sort of habitats do they find are favorable to fish, for fish?

And we hope to be able to collect a lot more detailed information of that by what we refer to as study fleets, that is, working with groups of fishing people that are motivated and want to cooperate because they know it is in everybody's best interest, but need to be helped by providing some modern tools, such as electronic log books or sensor systems so that they can collect data from their vessels more efficiently and communicate it to us, and also need to be compensated for some of these additional costs that they have of providing data.

So we do hope to develop study fleets of cooperators within the industry that are sort of our eyes and ears and special sensors on the water to provide data which would fit within stock assessments.

Mr. GILCHREST. Are there any study fleets now?

I guess when you are talking about study fleets, you are talking about commercial vessels, non-government vessels.

Mr. SISSENWINE. Right. We are talking about fishing vessels conducting their normal fishing activities, but who voluntarily agree to provide more extensive data than they would be required to under the log book system and higher quality data.

Now, I think that they are interested in doing this because they sincerely believe that it is in everybody's best interest to have this information, but we also want to help them do it by providing modern software, electronic log book systems, and instruments to be able to collect data and train.

Mr. GILCHREST. So this is something that NMFS is proposing?

Mr. SISSENWINE. This is a program that NMFS actually is working with the industry to actually implement pilot projects this spring and summer for three fisheries in the New England area.

Mr. GILCHREST. Is this what you were talking about, Dr. Lent, as possibly expanding the pilot programs?

Ms. LENT. That would be one.

Mr. GILCHREST. One of them would be the study fleets?

Mr. SISSENWINE. Yes.

Mr. GILCHREST. And where might they be?

Mr. SISSENWINE. Well, at the moment, the funding is coming out of the Research Partners Program, which is directed toward New England. So there will probably be a study fleet developed for the southern New England area, also one for a small vessel fleet out

of Chatham, Massachusetts and probably another dealing with the southern Gulf o Maine or western Gulf of Maine area.

But our objective in the long term would be to have a large number of study fleets operating for the various fisheries within our region.

Mr. GILCHREST. Throughout the area?

Mr. SISSENWINE. Throughout the country essentially, yes.

Mr. GILCHREST. So is there any extra funding that is needed for this specific pilot project?

Mr. SISSENWINE. Well, there is funding available for the New England pilot projects I have mentioned which Congress has already generously provided.

Mr. GILCHREST. How many boats would be in this pilot project?

Mr. SISSENWINE. We expect that each one of these will start with only a handful, three or four vessels, in the first few months, but we would hope that they would generally gear up to the order of 40 or 50 vessels from some of the fleets.

Mr. GILCHREST. And it would be a vessel that would be outfitted with the type of gear or technology that it would need to make—

Mr. SISSENWINE. To collect data while it is doing its normal business.

Mr. GILCHREST. And there would not be a scientist on board the boat?

Mr. SISSENWINE. No. The idea is that right now we have two ways primarily of getting data from vessels at sea. One of them is log books that the vessels fill out themselves, and the other are by putting observers on board.

Observers are very expensive. Log books on every vessel tend not to be — tend to be difficult to assure the quality and to get the detailed data we want. The idea of the study fleet is a subset of the vessels that want to cooperate that can provide better data than log books at a much lower cost than observers.

Mr. GILCHREST. So how did they provide better data?

Mr. SISSENWINE. Well, we would provide them with a computer system so that they could record their data as they go along in a very efficient manner, very convenient manner, and depending on the nature of the fishery, they might be transmitting it back to us on a real time basis.

It would also allow two-way communication so that we might have a design where we ask them to sample certain types of species because we happen to need data on that particular one.

Mr. GILCHREST. Have you targeted a particular fishery for this pilot?

Mr. SISSENWINE. Well, the three I mentioned would basically target a trawl fishery for yellowtail flounder in the southern New England area, probably a hook fishery for codfish off of Cape Cod, and a mixed gill net trawl fishery for cod in the western Gulf of Maine.

Those are the ones that the steering Committee, which is made up of scientists and fishermen, are discussing right now, and they could, of course, come up with some other views, but that's the current state of their planning.

We are very encouraged by the cooperation we are seeing and the technology opportunity.

Mr. GILCHREST. So you have a number of volunteers?

Mr. SISSENWINE. We have a number of people who are part of the steering Committee from the fishing industry who are encouraging us.

Mr. GILCHREST. I see.

Dr. Richards, do you see any issue at all with calibrating that kind of information, that data collection to a NMFS research vessel going out collecting the same data?

Ms. RICHARDS. Well, I mean, obviously that is a very important issue that we need to try to figure out how these data relate to the data from our surveys, which are ongoing, standardized, and so give us a perspective over a long period of years.

And so to be able to tie in these special surveys into the NMFS survey is a very important issue.

Mr. GILCHREST. Is there anything else that you want to contribute with us here this morning?

One other question, Dr. Sissenwine. The vessel monitoring system, would that be part of the gear that would be employed on one of these study fleet vessels?

Mr. SISSENWINE. It certainly could be. We expect that the vessel monitoring systems would be part of the overall instrument package for the larger vessels, again, voluntarily. Some vessels are already required to carry them, but we are talking about additional vessels that would volunteer.

And so for those vessels, particularly the larger trawlers that would be in this summer flounder fishery—excuse me—yellowtail flounder fishery off of southern New England, vessel monitoring systems are very likely.

In some of the smaller vessels, they are not as practical. They are expensive, and we have actually been looking at designs of essentially cell phone based systems to report data back to shore that are much more practical for the small vessels.

So we will use the technology that fits the circumstance.

Mr. GILCHREST. Is there any need or would there be a possibility for one of these study fleets around the Bering Sea or the north Pacific?

Mr. SISSENWINE. That is not an area that I work, but Ii see no reason why that would not be a potential application.

Mr. GILCHREST. I guess any one of you can answer this question. I assume that most of what we are talking about here this morning as far as data collection and cooperation and potential study fleets and other pilot projects are for the most part in the EEZ.

I think a huge percentage of the commercial fish that are caught spend a significant amount of time in state waters and in tidal estuaries.

Is there any connection to data collection 30 miles off the coast of Massachusetts, 50 miles off the coast of Maryland, 100 miles off the coast of North Carolina, when these surveys are taken to assume that the survey might include some information about the areas where these fish will spend part of their critical lifetime in tidal estuaries?

Can you collect the data from a spawning area and integrate that data with the data that you collect 30 miles off the coast?

Mr. SISSENWINE. Well, certainly you are correct that many of the fish species depend on the in shore waters. I mean, they basically do not know anything about the legal jurisdictions. So we are always concerned about how to connect up the live history of the fish and the data sets.

In terms of the fishery dependent data, that is the catch statistics, what is caught. There is a program that has been developed between the states and the Federal Government under the auspices of the Atlantic States Marine Fisheries Commission, which is intended to develop a very comprehensive and integrated data system for fishery statistics, and good progress is being made there.

The other side of the coin are these resource surveys which are a different type of data collection, and of course, we conduct a large resource survey in the offshore waters primarily within the EEZ.

A number of the states have their own in-shore surveys in their own waters, and we work with them to try to help in the design and to exchange data. We are very cooperative in the case of the survey, the in-shore survey conducted by the State of Massachusetts. In fact, it is conducted on one of our small research vessels, and we are working with a number of other states in that regard.

In some cases, states have looked toward cooperative research as a way to conduct their own surveys. In fact, the State of Maine is now implementing an in-shore survey in their waters which is a cooperative survey with the fishing industry based very much on the lessons we have learned in the offshore waters working with the fishing industry.

And I think there is great potential for more states to do that. So I do think that we need a comprehensive program that links up the in-shore waters with the offshore. We are working with the states as best we can to make those connections, and the states are all that I know of interested and anxious to be able to get access to the resources they need to be able to either use their own vessels or work with the fishing industry to conduct surveys that match up with our offshore surveys.

Mr. GILCHREST. So NMFS to a certain extent does work with some states.

Mr. SISSENWINE. Oh, yes.

Mr. GILCHREST. They work with the Atlantic State Marine Fisheries Commission to do surveys of spawning areas, of areas where the fish will spend some time during its lifetime.

I guess the other question is: is there enough information known about where the various commercially valuable fish spend part of their life in certain types of habitat, in near shore areas and in tidal estuaries, so that NMFS in collaboration with the state fishermen, Atlantic State Marine Fisheries Commission or whoever can say, "This is a tidal basin. This is tidal pond. This is an estuary, and if we lose this, we are going to lose a certain amount of the fish that we catch"?

And we know that development would destroy this. Dredging would destroy this. Too much activity would destroy this habitat.

Is there that kind of dialog going on right now?

Mr. SISSENWINE. Well, there is certainly cooperation between the National Marine Fisheries Service and every one of the states in

one form or another. Some of them are more developed into joint surveys, and others are different types of projects.

The Atlantic States Marine Fisheries Commission, after it is more aimed at the catch statistics, although they are talking about the design of surveys.

Your specific question about do we know enough to say what habitat is important to the different species of fish, I think we know a tremendous amount. A lot of it has been catalogued in documents we have prepared on a central fish habitat of the various species.

There is always a lot more to learn, and our information is probably most incomplete in the in-shore areas because there is such a diversity of habitats. So there is certainly a need for more information there.

You raise a more fundamental scientific question, and that is if we know that a particular tributary is important habitat to a species, whether it be striped bass or summer flounder, can we actually say quantitatively what would happen if we somehow damaged that habitat.

And unfortunately from a scientific perspective, that is a very difficult question to answer. We know what habitat fish use and why we use it, but we rarely can answer the question of what is the outcome, what is the impact if, in fact, the habitat is eliminated because that is a very complicated scientific question about why they use habitat and how opportunistic it would be.

Mr. GILCHREST. Can you say it is likely to improve the fishery or it is likely not to improve the fishery?

Mr. SISSENWINE. I think we can usually say it is likely to disadvantage the fishery when you remove habitat that is actively used by a fish population, particularly during an important life stage, like spawning or juveniles.

So we know the direction, and we know it is important, and this is largely why the agency has tried its best to work with states to protect habitat, of course. We would like to be able to do the research to really pin it down in a more quantitative way.

Mr. GILCHREST. So can that type of research be connected or that type of understanding be connected with these pilot projects and these study fleets? When you go out and you collect the data of a certain fishery, whether it is black sea bass, summer flounder, monkish or whatever it happens to be, in that data collection, in the overall surveys, is there now or should there be a fairly distinct connection between the habitat of these species and the data that you collect offshore?

Mr. SISSENWINE. Yes. We certainly need to be looking to every opportunity to collect more information about habitat and its relationship to fish. In our scallop surveys that I mentioned earlier on, we actually did have a significant component of that that was looking at habitat at the same time we were looking at scallop abundance because one of the critical fishery management decisions that was made was where to allow the scallop fishing to occur so that it would not damage habitat.

And we had to have new information about habitat in order to design the fishery, which later led to some very, very big benefits

for the scallop industry. We need to do that more in all of these studies.

Mr. GILCHREST. Did you want to add to that, Dr. Lent?

Ms. LENT. Mr. Chairman, I just wanted to add that in addition to working in state waters, a lot of these projects, a number of these projects are conducted on the high seas, including the long line experiment that I just mentioned to you, and the experiments coming up in the use of fish aggregating devices and their impacts on bycatch and, of course, all of the tagging issues.

So both unilaterally and multilaterally working with our international partners we're doing some research on the high seas.

Mr. GILCHREST. And I will close with this question. It is always difficult to answer, I would guess, and that is in the overall, in the big picture of setting quotas depending upon the availability of the fish, the stock assessment, and the on the next panel I am sure we will have some discussion about the amount of communication from NMFS to the council to the actual people that get on the boat to do the fishing.

In your role as employees of the National Marine Fisheries Service, is there an equitable distribution of data in order to make a fishery management plan for each of the states in the country, but in particular, is there an equitable distribution of fish for fishermen from Maine to Florida?

And is there political influence that enters the picture of the distribution of the catch?

Ms. LENT. I can maybe take a first crack at this, Mr. Chairman, and I will let the scientists weigh in on this. The allocation determination for summer flounder, for example, I know is done through the ASMFC and council process. It is an open process that involves the public and a lot of input and hopefully the product at the end is satisfactory.

I think what is important is that the better information we have scientifically through programs such as these cooperative research programs, the better the scientific basis we have for determining, first of all, how much we can catch and, depending on habitat issues, whether or not there is an issue associated with where the fish are caught.

I will see if the scientists have anything to add to that.

Mr. SISSENWINE. Well, it is a difficult question, and certainly there are always going to be some issues about access to the fish that are determined by the fish. There are certain places where the fish are more concentrated than others, and that naturally is an advantage to some fishing ports that are nearby and potentially a disadvantage to others. So there are those natural factors.

I view that the allocation issue, in fact, is primarily a political process. It is a social judgment as to how to use these resources. It is not something that scientists can tell you what is right and wrong about it.

We can do the analyses to help you by describing what the social and economic benefits are of different allocations. So we are very anxious to improve the quality of our social science research program, meaning both economics and sociology, so that we can better inform people like yourself and the decisionmakers within the National Marine Fisheries Service.

What are the consequences of their decisions, but ultimately they are not scientific judgments. They are social choices between how to use the limited amount of fish that is available.

Mr. GILCHREST. Very good. Thank you very much.

Dr. Richards.

Ms. RICHARDS. Well, as Mike says, it is really not a scientific issue. One of the nice things about working for the National Marine Fishery Services as a science is that you do good science, and you are pretty well divorced from the political and social pressure.

Mr. GILCHREST. So the most important issue here for the three of you is developing a regime that is the best that we can put together for collecting data. That's the most important issue.

Ms. LENT. And any types of gear research and other activities that we can do collectively.

Mr. GILCHREST. I see.

Mr. SISSENWINE. Providing sound and objective scientific advice.

Mr. GILCHREST. Sound and objective scientific advice.

Mr. SISSENWINE. Yes.

Mr. GILCHREST. Thank you all very much.

Ms. LENT. Thank you, Mr. Chairman.

Mr. SISSENWINE. Thank you.

Mr. GILCHREST. And we are going to hold those questions to the end. They will still be here, but you have a burning question?

COMMENTS OF JEFFREY S. EUTSLER

Mr. EUTSLER. Yes. I did a pilot survey just last month.

Mr. GILCHREST. Do you want to come to the mic?

Mr. EUTSLER. My name is Jeff Eutsler out of Ocean City Maryland. I have the fishing vessel "Tony and Jan."

And I happened to be involved in a pilot program for the horseshoe crabs, and three states were involved because of them did not kick any money into the program. It was Maryland, Delaware, and New Jersey.

And what we did, we started September 10th, and it lasted, because of weather and that, it lasted until about the 18th of October. We went to 45 different sites, but we made 90 trawls in those different sites by one at night and one in the daytime.

Mr. GILCHREST. Who was this with, National Marine Fisheries Commission?

Mr. EUTSLER. No, this was the Atlantic States Marine Fisheries. They gave the money to Virginia Tech out of Blacksburg, Virginia, and we had their scientist, Dave Hadeau, on the boat with me. It was me and him and the guy that works for me, my deck hand.

Mr. GILCHREST. Were there any other boats involved in the survey?

Mr. EUTSLER. No, I was the only boat involved in it. Well, I primarily got involved in it because I sat as an advisor to the horseshoe crab plan.

But the problem that I see in it, that is fine, and I think they are very important, these pilot programs, for any fishery, but the problem is they do it when it is too late. They do it after the fact, and a case in point here in Maryland we got cut 75 percent or 74 percent of horseshoe crab plan, and that was very important. That

cut me 40 percent of my income and the gentleman that works for me. And that was before they eve knew what was going on.

And so that is why I wanted to jump in with both feet for these pilot programs. And another thing, money plays—

Mr. GILCHREST. Do you think the pilot project or the service should have been done sooner?

Mr. EUTSLER. It should have been done a lot sooner, and I think what it is you have a tug, too, between two entities. You have the commercial aspect, and you have the environmental aspect, and until those two people meet together with some kind of, you know—I do not know the word. I just can't without thinking what I want to say, but until those two groups meet together and has out some things because—

Mr. GILCHREST. Has that happened?

Mr. EUTSLER. Not very good because the horseshoe crab—I will just use that for it real quick because I know we are limited in time—we went to the meeting in Annapolis, and we were told do not even come because they have already made their decision.

Mr. GILCHREST. Who told you not to come?

Mr. EUTSLER. That was the ARL or something like that in Annapolis.

Mr. GILCHREST. Do you feel that the data that you collected during those 90 trawls was sufficient and gave you accurate data on the condition of the horseshoe crab?

Mr. EUTSLER. I think so because of the fact that we took the scientist with us, and we went from a quarter of a mile here in Maryland because we had a special permit for scientific data. We went from a quarter mile to 12 miles in these different places, and in fact, in a couple of places I said there is no need to even tow here because we are not going to catch them, and we caught horseshoe crabs, not a whole lot, but there were some there.

And off of Jersey we went 1 day. I will give you an example. We made a 15 minute tow, which is pretty good, and we had about 150 horseshoe crabs. We went back and made that exact same tow at night, and we had 750 crabs.

So it is important, too, you know, the time when they make day and night because it could change.

Mr. GILCHREST. So do you feel that you had enough input during that survey from the scientist collecting the data that the overall survey was—

Mr. EUTSLER. Successful?

Mr. GILCHREST. —successful, accurate for information?

Mr. EUTSLER. I think so if they are allowed to use their information on it. Sometimes I feel like we do a lot of stuff like this, and they do not use the information, and I think like with technology the way it has gotten that fishing industries change from 20 years ago to now. I have been fishing 23 years, and our technology, I could take anybody out in this room and within a week train them to be a fisherman and catch fish because because of the technology, laptop computers and stuff like that.

So I think that when we do this, we have to change, too, and that is science and everything has to change.

Mr. GILCHREST. Do you think the reduction in the catch for horseshoe crabs was warranted?

Mr. EUTSLER. We went up and asked for a 40 percent reduction, figuring that would, you know, help and appease both sides, and we got cut 75 percent. I do not think—it is hard to say.

Now, earlier we have caught them a lot better, and sometimes weather plays a big part on it as well.

Mr. GILCHREST. Is there going to be another survey sometime? Do you know?

Mr. EUTSLER. This was a pilot survey program to see if it was economically feasible to do, and really during that time I made pretty good money doing it, but really I lost money because of what I was able not to catch, and that is another thing.

When they do the surveys and the programs, they should allow the fishermen to keep the fish no matter where they are at. Now, in Jersey, Maryland made it in theirs that I could keep what little bit of fish we caught along with it, which was nice, but in Jersey I had to push all those dead fish back, and in 15 minutes you kill fish. So really you are beating the devil around the stump doing these surveys. So that is something, too, that needs to be addressed, as well.

Mr. GILCHREST. What was your name again, sir?

Mr. EUTSLER. Jeff Eutsler, E-u-t-s-l-e-r.

And I have been fishing out of Ocean City 23 years and hope to continue to do so.

Mr. GILCHREST. Thank you very much.

Mr. EUTSLER. That is something about pilot programs, but I think they work, but they wait too long to do it. They put the cart before the horse or they wait when the fishery is so down that it does not work.

And I appreciate you being here today and you all, to.

Mr. GILCHREST. Thank you very much. We will add you to our witness list.

Mr. EUTSLER. OK. Thank you.

Mr. GILCHREST. Thank you.

Dr. Lent, Dr. Sissenwine, Dr. Richards, thank you very much.

Mr. SISSENWINE. Thank you.

Mr. GILCHREST. Our second panel this morning will be Mr. Howard King, Division Director for Fisheries Management and Development, Maryland Department of Natural Resources; Mr. Jack Colbourne, Sr., President, Colbourne Seafood, Incorporated; Mr. Richard Novotny, Executive Director, Maryland Saltwater Sportfishermen's Association; and Mr. Kerry Harrington, a commercial fisherman.

Welcome, gentlemen, this morning. Thank you for coming, and we look forward to your testimony.

Mr. King, you may go first.

STATEMENT OF HOWARD KING, DIVISION DIRECTOR FOR FISHERIES MANAGEMENT AND DEVELOPMENT, MARYLAND DEPARTMENT OF NATURAL RESOURCES

Mr. KING. Thank you, Mr. Chairman and members of the Subcommittee.

I appreciate the opportunity for the Maryland Department of Natural Resources to be here today and address you.

Again, my name is Howard King, and you mentioned that I am with the Maryland Department of Natural Resources, and specifically with the Fishery Service with that department, and we are responsible for the management of interjurisdictional and residential species in Maryland waters, and as part of this responsibility we license and regulate the fishing activities of both commercial and recreational users.

And it is incumbent upon the department and all regulators to work closely with the users so that we can implement the best management practices possible.

In Maryland, we use the information that is gathered in cooperation with our users and fisheries management forums with the National Marine Fisheries Service, the Atlantic States Marine Fisheries Commission, the Mid-Atlantic Fisheries Management Council, and the Chesapeake Bay Program.

In Maryland, we actually created a Waterman's Bay Improvement Program, and this was focused on Chesapeake Bay work, but it was a mechanism and a vehicle to enable the department to hire commercial harvesters to captain their vessels to provide an appropriate platform to sample fish and shellfish resources, and that sampling would be conducted at the same gear efficiencies as they would have applied in their own commercial fishery.

Watermen have also been used to assess the feasibility of rejuvenating oyster bottoms for new techniques, but they have managed pilot aquaculture, shellfish projects in tidal waters, and commercial netters have actually worked with the department to capture, hold, and assist in tagging certain species of finfish.

In each case, in our judgment cooperative efforts have resulted in better information and sound guidance in determining preferred management options.

The Maryland Watermen's Association in Maryland contacted with individual watermen to actually map the preferred or the most frequented commercial finfishing areas in the Chesapeake segmented into north, middle and south.

For the first time we were provided with information on their specific techniques in those areas that included information such as bottom hangs, mesh size, frequency of use, and the general size and grade of fish caught during the various seasons.

This was the first comprehensive view that the department had had of the overall commercial finfish activity.

We have also used charter boat captains and vessels to fish under controlled conditions to determine the bycatch mortality of the taking of certain species of fish in areas that had heretofore been closed to catch and release fishing.

As a result of these activities, we determined that the catch and release mortality was at an appropriate level that permitted catch and release fishing, and as a consequence, these areas were opened.

This did two things. This benefitted the charter boat fishery in that it increased their business, and it also included the on shore businesses supporting recreational fishing in Maryland.

On the ocean side, the department recently initiated a detailed trip ticket catch reporting system with the cooperation of the harvesters. This information is provided to the Atlantic States Marine

Fisheries Commission. They have an Atlantic Coast Cooperative Statistics Program, and Maryland is serving as the pilot state, the first state to be in gear and provide information to this regional commission.

Also with ASMSC and cooperating seafood dealers, and this is on the bay side, we have been funded to develop a prototype electronic catch reporting system for in this case our commercial striped bass fishery, but the core purpose of this new system would be accuracy and timeliness.

The striped bass fishery in Maryland is a quota base fishery, as many of our fisheries are becoming, both offshore and in shore, and timeliness is essential in the management of these quota based fisheries with these period allocations.

Recreational anglers are also cooperating with the department here on the ocean side. The anglers have, in fact, initiated on their own and then shared with the department their own volunteer catch report for the summer flounder fishery, and the department is reviewing that information. We reviewed it last year. We continue to review it.

The recreational flounder fishery, at least the summer founder fishery, is constantly in a state of change in this transitional period while we are rebuilding the stocks, and so I know the anglers feel as though they need more input into the data that is being used and more consideration of the information that they provide.

In my written comments, I have included some general comments on reauthorization of the Magnuson-Stevens Fishery Conservation Act, but I would like to say that the NOAA Chesapeake Bay Program Office is providing funding for advancements in Maryland and in the Chesapeake Bay system that is transferrable outside of that area in multi-species management.

This is really the cutting edge in our region for trying to get a handle on multi-species management and ecosystem management. We have a long way to go, but NOAA NMFS is really providing the funding initiative to do that.

On a specific note for Maryland fisheries, the black sea bass fishery has become extremely contentious in our region. I think there is an opportunity here for the National Marine Fishery Service to work a little more closely with the black sea bass fishermen in this mid-Atlantic region. It may be that the data from the northern portion of the fisheries range is driving this bus, and our fishermen, I think, believe that we have a different situation offshore here than the northern waters, bottom habitats are different, size distribution, and the stock could perhaps be different.

Bycatch mortality is a big concern here. It may require modification of gear which would be an expense that our fishermen could not bear. So there needs to be some sort of collaborative work, possible funding, to work with our black sea bass pot fishermen to try to resolve some of these differences. And I am not aware that such a program is in place currently, but that would certainly be an area to investigate.

With that I conclude.

[The prepared statement of Mr. King follows:]

Statement of Howard King, Director for Management and Development, Fisheries Service, Maryland Department of Natural Resources

Mr. chairman and members of the committee, I would like to thank you for giving the Maryland Department of Natural Resources, Fisheries Service the opportunity to address the Subcommittee.

My name is Howard King. I am the Director for Management and Development for the Maryland Fisheries Service. Our department and unit are responsible for management of interjurisdictional and resident fish resources within Maryland. As part of this responsibility we license and regulate the fishing activities of commercial harvesters and recreational anglers. It is incumbent upon our department to work closely with the users of the fishery resources to implement the best practical management measures. Information resulting from cooperative management research and survey projects is used in our fisheries management forums of the atlantic states marine fisheries commission and /or the mid-atlantic fisheries management council. Cooperative interaction with the users of the resource is most typically through direct services contracted to licensed harvesters and through cooperative catch reporting for commercial and recreational users.

The department created the watermen's bay improvement program specifically to hire commercial watermen to captain their vessels to provide an appropriate platform to sample fish and shellfish resources. The sampling is conducted at the same gear efficiencies that would be used in the commercial fisheries. This practice has been applied in our oyster, blue crab, finfish, and terrapin fisheries and complements our fishery independent sampling of the resources. Watermen have also been used to assess the feasibility of rejuvenating oyster bottom through bagless dredging techniques. In other instances watermen have been hired to manage pilot aquaculture shellfish projects in tidal waters. In past years we have also contracted with commercial net operators to collect, hold and assist in tagging or transplanting of certain species of finfish. This practice has been applied in our yellow perch and black drum management. In each case the cooperative efforts have resulted in better information and sound guidance in determining preferred management options.

We have contracted with watermen through the Maryland watermen's association to chart the most frequented commercial finfishing areas of the Maryland portion of the Chesapeake Bay. Provided also were information on bottom hangs, gear use frequencies and the general size and grade of fish caught during the various seasons.

Charter boat captains and vessels have been hired to fish under controlled conditions to assess catch and bycatch release mortality in areas subject to potentially excessive bycatch mortality. Recreational anglers also assisted in the project. This assistance resulted in closed areas being opened to a striped bass catch and release fishery in a previously closed area. Charter boat captains, vessels, and recreational anglers have also directly assisted in the estimation of angler catch success rates on and around established artificial reefs in Chesapeake Bay.

The commercial catch of any species subject to a fishery management plan or regulations is required to be reported. Recently the department initiated a detailed trip ticket catch reporting system in our oceanside bays with the cooperation of the harvesters. The department is working with the atlantic states marine fisheries commission and cooperating seafood dealers to develop a prototype electronic catch reporting system for our commercial striped bass fishery. This effort requires the cooperation of each segment in the transaction chain for the purpose of collecting better catch data in the most timely manner. Timeliness is essential in the management of a quota-based fishery with monthly allocations.

Recreational anglers are cooperating with the department to provide catch and effort information for the oceanside summer flounder fishery. We also established an angler survey for our Chesapeake Bay striped bass fishery. These volunteer efforts contribute data for many fishery parameters and is the only database available to the department that provides length frequency data for the recreational striped bass fishery. The volunteer angler striped bass survey is an online web-based reporting system.

The Magnuson–Stevens fishery conservation and management act, when reauthorized, should be certain to prevent overfishing and yield sustainable long-term benefits from our fishery resources. Regulators and users are still adjusting to the current authorization. The reauthorization should provide stability as we work through the recovery plans. The act should also provide the framework for advancements in ecosystem management but should not be so specific that it deters adaptive development of the processes. We should strive to reduce or eliminate ambiguity, strengthen the relationship between regulators and users in the commercial industries and the recreational community, and establish better linkages and protective

measures for essential fish habitat and conservation. It would be beneficial if funds could be authorized for states to share in research set-asides to develop better by-catch reduction gear for species captured within state jurisdictional waters and inland marine and estuarine waters.

Mr. GILCHREST. Thank you very much, Mr. King.

Mr. Colbourne.

STATEMENT OF JACK COLBOURNE, SR., PRESIDENT, COLBOURNE SEAFOOD, INC.

Mr. COLBOURNE. Thank you.

Mr. Chairman, members of the Committee, my name is Jack Colbourne of Colbourne Seafood and a fishing vessel owner at Mount Vernon.

My understanding of the fishery management plan was to regulate the fishery, not to regulate the fishermen and the seafood dealers out of business. My small business in Maryland suffered a loss of 40.3 percent from '96 to '97 because of regulations. From '97 until present, we have lost 60 percent of the remaining 60 percent because of new regulations.

I hope your intention is not to eliminate the American fisheries. If so, you are doing an excellent job. We currently are losing our markets to import products. We cannot compete with South America, Central America, and Third World countries who are saturating U.S. markets with cheap seafood caught, processed, and shipped by people making less per day than U.S. minimum wage per hour.

Without product, we will lose all of our customers. We are in danger of losing our fishermen and dockside packing facilities. We cannot take another 60 percent loss of income and survive. I am sure none of you would like a 60 percent cut in your salary. So please reconsider your sea bass, scupp, fluke, squid, and all other seafood management regulations.

Let the American fisherman make a living so he can support his family and pay his bills as you all do. Give us the same protection as the U.S. Government gives the American farmer, a right to survive.

In 1996, my company processed or packed 350,000 pounds of black sea bass. In 2001, we were down to 72,000. That is for the whole year.

The product is being taken off of the menu in the cities because of the frequent closures. It is being replaced with imports. We must have continuity to retain a customer base.

The first week of the quarter, the new quota quarter, the markets are flooded by several species of fish because everything is on a quota. The market is flooded. It tumbles. The fishermen, we all suffer from it.

About the third week everything is shut down again. So we will go ten more weeks without product. No one can survive under these regulations.

I noticed you took a great interest in Dr. Sissenwine's studies, all to be conducted in the Massachusetts, Maine area. What about the Mid-Atlantic Region? If there are plenty of funds available, why are we donating money to the Garden State Association to fund stud-

ies, joint ventures, and hiring people from Rutgers University to do study and stock assessments for the commercial fishery?

New York North has a state black sea bass fishery season. In the South we do not. When we are shut down in the South, north of New York keeps on fishing, but it goes against our Federal quota in the South also.

Why not give us state quotas base on historic catch going back 10 years, from '86 to '96, the years before NMFS started regulating the fishery? Maryland was third in production in those years. Now we are near the bottom because of regulations. Our quotas are being caught by other states north of us.

It seems as people who have been involved with commercial fishing or seafood dealers who have seen the highs and lows in production over the past 40 to 50 years have little or no influence in the continual overwhelming regulations being applied by National Marine Fishery, Atlantic State Fishery Commission, Mid-Atlantic Council, and the state natural resources.

The only people that know anything about our livelihood and our fishing or the economic impact it has placed on us is someone with a Ph.D. or a Doctor behind their name. If it is a 14 year old kid with a Ph.D. that graduated from North Dakota U., he would know what is best for us.

We hope the government, you people, will do something to rein in the appointed bureaucrats who are making laws and regulations. They are destroying the American fishery.

If you look around there are very few young people left in the commercial fishery. There is no future in it the way it is going. People are not following the footsteps of their fathers, their grandfathers.

My son will be fourth generation. What is his future in the fishery? He does not have one.

We all know we have to have regulations and laws and rules. We all understand that, but do they have to be so stringent that they are going to destroy a way of life? I mean, I respect all of these doctors and professors and whatever around here. I am sure they are doing a good job, but they have to consider the little people, the people that they are eliminating out of the fishery.

It has probably been 20 or 25 percent reduction in commercial fishermen in the last 5 years. Has there been a 25 percent reduction of the staff at the National Marine Fisheries? I am sure it has not. They have probably hired another 25 percent.

So please consider the little people when these management plans are put together. Without your help we are losing our heritage. We will not be here.

Thank you very much.

[The statement of Mr. Colbourne follows:]

Statement of Jack Colbourne, President, Colbourne Seafood, Inc.

Mr. Chairman, Members of the Committee,

My name is Jack Colbourne, owner of Colbourne Seafood, Inc. and the fishing vessel Mt. Vernon. My understanding of the Fisheries Management Plan was to regulate the fisheries - not to regulate the fishermen and seafood dealers out of business.

My small business in Maryland suffered a loss of 40.3% from 1996–1997 because of regulations. From 1997 to present we have lost 60% of the remaining 60% because of new regulations. I hope your intent is not to eliminate the American Fisheries, if so you are doing an excellent job. We are currently losing our markets to

imported products. We cannot compete with South America, Central America and third world countries who are saturating U.S. markets with cheap seafood. Seafood that is caught, processed, and shipped by people making less than the U.S. minimum wage per hour.

Without product we will lose our customers. We are also in danger of losing our dockside packing facilities. We cannot take another 60% loss of income and survive. I'm sure none of you would like a 60% cut in your salary. Please reconsider your Seabass, Scup, Fluke, Squid, and all other seafood management regulations. Let the American fisherman make a living so he can support his family and pay his bills as you do. Give us the same protection the United States gives the American farmer- a Right to Survive.

Thank You for your consideration.

Mr. GILCHREST. Thank you, Mr. Colbourne.

Mr. Novotny.

STATEMENT OF RICHARD NOVOTNY, EXECUTIVE DIRECTOR, MARYLAND SALTWATER SPORTFISHERMEN'S ASSOCIATION

Mr. NOVOTNY. Mr. Chairman, members of the Committee, I would like to thank you for giving me the opportunity to address this Committee.

Once again, my name is Richard Novotny, and I am the Executive Director of the Maryland Saltwater Sportfishermen's Association.

The MSSA is composed of approximately 7,00 conservation minded members who fish the East Coast. Although we are a Maryland based organization, we have many members throughout the mid-Atlantic region.

We would like to urge this Committee to keep reauthorizing the Magnuson-Stevens Fishery Conservation and Management Act. this act has demonstrated to be the most effective management tool in the protection and preservation of the nation's marine resources.

Since its passage, regional fishery management councils are required to determine if over fishing is occurring. They then are required to submit measures to end over fishing and start to rebuild those stocks that are determined to be over fished.

In the annual report to Congress by NMFS of the 2000 fishing season, NMFS has indicated 92 stocks were found to be over fished while 145 stocks were determined not to be over fished.

There are approximately 600 stocks that they do not even know what the status is. Either they are unknown or undefined. They do feel though out of the 600 stock that they have not investigated, 83 percent of them are considered to be very minimal in landing and economic value.

The Maryland Department of Natural Resources we feel has done a very credible job in gaining valuable scientific data concerning their fisheries. The best example of this data collection that we can think of would be the Maryland's Young of the Year survey for striped bass. This survey has been conducted since 1954 to monitor the reproduction of striped bass stocks along the East Coast that spawn in the Chesapeake Bay.

By Maryland providing this valuable information to NMFS and other Federal agencies, such as the Atlantic States Marine Fisheries Commission, comprehensive fishery management plans have been developed for striped bass stocks on the East Coast. Working together, monitoring scientific data from other state surveys and

establishing data concerning fishing mortality has helped bring the striped bass stock back to a recovered fishery and is no longer listed as a threatened species.

This amazing turnaround of the striped bass stocks could not have happened and could not have been accomplished in such a short period of time without all agencies cooperating together. That includes the councils. That includes NMFS, U.S. Fish and Wildlife Service, all the agencies in a cooperative manner bringing back the resource.

Maryland DNR has also established our annual survey in their state for striped bass fishery. This is a volunteer survey conducted with our association and several other fishing organizations to submit catch reports after striped bass fishing trips. The survey includes recording the size of the first 20 fish, fish health, location where caught, number of fish caught or released, and the number of anglers, the method of fishing, and fishing from either boat or land.

This valuable information, when analyzed, will allow the State of Maryland to accurately account for their recreational harvest. In turn, this information can be distributed to ASMFC science and statistical Committee to help quantify Maryland's recreational catch.

As Mr. King alluded to earlier, our association has done a report, a survey of summer flounder here on the coast last year. We have gotten together with the department, and they want to try to use the same survey as we have been using for striped bass, and the year 2000 here for summer flounder fishery to try to get a better handle on the actual recreational harvest for summer flounder and the back bays.

Greatest problem concerning our fish stocks is what we feel is over fishing. One measure to control over fishing is for Federal agencies working along with each state to control harvest. Scientific data must be obtained concerning fishing mortality and stock composure and abundance. Knowing these factors can help NMFS, ASMFC, and the councils establish meaningful fishery management plans.

And example of this cooperative research program would be the tagging effort of the striped bass stocks off of their winter quarters off North Carolina. This is a cooperative program with several Atlantic Coast states and NMFS to document the coastal migratory behavior of fish stocks, the striped bass stocks up and down the coast.

It is best to get first hand assessment of the resource by the ones who are close to the day-to-day management of the resource. Sharing information and scientific data concerning fish stocks would only help in the management of the resource on a national level. Yet some stocks only pertain to local areas or states. Yet many species know no state boundaries. These various stocks travel up and down the coast on a very predictable migratory pattern.

Migratory stocks are not only in state waters, but are found in the EEZ or the exclusive economic zone. Our fish stocks are a finite resource and must be protected from being over fished.

NMFS is charged with the stewardship of our precious fish stocks, and only through the cooperation of each state participating in the fishery can we control their future.

To help in the cooperative management of the resource, states must submit total landing for each species by a commercial and recreational sector. Other additional necessary data would be size, composition of the catch, the number of individuals participating in the various fisheries, and the number of weight and fish harvested.

Gaining this type of scientific data will enable NMFS to establish meaningful regulations to control mortality. Once again, we would like to remind NMFS that they must put the resource first and the users of the resource second. Without the resource the users will not be around to use it anyway.

We would like to take this opportunity also to comment on the composition of the councils. When the councils were first established, we understood the need to overload them with commercial fishermen. Councils had to incorporate many new regulations concerning commercial fisheries' harvest. Gear type, area, minimum size limits, and harvest were only a few of the variables that had to be established.

However, since that time, the recreational fishery has grown by leaps and bounds. In a 1997 study conducted by NMFS they stated that there was 17 million recreational anglers who made 68 million fishing trips to bolster the U.S. economy by a tune of $108.4 billion. As you can see, it is a very important industry.

Now with the recreational fishing community being so dominating in numbers and economic value, they must have a stronger voice in the policy and decisionmaking in our nation's fishery. We ask that this Committee investigate the current composure of the council in reference to our question and to correct the bias shown toward the commercial industry.

It is time for the council to have a broader representation for the public interest, recreational, commercial, and conservation groups. Please remember that we are talking about a public resource that belongs to all U.S. citizens of the United States.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Novotny follows:]

Statement of Richard Novotny, Executive Director, Maryland Saltwater Sportfishermen's Association

Mr. Chairman and members of the Committee, I would like to thank you for giving me the opportunity to address this committee. My name is Richard Novotny and I am the Executive Director of the Maryland Saltwater Sportfishermen's Association (MSSA). The MSSA is composed of approximately 7,000 conservation-minded members who fish the East Coast. Although we are a Maryland based organization, we have many members throughout the mid–Atlantic region.

We urge this Committee to keep re-authorizing the Magnuson–Stevens Fishery Conservation and Management Act. This act has demonstrated to be the most effective management tool in the protection and preservation of the Nation's marine resources. Since its passage, regional fishery management councils are required to determine if overfishing is occurring. They are then required to submit measures to end overfishing and rebuild those stocks determined to be overfished. In the annual report to congress by NMFS of the 2000 fishing season NMFS has indicated that 92 stocks were found to be overfished while 145 stocks were determined not to be overfished. There are approximately 600 fish stocks whose status is either unknown or undefined. However, approximately 83 percent of these stocks are considered to be very minimal in landings or economic value.

In their annual review of the conditions of U.S. fisheries acting NOAA Administrator, Scott Gudes, said "the status of many U.S. marine fish stocks improved in 2000, although some stocks continue to have problems. This shows us that while we've made some significant gains we must also continue to work with the regional fishery management councils to reduce the number of overfished stocks and comply more fully with strong conservation standards enacted in 1996".

Maryland Department of Natural Resources (DNR) has done a very credible job in gaining valuable scientific data concerning their fisheries. The best example of this data collection that we can think of would be Maryland's Young of the Year Survey for Striped Bass. This survey has been conducted since 1954 to monitor the reproduction of striped bass stocks along the East Coast that spawn in the Chesapeake Bay. By Maryland providing this valuable information to NMFS and other federal agencies such as the Atlantic States Marine Fisheries Commission (ASMFC) comprehensive fishery management plans have been developed for striped bass stocks on the East Coast. Working together monitoring scientific data from other states' surveys and establishing data concerning fishing mortality has helped bring the striped bass stocks back to a recovered fishery and is no longer listed as a threatened species. This amazing turnaround of the striped bass stocks could not have been accomplished in such a short period of time without all agencies cooperation.

Maryland DNR has also established an angler survey for their striped bass fishery. This is a volunteer survey conducted with our association and several other fishing organizations to submit catch reports after each striped bass fishing trip. The survey includes recording the size of the first twenty fish caught, fish health, location, number of fish caught or released, number of anglers, method of fishing, and fishing from boat or land. This valuable information when analyzed will allow the State of Maryland to accurately account for their recreational harvest. In turn this information can be distributed to ASMFC's science and statistical committees to help quantify Maryland's recreational catch.

The greatest problem concerning our fish stocks is overfishing. One measure to control overfishing is for federal agencies working along with each state to control harvest. Scientific data must be obtained concerning fishing mortality and stock composition and abundance. Knowing these factors can help NMFS, ASMFC and councils establish meaningful fishery management plans.

We are sure that all states are willing to share their knowledge and management tools in having sustainable fisheries. After all it's best to get first hand assessment of the resource by the ones who are close to the day to day management of the resource. Sharing information and scientific data concerning fish stocks would only help in the management of the resource on a national level. Yes, some fish stocks may only pertain to local areas or states, yet many species know no state boundaries. These various stocks travel up and down the coast on a very predictable migratory pattern.

Migrating stocks are not only in state waters but are found in the Exclusive Economic Zone (EEZ). Our fish stocks are a finite resource and must have the protection from being overfished. NMFS is charged with the stewardship of our precious fish stocks and only through the cooperation of each state participating in the fishery can we control their future. To help in the cooperative management of the resource states must submit total landings for each species either by the commercial or recreational sector. Other additional necessary data would be the size composition of the catch, the number of individuals participating in the various fisheries and the numbers and weight of fish harvested. Gaining this type of scientific data will enable NMFS to establish meaningful regulations to control fishing mortality.

We would like to take this opportunity to comment on the composition of the councils. When the councils were first established we understood the need for overloading them with commercial fishermen. Councils had to incorporate many new regulations concerning the commercial fishery harvest. Gear type, areas, minimum size limits, and harvest were a few of the variables that had to be established. However, since that time the recreational fishery has grown by leaps and bounds. In a 1997 study conducted by NMFS they stated that there were nearly 17 million recreational anglers who made 68 million fishing trips to bolster the U.S. economy to the tune of $108.4 billion. Now with the recreational fishing community being so dominating in numbers and economic value they must have a stronger voice in the policy and decision making in our nation's fishery. We ask that this committee investigate the current composure of our councils in reference to our questions to correct the bias shown toward the commercial industry. It is time for councils to have a broader representation for the public interest, recreational, commercial and conservation groups. Please remember that we are talking about a public resource that belongs to all citizens of the United States.

Mr. GILCHREST. Thank you, Mr. Novotny.
Mr. Harrington.

STATEMENT OF KERRY HARRINGTON, COMMERCIAL FISHERMAN

Mr. HARRINGTON. Thank you, Mr. Chairman.

I am before you today submitting this written testimony in hopes that you will understand—

Mr. GILCHREST. Mr. Harrington, can you pull the mic a little closer?

Mr. HARRINGTON. Yes, I can do that.

I am before you today submitting this written testimony in hopes that you will understand and rectify the plight of the commercial fishing industry. There are many areas that have been affected, from new regulations, closures, quotas, limited entry, et cetera. The list goes on.

It is my understanding that all of these actions were implemented based on good, sound data to support the changes. However, as we all know, once the data is actually compiled, it is antiquated. It is not and never has been the intent of the fishing industry to annihilate many species of fish. I believe I can speak for the industry as a whole that we simply want to find the cure to the problems so that our industry is not affecting the livelihood and economy of many.

It is my opinion that in order to cure problems it is necessary that we realize the impact of both the fisheries and human sectors. A challenge of this sort requires an in depth understanding of each fishery by both fisherman and regulators. We must have joint participation to create a balanced outcome. It is crucial that we remember that many variables and be careful not to make rules and regulations so stringent to create animosity within.

As the Magnuson Act comes up for review, it gave us time to realize changes need to be made. I admit I do not understand all of its content, but through joint cooperation, positive evaluations that a pro fisherman and pro regulators can be met.

In my 20-plus fishing career years at Ocean City, there have been many trials and tribulations, but I must state that regulations over the past several years, and obviously this goes between the industry and the regulatory agencies, have caused many talented and caring fishermen to believe the livelihoods were the dying species, not the fish.

Quotas. If you do not go fishing, you will lose your fair share of your quota allocated. That translates into fishermen fishing overtime and fishing when they should be making safety repairs on their vessels, fishing when they are exhausted for fear that they lose the part of the quota.

Under the rodeo trip regulations, it has proven both crews and vessels are in jeopardy. They are going to see unsafe conditions with improperly maintained vessels.

Production fishing has also impacted adversely in ice plants, fuel companies, tackle shops, retail shops, restaurants, hardware stores, you know, et cetera.

Sea bass fishing is or was my primary fishery for many years. It also has been where I have taken the greatest financial loss, ap-

proximately 80 percent. I first questioned the data to which NMFS derives sea bass in the faltering stock.

There have been several issues in this fishery which warrant questioning in the process of regulations. There were supposed to be studies done over a period of time based on size. Instead there was a rapid increase. Without using a reasonable time period for the study, with a realistic, agreed upon time period for a study, say, 3 years, it is impossible to determine a regulatory size which has a positive or negative impact on the mortality rate of the fishing stock.

Logic dictates that such a study would require a period of time equal to a minimum cycle of the sea bass route. It was my understanding that 3 years was originally designated. However, the change from nine to ten inches was over a 6-week period of time.

In 1996, there was a moratorium put on sea bass. However, with a loophole that allowed anyone who could prove that they caught one pound of sea bass could acquire a Federal permit. I still question the fairness and logic of that.

What this did was allow an increase in number of people for sea bass and a fishery that is supposedly already in trouble. Now there were more fishermen taking away from the quota than was when the data was originally collected.

Compounding the inaccuracy of the data, that there were northern states that catch sea bass inside state waters, and they decided to issue over 1,000 new, additional licenses. All of these fish, although caught only in state waters, were accounted for against the Federal quota.

If there is a stock problem, then with the Magnuson Act on the table, there should be an allocation based on prior history before the moratorium was even put into effect as has been done in other fisheries. Such an action will alleviate sea bass mortality by working down from a fixed number. It would also eliminate the excess gear at the same time.

This would allow National Marine Fisheries Service to find out if the problem was escalating. Therefore, compensation for idle gear from those who were originally in the fishery should be sought. The data is available from logs as far back as 1988. We all know there is a growing recreational fishery which has grown enormously in the recent years, along with the use of electronic devices being so precise that it has even increased the catch rate dramatically. No licenses are required.

There are other fishing industries that have regulations in question. These fishermen all need to be addressed for the sake of fish and the fishermen.

There has been a conflict of interest by user groups for many years, and I submit this needs to change in order to bring the fish, not the fishermen to the front of the line. There should be an understanding that a commercial vessel does not get paid if it does not land a significant amount of product.

A charter boat needs a sufficient amount of fish to please its customers, and the private sector needs enough fish to please themselves and to consume. There is a staggering and sad amount of money and effort that in the past has been used and misused in

this ongoing conflict. If this effort were spent to initiate better relations and conservation, all would benefit.

[The prepared statement of Mr. Harrington follows:]

Statement of Kerry Harrington, Commercial Fisherman, Berlin, Maryland

I am before you today, and submitting to you this written testimony, in hopes that you will understand and rectify the plight of the commercial fishing industry.

There are many areas that have been effected from new regulations, closures, quotas, limited entries, etc. The list goes on and on.

It was my understanding that all of these "actions" were implemented based on good, sound data to support the changes. However, as we all know, once the data is actually compiled, it is antiquated.

It is not and never has been the intent of the fishing industry to annihilate any species of fish. I believe I can speak for the Industry as a whole that we simply want to find a cure to the problems so that our Industry is not annihilated, affecting the livelihood and economy of many.

It is my opinion, that in order to cure the problems, it is necessary that we realize the impact in both the fishery and human sectors. A challenge of this sort requires an in depth understanding of each fishery both by Fisherman and Regulators. We must have joint participation to create a balanced outcome. It is crucial that we remember the many variables and be careful not to make rules and regulations so stringent as to create animosity within.

As the Magnuson Act comes up for review, it has give us time to realize changes that need to be made. I admit that I do not understand all of its content, but through joint cooperation, positive evaluations that are Pro Fisherman and Pro Regulators can be met.

In my 20+ fishing career, there have been many trials and tribulation, but I must state that regulations over the past several years and obvious discord between the Industry and the Regulatory agencies have caused many talented and caring Fishermen to believe their livelihoods were the dying species, not the fish.

Quotas

If you don't go fishing, then you will loose your fair share of the quota allocated. That translates into Fishermen fishing overtime or fishing when they should be making safety repairs to their vessels. Fishing when they are exhausted for fear that they will loose part of their quota. Under these Rodeo Trip regulations, it has been proven both crews and vessels are in jeopardy. They are going to sea in unsafe conditions with improperly maintained vessels.

Reduction in fishing has also impacted adversely ice plants, fuel companies, tackle shops, retail shops, restaurants, hardware stores, dock laborers, etc.

Sea Bass fishing is or was my primary fishery for many years. It also has been were I have taken the greatest financial loss, approximately 80%.

I first question the data to which the NMFS derive that Sea Bass is a faltering stock? There have been several issues in this fishery, which warrant question in the process of the regulations. There were suppose to be studies done over a period of time based on size. Instead there were rapid increases without using a reasonable time period for the study. Without a realistic agreed upon time period for a "study", say three years, it is impossible to determine if a "regulatory size" would have a positive or negative impact on the mortality rate of the fishing stock. Logic dictates that such a study would require a period of time equal to at minimum, the cycle of a "Sea Bass Growth". It was my understanding that three years was originally designated. However, the change from 9 inches to 10 inches was over a six (6) week period of time

In 1996 there was a moratorium put on the Sea Bass licenses. However, there was a loophole that allowed anyone who could prove they caught one pound of Sea Bass could acquire a Federal permit. I still question the fairness and logic of that "act".

What this did was allowed an increase in the number of people fishing for Sea Bass; in a fishery that is "supposedly" already in trouble! Now there were more Fishermen taking away from the quota than when the data was originally collected. Compounding the inaccuracy of the data, there were Northern states that catch Sea Bass inside States waters and they decided to issue over a thousand new or additional licenses. All of these fish, although caught only in state waters were accounted for against the Federal quota.

If there is a stock problem then with the Magnuson Act out on the table there should be an allocation based on prior history before the moratorium was even put into effect, as has been done in most other fisheries.

Such an action would alleviate Sea Bass mortality by working down from a fixed allowed number. It would also eliminate the excess gear at the same time. This would allow the NMFS to find out if the problem was escalating. Therefore compensation from idle gear from those who were originally in the fishery should be sought. The data is available from logs as far back as 1988.

We all know there is a growing recreational fishery, which has grown enormously in the recent years along with the use of electronic devices being so precise it has even increased the catch rate dramatically. No licenses are required.

There are other fishing industries that have regulations in question. These fishermen all need to be addressed for the sake of the fish and the fishermen. There has been a conflict of interest by user groups for many years and I submit this need to change in order to bring the fish, not the fishermen to the front of the line.

There should be an understanding that a commercial vessel does not get paid if it does not land a significant amount of product. A charter boat needs a sufficient amount of fish to please its' customers and the private sector needs enough fish to please themselves and to consume.

It is staggering and sad the amount of money and effort that in the past has been used and misused in this ongoing conflict. If this effort was spent to initiate better relations and conservation all would benefit.

Mr. GILCHREST. Thank you, Mr. Harrington.

Mr. HARRINGTON. Thank you.

Mr. GILCHREST. Our purpose here today, and I am going to ask a few questions of our witnesses, was to try to understand as a small part of the reauthorization of the Magnuson Act how we could appropriately in the best possible way know how many fish are out there. How do we collect that scientific data and collect it in a timely fashion, not having it rushed like Mr. Harrington suggested here with sea bass, but conduct a survey over a period of time so that the data we collect is appropriate and is accurate and it is reliable?

A sufficient number of surveys so that there is not a long period of time between the surveys. We are going to make an attempt. I know when you see this fellow up here that only owns a canoe, and maybe I should go out with the gentleman who collects horseshoe crabs. In case I lose the next election, I can enter the fishery.

[Laughter.]

Mr. GILCHREST. Maybe I will go into some other line of fishery.

I made this comment to farmers that I spoke to last week, about 1 week ago about this same time, that I am a former house painter, high school teacher that ran for Congress on a whim, got elected. I am now in a position to affect your incomes, and there are other people like up there in Washington.

And there are not very many commercial fishermen in Congress or recreational charter boat captains in Congress or people that deal with ecosystems or essential fish habitat. They are a collection of people like you see in all walks of life affecting your bottom line, your taxes, your mortgage rates, the amount of fish you can catch, and so on.

So I guess the point I am trying to reach out here to you is that we are out here to try to collect information so that when we reauthorize this act this coming year we do it with the kind of information that is necessary to make it equitable for everyone, so that we do have sufficient funding and the kind of people that are necessary to do the surveys to collect the data, and that the surveys are done properly and in a timely fashion; and that we would like to vastly improve the amount of cooperative effort that we have discussed today between the scientists, National Marine Fisheries

Service, the commercial industry, fishermen, recreational industry, to be a part of that data collection so that we can all share and learn from each other.

And then when you have the appropriate data in a timely fashion, that those quota allocations all around the country are justly and equitably distributed. You know, Dr. Sissenwine said today that they collect the data and give it to the people that make the political decisions, and that is pretty much exactly correct.

So what we are going to attempt to do, and this will not be the last time that we meet and talk to all of you, I know the last time Jack and some people were in Washington and they had real difficult questions, I suggested that we tour the Capitol so I could show them the art work.

[Laughter.]

Mr. GILCHREST. I think they appreciated the art work. I know Jack did, but then we did get around to some of those hard questions which we are seeing here this morning.

Mr. Harrington, you made some comment about a conflict of interest within the system. Can you elaborate on that?

Mr. HARRINGTON. Well, it seems like the amount of studies that were implemented toward the sea bass industry, the fellow—I could not get his name. He is sitting in front of his name tag. It was the gentleman that was in the center of the first group.

Mr. GILCHREST. Mr. Sissenwine.

Mr. HARRINGTON. Yes, OK. Anyway, it seems as the data that was derived was not really sufficient enough to have put such a rigid quota system and reduction on the sea bass fishery that I can understand, and it has caused a major effect to anybody in the mid-Atlantic area, that is, especially that is in that fishery.

I mean, I have done that fishery since 1980 here in this town, and prior to that also with other people, but given the magnitude of a reduction of my own personal income, I think you have got to take that into context of where do you go from there and what do you do with your gear.

I have idle gear. I have gear that has been sitting on the dock for over two and a half years now. It is bought. I have got gear that I borrowed money against. It is the gear that made my ability to pay the debts that I carry. And now I have lost that resource.

So not only myself, but other people that are in the sea bass fishery. The compensation toward that would be go back in history. Look at the log books because I thought that was what we were giving that information for, as a tool for regulators to look at and for you to look at and find that there has been enough data compiled that is a compensation.

If you are going to take that kind of a drastic reduction in your income, as do farmers, they pay a farmer not to plant a field because they have got too much access for various reasons. And this should be implemented in the fisheries as well. Because this is my last chance to put my boat on the market, is for the February issue of "National Fisherman" because I do not see any way that I can sustain myself through this winter.

I have lost two fisheries. I have lost my summer fishery, which begins actually in the spring for the black sea bass, and my winter

fishery, which was the dog shark fishery, which has been alleviated also.

And then I had an option for my long line fishery, which I am a participant in, and that would be Florida, from the Keys all the way up the State of Florida, and that has been alleviated.

So I have lost all of my stones to step off on to try to cure the problem. I mean, that is my own personal plight, but I mean, it probably has major effect on fish houses, and Jack Colbourne spoke earlier of his plight, I mean, the reduction in his fishery, in his packing house.

And that is shown across the board. The more reductions that we have in these, I can elaborate on what I was talking about in my piece here, that you take a fishery that is supposed to be in trouble, a sea bass fishery, and at the last moment somebody who caught one pound is allowed to catch as many fish as I am, and then it gets antiquated even worse because the state fishery heads come into the picture and over 1,000 more licenses have been issued.

It seems to me that somewhere along the line the Federal National Marine Fisheries Service or the Federal Government has to step in and supersede somehow to say was there an excess of sea bass when they put these closures into effect or was there a resource that was not tapped into because prior to the 1996 moratorium, the New England states did not have anything on the books, less than 5 percent. And now in the fall we have a reaction of 62 percent I think it was this year in a 2-month period.

So I think they have to reevaluate their studies on sea bass fisheries.

Mr. GILCHREST. Mr. Harrington, part of the reason for the hearing today is to show how we can improve data collection. So you feel that on black sea bass, for specific example, the data that has been collected which goes to determine the allocation was not accurate, and then the allocation distribution was not fairly allocated.

Mr. HARRINGTON. Yes, that is correct because if you go by—

Mr. GILCHREST. And part of the problem as I understand you are saying is that the state fishery quota in Massachusetts is part of the allocation problem in the long run?

Mr. HARRINGTON. Yes.

Mr. GILCHREST. Because there are only so many fish, whether it is in state waters or Federal waters.

Mr. HARRINGTON. Yes, like the gentleman said earlier, those fish, they do not know that there is a boundary there. Those fish go in state waters, and you mentioned yourself the tributaries. They go up inside and they spawn, and there is an in-shore fishery in that area.

Mr. GILCHREST. So a vastly improved survey, scientific collection of data that dealt with the size, the age, the sex, et cetera, would—

Mr. HARRINGTON. Location also.

Mr. GILCHREST. Location. OK.

Mr. HARRINGTON. I think you will find that there is a stock of fish and I do not know if there is any tag fish that they have caught in the New England area that has come from this area. I think their stock is the stock that goes northwest and southeast. They travel on shore and offshore just like they do here.

Our fish are bound to coming in shore in spring and spawning and making their way as the water temperature changes and back off the offshore areas.

Mr. GILCHREST. You are saying that there is a distinct population between New England and—

Mr. HARRINGTON. I think you will find the migratory routes are finite and not coast-wise. I think you will find if they do more studies you will find that the fish that are coming from, say, the Carolina area or off of the southern part of Virginia and migrating up the coast, say, up to New Jersey is not the same stock.

This is where the scientists come in. They can follow that. They can follow the tag fish, but I think you will find that there is more of a stock coast-wise that works the continental shelf and then migrates to the northwest in shore.

Mr. GILCHREST. So the sea bass that you catch here you are saying are not likely to be the same.

Mr. HARRINGTON. It is probably not part of the same stock that they are catching off of the New England area.

Mr. GILCHREST. That is interesting.

Mr. HARRINGTON. And if they are relatively a new fishery—

Mr. GILCHREST. How would you suggest that we find that information out?

Mr. HARRINGTON. I think what the fellow said earlier about the tag-in programs, and I think you will find that the fish that are tagged on the in shore, inside state waters eventually end up somewhere out on the edge in the deeper water in the winter months, and that is where it would probably be retained from the trawl service.

You know, you could probably have a trawl surveyor. Anyway, you will find a trawler will be catching that same species to the southeast and off on the continental shelf.

Mr. GILCHREST. So this kind of information would alleviate the problem that you describe about the allocation.

Mr. HARRINGTON. It would help that, and also if it came down to where it is now, it's already been fixed. My problem is I need a quicker cure for the problem because we need to find out whether or not where I am financially—this whole ordeal has been going on for two and half years.

Personally, I will not survive the winter. I have gotten to this point in hopes that some kind of compensation of some sort will be recognized that no one of us can absorb that kind of reduction in our income, and that is my personal, my plight, but it is still in the future of the fishery for my son to take it over, the boat that I built, and that is kind of a glimpse of light in the dark now.

Whereas something that you strive so hard to make ends meet with, and it just gets taken away, and it needs to be addressed in such a fashion that there is a viable resource out there, and there are many users, and like this gentleman next to me said, Richard, you know, the users are increasing daily, and the magnitude of recreational fishermen also have come into play. So it all has to be considered in the stocks and the alleviation of that.

But by the same token you have to have enough product in order to sustain yourself as a commercial fisherman.

Mr. GILCHREST. That is what we are trying to assess here.

Mr. HARRINGTON. I am sure that everybody I know in this room that is a commercial fisherman is willing to do whatever it takes survey-wise to shed some more light on the reality of where the stocks are, as well as a joint cooperation between sports fishermen and commercial fishermen. I think that right there, the combination of the two, and the bickering and the conflict that has been going on for years, and in fact, most commercial fishermen love to sport fish, too, and we do. We do them both.

I used to do the circuit. I did sports fisherman before commercial fisherman. So I know both ends of the spectrum.

Mr. GILCHREST. Thank you, Mr. Harrington.

Mr. HARRINGTON. Thank you.

Mr. GILCHREST. Jack, do you have any recommendations on improving data collection from HMFS' perspective? And do you have any specific issues that you see could be improved as far as the commercial industry's relationship as far as you know it here in Maryland with the National Marine Fisheries Service?

Mr. COLBOURNE. Well, I think we need to be part of the product studies and the joint ventures just like Massachusetts and Maine. I think we need to be part of that.

I know the National Marine Fisheries had a vessel called the "Albatross," and we need to have commercial fishermen fishing the same areas side by side tows.

Mr. GILCHREST. Has that happened?

Mr. COLBOURNE. Well, supposedly whenever it does happen—yes, it has happened—it seems as if the commercial vessel always greatly out catches the "Albatross."

Mr. GILCHREST. Is there a reason for that?

Mr. COLBOURNE. Yes, there is a reason. Because commercial fishermen, well, they are better fishermen. They probably have better gear, and they probably know a whole lot more about what they are doing.

Mr. GILCHREST. Better gear than the Federal Government?

[Laughter.]

Mr. COLBOURNE. Well, I know some fishermen that will put up against anybody the government can hire, but these guys have done this all of their life, and a lot of them, their fathers did it; their grandfathers have done it in areas, and the way they hang their nets and the way they tow, it is just a lot of tricks to the trade, and I think they could be a tremendous asset to the National Marine Fisheries if they would put a little more faith in the commercial people on these surveys instead of basing everything on the "Albatross."

Mr. GILCHREST. When the commercial fisherman goes out with the "Albatross," what happens? Does the commercial fisherman that catches more fish, is that taken into consideration as far as you know?

Mr. COLBOURNE. Well, it depends on who you ask. I have heard that they do take it into consideration. I have heard that, well, the best information we have is what we put together from the "Albatross." So this is what we have to go by.

So I think they have to be a little more flexible and realize that we have a little bit more expertise maybe at some types of fishing than what they have.

I also agree with the tagging program that maybe they need to tag more fish and it coincided with commercial and the charter boat fishery, the recreational fishery. They need to tag more sea bass and see if these fish do migrate up and down the coast.

I am like Kerry. I think the stock to the northeast is a different stock than what we have here.

Mr. GILCHREST. To your knowledge, Jack, has anyone looked into that?

Mr. COLBOURNE. I do not know, but if you remember back in August we mentioned that to Mr. Hogarth, and at that time, he not only agreed to look into that, but he told us that he would do or have done a black sea bass survey joint venture like we're talking about, which from August the 1st until now I do not think anything has ever been done except the excuse was used that we do not have the money.

But the good doctors sitting here before me said they had plenty of money.

[Laughter.]

Mr. GILCHREST. That is the first time I have ever heard anybody say they had plenty of money.

Mr. COLBOURNE. Well, you were asking if they needed more funding.

Mr. GILCHREST. Right.

Mr. COLBOURNE. And I think the answer was—correct me if I am wrong—that there was necessary funding available to do the studies.

Mr. GILCHREST. We will look into and get back to you, Jack, and the rest of the witnesses on the issue of the possible potential for the two different stocks.

Mr. COLBOURNE. But the think that like Kerry and myself are trying to reiterate is that they have pushed us to a point that the fishery is going to collapse. The commercial fishery is going to collapse.

Now, if they protect it to the point that the fishery collapses, what have you accomplished? I do not think the Magnuson Act was created to destroy the American fisherman.

Mr. GILCHREST. Jack, we are going to do what we can to insure a viable fishery for the fish and for the commercial fishermen, recreational fishermen, and for the consuming public. I do not have all of the answers at this point, but I think one of the key pieces to this puzzle, one of the two key pieces of this puzzle for the fisheries is good information about the fish stock, and an equitable allocation of that resource.

And we will go to every length to assure that that happens when we reauthorize the Magnuson Act, and we will fight tooth and nail to get the appropriate funding for the data collection.

Mr. COLBOURNE. Well, we appreciate all that you do and that you have tried to do for us in the past, and you have done for us in the past.

The last thing that we commercial fishermen want to do is to annihilate the fishery because we are going to lose it all. I mean, we are not like a recreational fishery. If he loses the fish, he can go bow hunting. If we lose the commercial fishery, we have lost it all.

So the last thing we want to do is annihilate any fishery.

Mr. GILCHREST. All right. Well, thank you, Jack.

Mr. COLBOURNE. Thank you.

Mr. GILCHREST. Just a couple more questions. Mr. King, the whole issue of data collection and cooperation between the people that do the fishing and the people that do the scientific study. It seems from your testimony that there is a good deal of cooperation and an ongoing relationship between Maryland fishermen and watermen and the Department of Natural Resources.

How important is that relationship to good data and appropriate allocation of the quota?

Mr. KING. Extremely. In days gone by commercial harvesters would report their catch and effort to the department, and the department would then make management decisions based on that reporting, and then we would be accused of making decisions with bad data by the harvesters.

I think those days are gone forever. More and more we see anxiety and extreme interest on the part of harvesters to make sure the department is using the best available data, and I think they are much more willing to provide that data today than they had been in the past.

We are not all the way that we need to be yet, but it is moving in that direction, and we are much better off today using harvester's data than we were in past years.

Mr. GILCHREST. When that relationship is established with certain watermen for a certain fishery, whether it is striped bass or crabs or whatever, is there an ongoing discussion about where to go to collect that data or harvest the rockfish, let's say, for example, in a certain tributary at a certain time at night? Is there a cooperative effort whether you go out at two o'clock in the morning or two o'clock in the afternoon?

Mr. KING. Yes, more so than in the past, but most recently, for instance, with the blue crab fishery, we were conducting a peeler pot study, and so the commercial crabbers volunteered to take us to where they would go because, as has been stated here, the commercial harvester in almost all cases, can do a better job of it than the state biologist.

And so we took them up on that, and then they did serve as our guides in collecting that data and setting those pots.

Mr. GILCHREST. You mentioned trip ticket catch system, and Maryland is a pilot state for that. What exactly is that?

Mr. KING. Well, through ASMFC there is this Atlantic Coast Cooperative Statistics Program where the states will be collecting and databasing consistent, compatible data so that we can look at the states coast-wide and be on a level playing field.

And so we were funded to establish a trip ticket system on the ocean side as a pilot project for that program.

Mr. GILCHREST. So Maryland is the only one doing it right now?

Mr. KING. Maryland is the only one funded by ACCSP. North Carolina has a trip ticket of sorts in place, and has for a couple of years, but currently they are not in the program. They are not in the system. So this trip ticket system was designed specifically for this coast-wide program.

Mr. GILCHREST. I see. In collecting the data for a series of species, whether it is crabs or striped bass or perch or whatever, in

your analysis of understanding the number of fish that are out there in any particular stock, is there an effort to understand the impacts on essential fish habitat in all of the various tributaries, tidal ponds, tidal basins, estuaries?

I guess what I am asking: is there some understanding if you are going to have a healthy fishery that there needs to be areas for these fish to not only spawn, but for these fish to have in their habitat enough protection with bay grasses, enough food for them, for example, to eat between, let's say, striped bass and menhaden? Is there some type of an approach to look at the food web in the system and understand how it works along with just collecting the data on the species?

Mr. KING. There is an appreciation. We are in the infancy, I think, of being able to apply what understandings we do have and then further to put in the protective mechanisms to make sure that those areas are preserved through ASMFC, again, in the case of striped bass menhaden, the predation aspects of multi-species migrant, that is being investigated now.

In Maryland we decided to start relatively small. We have taken a resident species, yellow perch, and we have written a draft fisheries management plan, but it is actually a yellow perch management plan of which fisheries is one component. The other component is habitat.

And so as part of that plan, we are setting up a system where the essential or critical fish habitat, particularly the spawning and nursing areas, may be candidates for a special state water use classification, and that would require regulatory action and enforcement by other units of state government or units other than the fishery service, other than the Department of Natural Resources.

So we have taken a species for which we are wholly responsible in Maryland, a resident species, not interjurisdictional, and are trying to apply what we know to date about essential fish habitat, apply it to this individual species as a first step in trying to get a handle on ecosystem management for the benefits of fish production and fisheries.

Mr. GILCHREST. It sounds exciting.

Mr. KING. Well, it is a first step, but I think—

Mr. GILCHREST. That is being done with yellow perch, and it is not being looked at with menhaden, for example?

Mr. KING. At a regional level.

Mr. GILCHREST. I see.

Mr. KING. At an Atlantic Coast level it is for striped bass, and menhaden specifically.

Mr. GILCHREST. I see. Thank you very much.

Mr. Novotny, you made a comment about the composition of the councils.

Mr. NOVOTNY. Yes.

Mr. GILCHREST. Do you have a recommendation?

Mr. NOVOTNY. Yes. I would like to see the councils more equally divided. Right now there is a tremendous bias commercially with people on those councils, and I feel as though the recreational sector, which has really grown in the last decade or so, should have fair and equal rights to the outcome of their fishery.

Right now it seems like commercial comes first, and then it is recreational with the votes out of most of the councils. Just one instance is the flounder, summer flounder stocks. For some reason the distribution of summer flounder is 60 percent commercial and 40 percent recreational.

We do not feel as though that is very fair. It is not fair and equitable for the recreational fishery to only get 40 percent when the commercial guys get 60 percent. A 50-50 split would be fair and equitable, and that would be fair and equitable in all fisheries.

The same way with the bluefin tuna, which is managed by NMFS. You know, once again, that is not fair and equitable. So, yes, we would like to see a more fair and equitable proportion with recreational, commercial, and even conservationists on the council who will speak on behalf of the fish.

The recreational fishermen generally will speak on behalf of the fish and put the fish first. Unfortunately sometimes when there is an economic value put on a stock, you know, the commercial might have a tendency to not be as cautious and not be as conservative as what a recreational fisherman would be or even a conservationist.

And if we are going to err, we should err on the side of the fishery and not on the side of the fishermen. And I know that the gentleman here and the gentleman here are having a hard time with the fishery, and you have got to realize our fisheries, all of our fisheries, are a finite resource, and we must gauge them.

I mean we do not want to have happen what happened up in Georgia's bank where they enclosed that entire fishery to commercial fishing. Those fish, those captains up there actually blamed NMFS for allowing that to happen, and the reason they blamed NMFS for allowing that to happen is because they allowed them to catch too many fish up in Georgia banks.

I will make a statement here. I know it is not going to be liked by a lot of people, but I will say something afterwards. The marine resource owes no one a living, just like the United States does not owe a farmer a living. You know, it is a trial and error. You know, they put up with weather conditions just as though the commercial fisherman.

But by saying that, they have just as much right as being in the fishery as the recreational fisherman, and I do not deny them that. But, once again, we all must get together and try to be cooperative with the harvest of our fisheries.

Several years ago we met with the commercial fishermen here in Ocean City, and we were concerned about the summer flounder fishery, the recreational side, and we proposed a closure of the outside, the inlet to Ocean City because we thought too many fish were getting caught up even before they had a chance to come into the back bays here in Ocean City.

So through negotiations, we worked out an arrangement where the trawlers would keep them all off of the sea buoy out there and hopefully allow some more flounder to come into the back bay. So with this kind of cooperation, I think we can work together and get some meaningful fishery management plans where everyone is protected.

And once again, with Mr. Harrington here saying that they opened that sea bass commercial fishery if you showed one pound of fish was, I feel, totally wrong, you know. Once again, you are allowing people to come into a fishery that is already in need of conservation, and I do not think that was the right step to do.

Mr. GILCHREST. Thank you very much, Mr. Novotny.

Any other comment by any of the witnesses?

Mr. HARRINGTON. Can I?

Mr. GILCHREST. Yes, sir, Mr. Harrington.

Mr. HARRINGTON. I did not touch base on there are other fisheries that are out here, such as long line fishery. Congress, I think, proposed a buyout at one point, especially in the southern sector, which I am not even—I mean, I fished in the southern sector, but I chose the northern because I was up here more frequently.

I do not know where that went to, and I proposed it to come up in a recreational fisheries meeting. If they assumed that the long line fishery is the demise of the offshore fishery as far as marlin and sailfish and various species, highly migratory species as that, then under the circumstances where giant areas are being closed from Key West all the way up to South Carolina, under those circumstances, I think there is enough money generated and actually wasted in conflict, whereas if that money was used as a proposal, as a buyout, I think you could see that a commercial fisherman in that category as far as long line fishery goes, there would be some consensus to sell out, and that way that would never be allowed to go again.

The license would be actually consumed by the sport fisherman world, and they could do with them as they want, burn them or whatever, but be scrutinized for being in that fishery is wrong because the data, as I said in there, the way it is antiquated sometimes, it comes up shy of truthfulness.

But if that be the case, I mean, there are fishermen out there; there are long liners, and myself included, that have said, OK, well, if that be the case—but most of our long liners, their biggest fleet has left the country. Yet they are still catching and selling back into our country. They are not regulated in other countries.

The ironic part about it is that they have created in other countries a directed marlin and sailfish fishery for the consumption of United States citizens. I went to Vermont last year, and there it was right there in a grocery store: blue marlin, white marlin, and sailfish. I could not believe my eyes.

If I catch one of them, I go to jail here in this country. Yet it is allowed to be sold in this country right in any public place. You can go to the Philadelphia fish market, and in the Philadelphia fish market there are other size fish that come from out of the country, sold in our country because they do not have the regulations that we do.

Mr. GILCHREST. We might want to have you, Mr. Harrington, give us a list of places that we as a Subcommittee can visit.

Mr. HARRINGTON. Yes, yes.

Mr. GILCHREST. Whether it is Vermont or Philadelphia.

Mr. HARRINGTON. Yes, yes.

Mr. GILCHREST. Actually I am relatively serious, but we can take a look at some of these imports that you are discussing, and the

last thing we want to do—and it generally happens whether we want it to or not—is when we pass laws, we have this unintended consequence that you are describing, which we want to eliminate that as much as possible this time.

There is not a total separation, and it has been discussed. There is not a total separation between what this country does in a necessary way for agriculture as far as set-asides. If you leave this in warm, spring grasses and it attracts birds, you are going to be paid for it. If you plant loblolly pines or white pines in this buffer to protect water quality, you are going to be paid for it.

If you sell your right to build so it will always remain open space or agriculture, you will be paid for it. So some of the closures, some of the sanctuaries, marine protected areas, these kinds of things, the issue always is getting enough support to allocate or appropriate sufficient funds in order to do that.

But agriculture has been and is now in a fairly critical stage because of the amount of competition it is getting from the international community where you did not have that before.

Mr. HARRINGTON. I can add to that. It goes back to that corridor. I think with the amount of increased participation in the sport fishing world, Mr. Novotny said, you know, and the numbers are superseding anything they can even imagine; a small percentage given from that resource could offset the detriment of the commercial fisherman end of it.

Do you understand what I mean? You can take it to actually propose a portion of that. That would offset, which actually would gain ground on the sport fisherman world because it is just phenomenal.

If you have ever been out there in the summertime tuna chunking, you go to an area and there are 500 boats within a ten mile radius. That is phenomenal.

Mr. KING. Spending a lot of money.

Mr. HARRINGTON. Spending a lot of money. It is true, but it is not money we are dealing with. We are dealing with fish.

Mr. GILCHREST. We are dealing with fish.

Thank you very much, Mr. Harrington.

Mr. HARRINGTON. Thank you.

Mr. GILCHREST. I think at this point, first of all, I want to thank all of you for coming. You have been very articulate and sophisticated with the information that you have given us this morning, and we will make good use of it, but at this point we have about 10 minutes. So if there is anyone that wants to ask a question, if you could come up to the mic right over here.

Kevin, could you raise your hand?

Right near Kevin and ask a question from the mic.

COMMENTS OF MONTY HAWKINS, BERLIN, MARYLAND

Mr. HAWKINS. Howdy, all. I am Captain Monty Hawkins, "O.C. Princess," Ocean City, Maryland, party boat fishery.

Captain Kerry, you spoke several times about—Captain Kerry Harrington, I should say—you spoke several times about the issuance of permits for the sea bass fishery. What was the effect of that? What happened to the number of pots that were in the ocean?

Mr. HARRINGTON. At what time?

Mr. HAWKINS. From the time they started the permit until that permit process was over, maybe a year. Did the number of pots increase?

Mr. HARRINGTON. On my part?

Mr. HAWKINS. No, no, no. Overall.

Mr. HARRINGTON. Oh, on the overall. What happened at first was the unknown, you start your season out to try to get your quota every chance you have.

Mr. HAWKINS. OK. Did the number of traps increase after a moratorium was declared?

Mr. HARRINGTON. Oh, absolutely because more people got into the fishery.

Mr. HAWKINS. By how much?

Mr. HARRINGTON. I do not know what it was. Massachusetts has increased their fishery.

Mr. HAWKINS. Not Massachusetts at all. Off here.

Mr. HARRINGTON. There was people. Whoever was not in the fishery, there was other people that got into the fishery that created and were buying pots and making pots.

Mr. HAWKINS. Did the number of pots double or triple or quadruple?

Mr. HARRINGTON. Oh, I do not know the exact numbers exactly, but it increased as far as there were more fishermen that got into it.

Mr. HAWKINS. It sure seemed like a lot more pots out there to me. After a moratorium was proposed, a lot of pots were put out there. I am very active in artificial reefs, and one of the net effects was more or less a bottom war kind of thing where trap fishermen were sighting bottom and get as much gear on good bottom as they could, and what happened was the artificial reefs got covered up with pots also by new entrants into the fisheries.

At any rate I could go on and on about that. One of the things I specifically wanted to mention with the Magnuson Act is the collection of anecdotal evidence. We are trying to rebuild fisheries to what we had in the '80's, and, well, the sea bass fishery off of Ocean City here, if you rebuilt what you had in the '80's, you wouldn't be rebuilding to much. The fishery had already been trammeled by then. It could certainly stand a lot more than that.

By collecting anecdotal evidence, you could ascertain overall ecological impacts from different gears over a much longer period.

Mr. GILCHREST. Monty, who would you collect this anecdotal information from?

Mr. HAWKINS. Guys who were a lot older than me.

[Laughter.]

Mr. HAWKINS. Really, there is—

Mr. GILCHREST. Are you recommending collecting anecdotal information from recreational commercial retired fishermen?

Mr. HAWKINS. Absolutely, both sides, yes, both sides, yes. And it needs to happen up and down the beach. I mean, there are probably men in this room—

Mr. GILCHREST. It might be a good idea for us sometime this winter or early spring or whenever we can get back over here to have not necessarily a formal hearing, but have a gathering in a room similar to this with a sent out agenda to discuss some of these spe-

cific issues that you are bringing up now, and one of which would be interesting anecdotal evidence from a historical perspective on a range of species that have been right off the coast of Ocean City.

Mr. HAWKINS. Well, we spoke earlier about monkfish. I have heard guys talk about gigging monkfish in this back bay back here when they were a boy. Now, that does not happen anymore. It seems like the fish have moved off further and further and further until now you have got to go 30 fathoms to catch one.

Mr. GILCHREST. So there was monkfish in Assawoman Bay?

Mr. HAWKINS. Yes, sir.

Mr. GILCHREST. Very interesting.

Mr. HARRINGTON. There still is.

Mr. GILCHREST. Is there?

Mr. HARRINGTON. Yes, there still is. If you ever had them, then you go to the back bay, but there has been some alterations in the Indian River inlet in the back bays, but all of the back pockets that run back behind the ghost station, we used to go back there, and there would be 30, 40 with their heads stuck up on the bank, you know, and we would come over to the dock where we would keep the fish land dock and have them catch there. So they are still around.

There have been some alterations, you know, in their resource.

Mr. HAWKINS. Right. Time is very short, and I am sure there are a lot of things that need to be said, but the live bottom habitat that we have off our coast here, I mean, we know more about the chemolithic autotropic hyperthermofiles in the deepest part of the ocean vents—

Mr. GILCHREST. All of us know more about that.

Mr. HAWKINS. —than we know—well, scientists know more about it than they know about near shore reefs here.

I was in contact with the fishery ecologist from National Marine Fisheries, and he said, "What reef ecology? We have got a lot of—that gentleman right there, if he is looking to work, buddy, I guarantee he could take on a guided tour all of our out-of-state reefs here that are off our coast. There is a lot of coral, a lot of mussel beds, a lot of bottom that is very important to the thriving of our local fisheries and our economies."

Mr. GILCHREST. Well, Monty, you bring up a good point, and maybe—well, not maybe. We will arrange a time when I do not know if Kerry will let us use his boat or, Monty, we can collaborate this effort along with some scientists from NMFS to go out there and take a look and see, and get some to the best that we can historical evidence about what the habitat looked like decades or 100 years ago, and how we can bring those reefs back.

Mr. HAWKINS. I strongly feel, and particularly in the sea bass industry, one of the earliest studies on sea bass was a tag study up in Massachusetts, and they grasped the significance automatically that the sea bass were habitat fidelity. They come right back like the salmon. They will come right back to the exact same spot or very close to it.

Well, obviously if you allow this fish to flourish, and the more eggs you get, the better off the species do, and he comes right back, it is almost like an aquaculture, and that is at the very heart of why that gentleman is in trouble.

The fishery is based from Cape Cod, I guess, to Cape Hatteras as one stock when, in fact, you could take six or eight square mile areas of ocean bottom, and that is the stock. And I base this on a lot of reading, a lot of research, and also personal tag returns.

And finally, I think the time is very short. We do all we can to save all of the glamour species. Even the monkfish is being looked at.

If you ask the knowledgeable people in this room what was in more trouble, a monkfish, a striped bass, a flounder or a red hake, I would think that everyone would say a red hake, and they are gone. These things are decimated, and there is not a blessed thing being done, nothing.

Anyway, it needs to get looked at.

Mr. GILCHREST. Before I leave I will get a list from you.

Mr. HAWKINS. All right. Thank you, sir.

Mr. GILCHREST. Thank you.

Yes, sir.

COMMENTS OF CHIP CARPER, HEBRON, MARYLAND

Mr. CARPER. Congressman, my name is Chip Carper, and I have wondered why I felt so compelled to say anything, but I have an interesting perspective in that it—

Mr. GILCHREST. Who is it?

Mr. CARPER. Chip Carper, with a C.

Mr. GILCHREST. Carper.

Mr. CARPER. Yes, sir.

I am very involved in the recreational fishing end of it, but I also have quite a few close friends, what I consider close friends that are commercial fishermen. I have ventured into commercial fishing at no charge to several of these people just to experience what it is that they do, to learn more about what they do, to learn more about long line bycatch and things that are of a concern to a lot of people here.

And interesting enough, you mentioned places you would like to know about where you can find fish that are illegal for U.S. fishermen. You might want to try the Elto Bar Lodge at the Grand Canyon where I dined on blue marlin in April of last year.

Mr. GILCHREST. What was the name of that?

Mr. CARPER. That is the Elto Bar Lodge.

Mr. GILCHREST. Elto Bar Lodge.

Mr. CARPER. It's fairly famous. It is in a fairly large national park called the Grand Canyon.

[Laughter.]

Mr. CARPER. I found that very interesting.

They said they have it quite regularly, by the way.

Mr. GILCHREST. We will make a call to them this afternoon.

Mr. CARPER. Yes. On more of a general note, I would just like to say that I think that something has been brought out here that is very critical. It becomes a fisherman issue at a certain point. Ultimately regulation has proven over time to be very detrimental to anyone that it impacts. I think overall, I think fishermen will be impacted the most greatly, whether they be commercial or recreational, because regulation oftentimes, as we have seen examples

and there are examples here, is done as a blind poke at a very large problem.

The ocean has been around longer than anyone in this room, and we know very little about the ocean in the big picture, and I think that as we make efforts to regulate, we need to make sure that the research and the regulations are in the best interest of the resource primarily, of course, but second, that as fishermen people begin to realize that these regulations will ultimately be imparted or put in place to the detriment of fishermen in general.

And I think that the resource we are entitled to by our citizenship in the country and in the world in general because no one owns the oceans in the bigger picture; we own a very small segment within the 200 mile limit. And I think that the foreign fishing, we have done things to make efforts to protect our steel industry from foreign influences. I personally think that we need to make greater efforts as a nation to prevent our companies within the United States, *i.e.,* Wal-mart, some of the larger retailers that sell products from countries, such as China, that are manufactured by prisoners in communist prisons.

Those types of things continue to influence us as a nation, and the fish stock is just another example of that. These countries, Africa is a big country now in the long line fishery. Boats have left the United States, gone there. They will take whatever you bring to the dock, regardless of species or size, and they have a market for it and a large part of that market is the United States.

Mr. GILCHREST. Thank you very much, Chip. It has been very helpful.

Yes, sir.

COMMENTS OF JOSEPH R. GOLDEN, BERLIN, MARYLAND

Mr. GOLDEN. Yes, my name is Joseph Golden.

And I would just like to comment that when you get ready to reauthorize this Magnuson-Stevens Act that you should remind the National Marine Fisheries Service they are the National Marine Fisheries Service and not the New England fisheries service. They need to make studies of the whole coast, not just New England fisheries.

And before they can go making laws to put people out of business, I think they ought to take their surveys before they make the law, not after they have made the law and they have destroyed these people's livelihoods.

They need to take their surveys before they make the law. Before they come up with a total catch allowance, they should know what it is.

That is all I have to say. Thank you.

Mr. GILCHREST. Joseph, thank you very much. We will make every effort to follow your advice.

I think this may be the last speaker. A gentleman from Easton, Jack Colbourne, he is a former Marine.

Mr. COLBOURNE. He is OK.

Mr. GILCHREST. He is OK.

Mr. GOETZ. How about Purple Heart?

Mr. GILCHREST. Purple Heart.

Mr. COLBOURNE. Better yet.

Mr. GOETZ. I served representing Maryland for two terms on the Atlantic States Marine Fisheries Commission, and I served—I am sorry. I had it backwards—on the Mid-Atlantic Fishery Management Counsel. I served two terms. I served three terms on the Atlantic States Marine Fisheries Commission representing State of Maryland.

I am a fisherman. I have been trying to be a fisherman all my life. I am not a commercial fisherman in any true sense, but I understand and sympathize with the problem.

I have been in the food business, however, all my life, my younger life, not now, and the businesses that I have dealt with like red meat, like poultry, you name it, you had to make it. It did not just come because it was there.

And that made it very difficult also to make a profit, very much so. So I sympathize with the profit aspect of this also, but remember your resource is there and you do not have to create it, make it or grow it.

But the point I would like to make to the Committee is there was some discussion about a trip ticket approach. Now, when the ASMFC met in 1987 down in Florida, it was generally agreed by all the states from Maine to Florida that we should all have a trip ticket approach. Of course, it does apply to commercial.

And what it meant was that the fishermen would come in with a detailed description of where he fished, what the conditions were. I mean, it would all be organized. All you had to do was check it off, and what he caught by species and by total.

That was in a day we really did not have the technology that we have with computers today, and then it had to be mailed in or however it got to the office in Tallahassee. Well, today this is a simple matter. All fishermen have to sell their catch, and it has to go to the buyer. So the buyer and the fisherman make out their reports, and immediately it goes into the information held by the state or by the Federal responsible government.

It just seems to me that this Committee should say the trip ticket would answer a lot of the questions that were being raised here today. If there are areas, for example, that are poor producers, we sure as hell are going to find out because fishermen are reporting that constantly. It would certainly relate to species and all the rest of it.

But that is the main reason I wanted to come up and speak. I would like to see the Committee be more concerned about—this trip ticket approach, I think, as Maryland indicated, is in—it should not be because in 1987 we started on the path to do something about it, but it is at the beginning. So it is at a beginning point, and it could contribute significantly to the problems with the fisher.

Mr. GILCHREST. Duly noted.

Mr. GOETZ. Thank you.

Mr. GILCHREST. Duly noted, Mr. Goetz. Thank you very much.

Participant. I just want to let him know that we have been filling them out for the last 7 years, seven or 8 years, daily, and they have got to either go in by the 15th or the end of the month, and they give you until the 15th of September, say, to the 15th of October, and that goes to National Marine Fisheries.

In the last couple of years we have been able to take that daily trip and send it to our State of Maryland instead of filling out the monthly and the year report. We cannot E-mail it. It has to go by mail, or if it is not in, you do not get your license.

Mr. GILCHREST. Thank you very much.

Before we close, I want to make sure that I, first of all, thank all of the witnesses for coming here today, and I hope that you have a little time to enjoy Ocean City. That goes for the recreational boaters, the commercial fishermen, everybody in the room.

My wife is back in the hotel not feeling well today. So she did not quite make it in the rain in Ocean City.

But I wanted to make sure I thank Mayor Jim Mathias, Carol Jacobs, Wendy Bunting, Matt Needham, and I have on my list Kathy Bassett. That is my press secretary, and also the staff of the Subcommittee, and the Park Place Hotel that put up the Fisheries Committee today.

We will take the testimony that the witnesses gave us this morning and those of you who came up to speak. The information that you have given us we will take very seriously. We will make it a priority to insure that this aspect of the reauthorization of the Magnuson Act, the data collection, the cooperation between those people who fish and those people who collect the data and those people who allocate the quota, it is our goal to vastly improve on that system.

Thank you all very much and have a good day. The hearing is adjourned.

[Whereupon, at 12:46 p.m., the Subcommittee meeting was adjourned.]

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