

**FISH FIGHTS: AN EXAMINATION OF CONFLICTS  
OVER OCEAN RESOURCES**

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**HEARING**

BEFORE THE

SUBCOMMITTEE ON OCEANS, ATMOSPHERE,  
FISHERIES, AND COAST GUARD

OF THE

COMMITTEE ON COMMERCE,  
SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

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SEPTEMBER 18, 2018  
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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

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SECOND SESSION

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# **FISH FIGHTS: AN EXAMINATION OF CONFLICTS OVER OCEAN RESOURCES**

**TUESDAY, SEPTEMBER 18, 2018**

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

The Subcommittee met, pursuant to notice, at 10:33 a.m. in room SR-253, Russell Senate Office Building, Hon. Dan Sullivan, Chairman of the Subcommittee, presiding.

Present: Senators Sullivan [presiding], Baldwin, Nelson, Wicker, Inhofe, Cantwell, and Blumenthal.

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

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

Today's hearing will focus on international conflict and criminal activity associated with global fisheries. A particular interest is the fight for fisheries resources, geo-political flash points where conflict is likely to arise, and the role of both state and non-state actors involved in conflict and even criminal activity.

Additionally, we will discuss measures being taken to address the growing challenges in criminal activities surrounding these resource conflicts and what more can be done.

As fish stocks move with changing environmental conditions and expanding global populations, demand consistent and affordable access to protein pressure has increased on global fishery resources.

For no other country is this truer than China. China's use of both soft power and hard power to expand its boundaries, secure sufficient fish stocks to feed its people, and fuel national economic growth is a clear step toward what some are referring to as hybrid warfare.

Each year, the Chinese Government funnels billions of dollars in subsidies to its distant water fishing industry. This government aid program has enabled their fishing sector to grow exponentially and unsustainably. It is now the largest in the world with the reach to pilfer other countries' resources across the globe.

As often seen throughout history, when military might is used to protect a nation's growing commerce, Beijing is deploying its military to protect its fishing fleet with Chinese fishing boats often benefiting from the protection of the Chinese Coast Guard and Navy presence in the South China Sea and abroad.

Countries on the receiving end of Chinese actions are responding in kind. Indonesia has destroyed hundreds of fishing vessels in their waters illegally while Ecuador was forced to summon the Chinese Ambassador to condemn China's fishing in the Ecuadoran Exclusive Economic Zone following the seizure of 300 tons of illegally sourced fish.

International cooperation in this area, however, is possible, including with the Chinese Government. This past June, the U.S. Coast Guard, in close coordination with the State Department and the Chinese Government, intercepted a Chinese-flagged fishing vessel operating not far from my home state of Alaska.

Our Coast Guard conducted a joint boarding of this Chinese-flagged vessel along with a Chinese ship-rider and found almost 10 kilometers of international illegal drift net and 80 tons of illegally seized salmon which were likely headed back home to Alaska.

With Chinese governmental cooperation, the fishing vessel's voyage was terminated and the vessel and crew were returned to China for future enforcement action which we will be monitoring closely.

Conflicts over maritime resources are not isolated to the Pacific. As many of you saw in the news recently, French and English scallop boats in the English Channel came to blows over the right to dredge in the near-shore waters. Valuable fish stocks and the right to exploit them will continue to cause increasing tensions around the world.

Beyond direct conflict, global pressure on fish stocks have led fishermen to seek cost reductions through any means necessary, sometimes illegally, or to abandon fishing altogether and pursue other activities, sometimes illicit activities.

It has been reported that some illicit harvesters seize their deckhands' passports and forbid them to leave the vessels, effectively turning them into forced labor. Others turn to drugs, weapons, and human smuggling. Many of the Somali pirates, for example, began as fishermen but once their fishery was depleted turned to crime.

There's evidence that transnational criminal organizations are involved in all aspects of this kind of behavior, orchestrating illegal fishing, smuggling, and other illegal activity that might bring profit.

While American fish stocks associated domestic management through the Magnuson-Stevens Act are viewed as the envy of the world in many cases, our domestic fisheries could support increased harvests. It's not enough for us to only be concerned about what happens in the American EEZ.

Highly migratory species, coupled with changing conditions in the oceans, mean that we have to embrace the global nature of the challenge facing this critical resource.

One of the foundational tenets of our successful domestic fisheries management is a reliance on sound, verifiable science. While the news and statistics surrounding illegal, unregulated, and unreported fishing is certainly dire, I want to make sure that the science supporting those facts is accurate, so appropriate action can be taken without penalizing illegal seafood industry.

I look forward to hearing thoughts and solutions from our distinguished panel members this morning.

With that, I want to thank all of our witnesses for being here today and now recognize the Ranking Member for any opening statements she may have.

**STATEMENT OF HON. TAMMY BALDWIN,  
U.S. SENATOR FROM WISCONSIN**

Senator BALDWIN. Thank you, Mr. Chairman.

This hearing is timely and it responds to pressing challenges that have economic, ecological, and security implications.

Our oceans and fisheries are under siege from over-fishing; illegal, unreported, and unregulated fishing; as well as climate change and ocean acidification. These pressures are diminishing fish stocks around the world and changing where fish populations are found.

Rising nationalism is another ingredient in this stew. Tensions are building on the high seas and in territorial waters. Experts are warning that we're entering an era of natural resource conflict where wars will be fought over fish.

The United States is a major player in the world fishery industry. We harvest five million metric tons of fish each year, more than any other country in the world, besides China and Indonesia. The U.S. fishing industry is valued at \$250 billion annually and it supports 1.3 million jobs.

After key commercial species, like cod, flounder, and haddock, in New England collapsed in the 1980s and 1990s from over-fishing, we got to work; and through comprehensive Federal fisheries legislation, we have become a global leader in fisheries management.

The Magnuson-Stevens Fishery Conservation and Management Act of 1976, as improved by major amendments in 1996 and 2006, has helped 44 once-depleted fish species recover since 2000. It also put over-fishing in U.S. waters at an all-time low.

As a significant fishing power, a key influencer in global fishing industry, and a major market for imported seafood products, we have a responsibility to help sustainably manage global fisheries; not only to feed Americans and ensure our fisheries are economically viable, but also to help maintain global stability and peace with other coastal countries.

Climate change and ocean acidification are exacerbating fishery conflicts. The oceans have already absorbed about 93 percent of the heat created from human-influenced climate change. As a result, our oceans are warming and sea levels are rising.

In addition to heat, the ocean is also a sponge for carbon dioxide, and has absorbed about a quarter of manmade carbon dioxide emissions from burning fossil fuels. Ocean acidification is occurring as a result. Research shows that warming temperatures are driving commercial fish species away from the tropics and toward the poles. Sea level rise threatens the boundaries of our exclusive economic zones and ocean acidification impacts fish behavior and the basis of the food web upon which fish populations depend.

The U.S. has the second largest exclusive economic zone in the world, ranging from parts of the Caribbean Sea and the Gulf of Mexico to areas in three oceans: the Atlantic, the Pacific, and the Arctic.

Our EEZ is in a vulnerable condition as climate change, ocean acidification, and illegal fishing threatens our fisheries resources.

The U.S. and the world need to work toward a comprehensive government approach to improving global fisheries management based on sound science.

A recent study published in the premier journal *Science* represents models demonstrating that improved fisheries management can actually help offset the negative effects of climate change on fisheries. We also need to help other countries develop capabilities to effectively police EEZs.

I commend the Senate's bipartisan efforts to address IUU fishing and I also want to thank the U.S. Coast Guard and Navy for fearlessly defending our ports and high seas' interests.

Thank you, Mr. Chairman, for convening this prescient hearing.

Senator SULLIVAN. Thank you, Senator Baldwin, and as you mentioned, these are issues that I think most of us would agree are very bipartisan from the Senate's and the Congress's perspective and it's timely right now.

So I do want to welcome our distinguished panel of witnesses. I'll go through the list here.

Vice Admiral Daniel Abel is the Deputy Commandant for Operations, United States Coast Guard; Dr. Paul Doremus is the Deputy Assistant Administrator for Operations at NMFS in the National Ocean and Atmospheric Administration; Ambassador David Balton is a Distinguished Retired Career Foreign Service Officer who has worked his whole lifetime, professional lifetime on these issues, a good friend of Alaska's, as well, and he is now the Senior Fellow for the Polar Initiative at the Wilson Center; and Dr. Bama Athreya, who is a Labor and Employment Rights Specialist at the United States Agency for International Development.

I want to thank all of you again for being here today. You will have 5 minutes to deliver an oral statement and a longer written statement will be included in the record for each of you.

We'll begin with Vice Admiral Abel.

**STATEMENT OF VICE ADMIRAL DANIEL B. ABEL, DEPUTY  
COMMANDANT FOR OPERATIONS, U.S. COAST GUARD**

Vice Admiral ABEL. Good morning, Chairman Sullivan, Ranking Member Baldwin, and distinguished Members of the Subcommittee.

I thank you for the opportunity to testify today on behalf of U.S. Coast Guard enforcement efforts to deter IUU within areas of U.S. jurisdiction, on the high seas, and in cooperation with our partner nations.

I ask that my written record be entered.

Senator SULLIVAN. Without objection.

Vice Admiral ABEL. Your Coast Guard continues to be ready, relevant, and responsive to strongly support the Administration, this Committee, and Congress, and you have our thanks.

The Coast Guard embraces its role as the lead Federal agency for at-sea enforcement, protecting living marine resources within our exclusive economic zone, and on the high seas.

Coast Guard's at-sea enforcement activities complement and support broader U.S. efforts to combat IUU. U.S. fish stocks are some of the most well managed fisheries in the world. Thus, our re-

sources present an attractive target to foreign fleets engaged in IUU fishing.

The Coast Guard monitors and patrols our EEZ to ensure U.S. fishers have access to their livelihood, can support their families, as well as to deter foreign fishers from exploiting U.S. sovereignty.

Additionally, Coast Guard patrols and monitors key areas of the high seas to protect U.S. interests in valuable migratory fish stocks, as these stocks, such as tuna and salmon, are managed under regional fishery management organizations or RFMOs in which the U.S. participates. The work of these RFMOs helps to close the gaps in governance structures that could be exploited by IUUs.

Given the vast expanse of our EEZ and the high seas, one of our greatest challenges is to place the right asset at the right location at the right time to deter illicit activity.

The Coast Guard leverages its broad legal authorities as well as our linkages to the intelligence community to support these critical patrol efforts. By incorporating intelligence, surveillance, and reconnaissance and, most importantly, highly trained Coast Guard women and men, our service optimizes limited resources to confront the greatest threats.

Success against IUU relies on the Coast Guard's collaboration with inter-governmental partners, particularly Department of State, National Oceanographic and Atmospheric Administration, and, additionally, external partners and other nations and non-governmental organizations, all critical to deterring IUU fishing.

I'd like to highlight a few recent successes and best practices.

Mr. Chairman, as you mentioned, in June of this year, as part of our annual Operation North Pacific Guard, which draws support from an odd collection of shipmates that include the United States, Canada, China, Japan, Republic of Korea, and Russia, with this mix, the Coast Guard interdicted the foreign fishing vessel *Run Da* that was decimating fish stocks with highly illegal high seas drift nets, killing 80 tons of salmon.

The U.S. Coast Guard cooperated closely with Chinese officials, including a ship-rider carried on the Coast Guard cutter, to stop the vessel's illegal activity, turn the vessel over, the crew and the catch, for Chinese prosecution, which currently pends.

In the Western and Central Pacific Ocean, the Coast Guard patrols the high seas, the EEZ, and partner nation EEZs under unique bilateral agreements.

Conducting boarding at seas while vessels are actively fishing is critical in ensuring all aspects of the harvest are legal and conform to international laws.

For this purpose, the U.S. Navy, when able, provides ship capability and capacity to the Coast Guard and partner nation boarding teams under the Oceania Maritime Security Initiative, or OMSI, in the Pacific. These efforts provide the enforcement mechanism for 10 bilateral ship-rider agreements to support these Pacific Island nations.

Off the West Coast of Africa, Coast Guard law enforcement detachments deploy aboard U.S. ships to monitor partner nation assets as part of the Africa Maritime Law Enforcement Partnership or AMLEP run under the U.S. DOD, U.S. Africa Command.

Finally, the Coast Guard's recapitalization efforts are making a significant enhancement. Our new Fast Response cutters have provided great assets against IUU fishing, especially on the Mexico-U.S. border.

FRCs are much more capable than the aging 110s that they replaced, and we're anticipating the soon-to-be built offshore patrol cutters will provide even greater capability to reach the far reaches of our EEZs.

The Coast Guard understands the gravity of this threat, and I look forward to your questions.

Thank you.

[The prepared statement of Vice Admiral Abel follows:]

PREPARED STATEMENT OF VICE ADMIRAL DANIEL B. ABEL, DEPUTY COMMANDANT  
FOR OPERATIONS, U.S. COAST GUARD

Good afternoon Chairman Sullivan, Ranking Member Baldwin, and distinguished members of the Subcommittee. It is a pleasure to appear before you today to discuss the Coast Guard's role, authorities, capabilities, capacities, and recent experiences to deter, prevent, and enforce rules against Illegal, Unregulated, and Unreported (IUU) fishing within areas of U.S. jurisdiction, on the high seas, and in cooperation with partner nations.

Safeguarding living marine resources is vital to U.S. economic interests, and is an enduring Coast Guard mission. Beginning with 19th Century protection of the Bering Sea fur seal herds, and continuing through the post-World War II expansion of global fishing fleets, the Coast Guard has embraced and met its role as the principal Federal at-sea law enforcement agency for the protection of U.S. living marine resources. Today, the Coast Guard maintains a law enforcement presence within our Nation's Exclusive Economic Zone (EEZ); the largest in the world. Protection of the fisheries inside our EEZ is essential to the long-term health of vital fish stocks, being both an environmental and an economic concern. This is not just about holding the U.S. fishing industry accountable to U.S. laws; we provide a critical deterrent from foreign poachers targeting U.S. fish stocks.

However, IUU fishing activity is not just a national issue. The efficiency of contemporary fishing vessels has made strong management and enforcement of fisheries even more important. Fishing activity that does not respect rules adopted at either the national or international level threatens the sustainability of worldwide fish stocks and marine ecosystems, and adversely affects coastal communities by distorting the market and jeopardizing the economic survival of those whose livelihoods depend upon local fisheries. Actors engaged in IUU fishing often exploit the gaps between governance structures and operate in areas where there is little or no effective enforcement presence.

Coast Guard efforts to deter and combat IUU fishing bridge the Service's maritime security and stewardship goals. We partner with the Department of State (DoS), the National Oceanic and Atmospheric Administration (NOAA), remote island nations in the Western Pacific Ocean, North Pacific Partners, and nations along the Atlantic Coast of Africa to combat IUU fishing across the world's oceans.

These goals are driven by national policy, laws (such as the *Magnuson-Stevens Fishery Conservation and Management Act*), and international ocean governance structures (such as U.S. membership within international Regional Fishery Management Organizations (RFMOs)). RFMOs have proven to be effective, critical tools in managing fisheries resources beyond areas of national jurisdiction. For example, the Western and Central Pacific Fisheries Commission (WCPFC), one of the first RFMOs in the world to employ a fully-developed boarding and inspection protocol for high seas enforcement based on the United Nations (UN) Fish Stocks Agreement, has produced a level of governance and cooperation for long-term resource management that was previously not feasible. The Coast Guard is proud to have been involved in the development and negotiation of the protocol, and as a leader in its continuing implementation. Enforcement at the outer reaches of the U.S. EEZ, and within high seas areas managed by RFMOs, is a mission largely conducted by Coast Guard offshore assets. The Coast Guard's aviation and offshore recapitalization program ensures that the service will continue to have the capability and capacity necessary to conduct these critical missions which require significant demands of time and distance, and are often impacted by challenging weather conditions. Since 2008 in the area managed under WCPFC, the Coast Guard has con-

ducted more than 230 high seas boardings and inspections, issuing violations to 66 vessels. To date, in Fiscal Year 2018 alone, the Coast Guard conducted more than 39 boardings, documenting violations on 25 vessels.

Likewise, Coast Guard cutter patrols in support of the UN General Assembly resolution 46/215, which bans the use of large-scale high seas drift nets, also provides IUU fishing deterrence. This summer a Coast Guard cutter, while deployed in support of the annual Operation North Pacific Guard, and operating with support from assets and personnel from multiple partner nations, including China, Japan, Canada, Republic of Korea, and Russia, intercepted the Chinese fishing vessel RUN DA, which was carrying more than 80 tons of illegal catch resulting from high seas drift net fishing. Notably, the Coast Guard cooperated closely with Chinese officials to turn over the vessel, crew, and catch for case adjudication. The Coast Guard looks forward to continuing to lead the global fight against IUU fishing through its participation in a multitude of RFMOs.

Estimates of IUU activity vary, but at least one study found, based on regional surveys, global IUU catch may be valued in the tens of billions of dollars each year. These figures demonstrate the lucrative nature of this activity, and the attraction for transnational criminal organizations, menacing non-state actors, and foreign players to be linked to IUU activity and gray zone operations that may increase regional instability and maritime disorder. The Coast Guard is uniquely positioned to combat these destabilizing forces and uphold the rule of law through our role as a member of the intelligence community, our specialized capabilities, robust bilateral maritime agreements, and our law enforcement authorities. The myriad tools available through our intragovernmental partners position the United States as a global leader who can strengthen the international fisheries enforcement regime, and stop maritime threats to our national interest.

The more we strengthen the sovereignty of other nations, the greater their ability to resist foreign activity that negatively targets their economic resources.

In conclusion, the Coast Guard is an active and effective leader in the global effort to combat IUU fishing, and will continue to work closely with the DoS, NOAA, Non-Governmental Organizations (NGOs), industry, and international partners, to achieve national and international objectives for managing sustainable fisheries worldwide, and for reducing the IUU fishing threat.

The world's oceans contain shared resources, and therefore require an internationally cooperative approach toward their conservation and management. In the face of increasing challenges to global food security and the growing demand for marine resources, the U.S. Coast Guard stands ready to confront IUU fishing to ensure the long-term strategic and economic viability of fish stocks that are fished by U.S. fishers. In doing so, we can increase Maritime Domain Awareness on the high seas, and more effectively respond to a range of transnational threats; upholding global order in the maritime domain and asserting American influence through presence.

Thank you for the opportunity to testify before you today. I would be happy to answer any questions you may have.

Senator SULLIVAN. Thank you, Admiral, and I can assure you this Committee is fully supportive of the Coast Guard's recapitalization efforts. We're trying hard to get the Coast Guard bill passed here soon. So I appreciate that testimony.

Ambassador Balton.

**STATEMENT OF DAVID BALTON, SENIOR FELLOW, POLAR INITIATIVE, WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS**

Ambassador BALTON. Mr. Chairman, Members of the Subcommittee, thank you for this opportunity to testify today. I also ask my written statement appear in the record.

Senator SULLIVAN. Without objection.

Ambassador BALTON. While the focus of this hearing is on ocean fisheries, let's take a quick look at the bigger picture. The world's ocean is not in good shape. It faces three serious and inter-related challenges: unsustainable fisheries, marine pollution, and the series of effects caused by climate change-related challenges, such as ocean acidification.

But this hearing and other events around the world are raising awareness of these problems and this attention has led to some serious commitments and some concrete actions that are aimed at remedying the ocean's ills but we need to do much more.

With respect to ocean fisheries, we must take three steps to achieve long-term sustainability. We must end over-fishing, we must continue to combat IUU fishing, and we must do more to prevent damage caused to marine eco-systems by certain types of fishing practices.

Over-fishing remains a real concern. The percentage of the fish stocks harvested at unsustainable rates has increased steadily in decades, recent decades, and today represents roughly a third of such stocks. If this trend continues, serious consequences for food security and the marine environment will follow.

There's better news concerning efforts to stop destructive fishing practices. The U.S. and other nations have in fact restricted the use of several types of fishing gear and certain fishing practices, thereby reducing excessive bycatch and limiting damage to sensitive marine ecosystems but again we need to do more.

With respect to IUU fishing, which is more closely aligned with the main focus of this hearing, we have had some accomplishments to date. We are not starting from scratch. I just want to lay out a few of the things that have happened in recent years.

The Port State Measures Agreement has entered into force, now has 55 parties, including the United States. Many regional fishery management organizations have taken aggressive action against IUU fishing, including putting IUU vessels on blacklists and denying them fishing opportunities.

Some new RFMOs have come into existence, including in the North and South Pacific, bringing effective management to certain previously unregulated fisheries.

The U.S. and the Russian Federation, at a time of real friction in that relation, managed to negotiate and sign a bilateral agreement to combat IU fishing just a few years ago.

In just a few weeks, the United States, eight other nations, and the European Union will sign a new agreement to prevent unregulated fisheries in the high seas portion of the Central Arctic Ocean, and both the United States and the EU have taken steps to prevent the sale and importation of illegally caught fish in their respective markets. I wish I could say all these things have solved the problem. They do represent important steps, but we need to do some more things and here are five things I recommend.

First, we must promote widespread adherence to and implementation of the Port State Measures Agreement. This is a terrific tool. We need to use it fully and in particular we need to provide developing countries with the resources they need to implement it properly.

Two, we should expand fish traceability programs. In an ideal world, the consumer buying a fish in a restaurant or in a market would know where that fish was caught, who caught it, whether it was caught legally, whether it's the fish it says it claims to be. We are not at that stage yet but we're heading down that road and I would encourage us to do more.

We must get other states to end subsidies that contribute to over-fishing and IUU fishing. You know, we have gotten commitments to do that many times on paper. Now we must insist that these commitments be fulfilled. Most recently, there was a firm commitment to end such subsidies by 2020. Let us secure that.

Fourth, we should keep building a data base, known as the Global Record of Fishing Vessels, Refrigerated Transport Vessels, and Supply Vessels. This is a data base created by the U.N. Food and Agriculture Organization. It is already a good tool. It has uses in combating IUU fishing. We need to work with others to make it truly comprehensive.

And, finally, we must accede to the U.N. Convention on the Law of the Sea. There are a lot of reasons to do this, but one reason is that it will lend greater credence to our efforts to urge others in the fight against IUU fishing.

I wish to commend the sponsors of the bill that would create the Maritime Security and Fisheries Enforcement Act. If I can be of assistance to the Subcommittee as the bill receives further attention, I'd be pleased to do so.

Thank you for this opportunity to testify.

[The prepared statement of Ambassador Balton follows:]

PREPARED STATEMENT OF DAVID BALTON, SENIOR FELLOW, POLAR INITIATIVE,  
WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

Mr. Chairman and Members of the Subcommittee, I would like to thank you for this opportunity to testify in today's hearing focusing on ocean fisheries. My name is David Balton and I am currently a Senior Fellow at the Woodrow Wilson International Center for Scholars, working primarily on issues relating to the two Polar Regions, the Arctic and Antarctica.

As you know, Congress created the Wilson Center fifty years ago as the official memorial to President Wilson. We serve as the Nation's key non-partisan policy forum, fostering independent research and open dialogue to help guide the policy community.

Before I joined the Wilson Center this year, I worked for 32 years at the U.S. Department of State, the last fifteen years serving as Deputy Assistant Secretary for Oceans and Fisheries. In that capacity, I participated in numerous efforts to advance our Nation's interests relating to the oceans, including the effort to secure sustainable ocean fisheries. My testimony today draws largely on my experiences in that regard.

**State of the World's Fisheries**

While the focus of this hearing is on ocean fisheries, and the problem of illegal, unreported and unregulated (IUU) fishing in particular, I believe that it would be useful to take a quick look at the broader picture. The world's ocean as a whole is not in good shape. As highlighted by the series of Our Ocean Conferences launched by the United States several years ago, we face three serious and interrelated challenges in respect of the ocean:

- unsustainable fisheries;
- marine pollution; and
- a range of adverse effects caused by climate change and related phenomena, such as ocean acidification.

The good news is that, through hearings such as this one and countless other events in the United States and around the world, the ocean and its problems are receiving significant attention. This attention has produced some high-profile commitments, and some concrete actions, aimed at remedying the ocean's ills—by nations, international organizations, the private sector, philanthropies, scientific bodies and civil society. Much more needs to be done, however.

With respect to ocean fisheries, we must successfully address three main issues if we are to achieve long-term sustainability: (1) we must end overfishing, which is driven in large part by excess fishing capacity; (2) we must continue to combat IUU

fishing; and (3) we must prevent damage caused to marine ecosystems by certain types of fishing practices. Since the focus of this hearing is on IUU fishing, most of what follows addresses item (2). But first, a few words about items (1) and (3).

### **Overfishing**

The Food and Agriculture Organization of the United Nations (FAO) produces a biennial publication known as the State of World Fisheries and Aquaculture (“SOFIA”), which most experts generally regard as the best source of overall statistics in this field. The 2018 SOFIA reveals that, while the total amount of fish captured in the ocean has remained relatively stable over the past few decades, there are some alarming trends in these capture fisheries:

The state of marine fishery resources, based on FAO’s monitoring of assessed marine fish stocks, has continued to decline. The fraction of marine fish stocks fished within biologically sustainable levels has exhibited a decreasing trend, from 90.0 percent in 1974 to 66.9 percent in 2015. In contrast, the percentage of stocks fished at biologically unsustainable levels increased from 10 percent in 1974 to 33.1 percent in 2015, with the largest increases in the late 1970s and 1980s. In 2015, maximally sustainably fished stocks (formerly termed fully fished stocks) accounted for 59.9 percent and underfished stocks for 7.0 percent of the total assessed stocks.

In other words, overfishing remains a real concern. The percentage of fish stocks harvested at unsustainable rates has increased steadily in past decades and today represents roughly a third of such stocks. If this trend continues—and unless further action is taken to reduce overfishing and excess fishing capacity, we should expect it to continue—serious consequences for food security and the marine environment will follow.

### **Destructive Fishing Practices**

Over the past 25 years, the United States and other nations have restricted the use of several types of fishing gear and certain fishing practices with the potential to cause significant harm to the marine environment. That harm may include, among other things:

- excessive bycatch, particularly of juvenile fish and species at risk such as seabirds, sea turtles, marine mammals; and
- damage to sensitive areas such as seamounts, hydrothermal vents and other vulnerable marine ecosystems.

The United States can point to some real successes in this endeavor. For example:

- we championed an initiative to prohibit the use of large-scale driftnets on the high seas;
- we led the effort to reduce the mortality of dolphins in the purse seine tuna fisheries of the Eastern Pacific Ocean;
- we prompted other nations to use turtle excluder devices, thus reducing sea turtle mortality in their shrimp trawl fisheries;
- we pushed the United Nations and regional fisheries management organizations (RFMOs) to limit bottom trawling operations in areas known to have vulnerable marine ecosystems; and
- we have secured bans on shark-finning and pursued sustainable shark fisheries.

Again, more needs to be done in this space, particularly to reduce the mortality of endangered species in certain fisheries.

### **IUU Fishing**

Even in cases where governments, individually or collectively, have set responsible limits on the harvest of marine fish and have enacted or adopted other necessary management measures, some fishers violate those rules. The term “IUU fishing” has come to represent a wide range of activities that undermine sustainable fisheries.

I have seen any number of estimates of the amount of IUU fishing taking place and of the value of illegally harvested fish. My own view is that those estimates are probably not reliable, simply due to the difficulty of obtaining hard data on this topic. Nor can we know for certain whether the overall amount of IUU fishing is increasing or decreasing. What I do feel safe in saying is that IUU fishing remains a serious threat to fisheries worldwide.

Over the past two decades, nations have taken many steps—at the global, regional, and national levels—to combat IUU fishing. To highlight just a few:

- As part of Agenda 2030, the United Nations adopted Sustainable Development Goal 14, which includes the following target:

By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

- The Port State Measures Agreement (PSMA), negotiated under the auspices of the FAO, has entered into force and now has 55 parties, including the United States. Meetings of the parties to the PSMA have started to take place, with the aim of ensuring effective implementation of its provisions. One key to this effort will be to provide developing countries with the training, expertise and resources they need to prevent illegally caught fish from being landed, transshipped, packaged or processed in their ports. I am aware that the United States is actively engaged in such capacity building efforts, providing both financial and technical support.
- Another critical step will be to facilitate the exchange of information about IUU fishing activities—among States, RFMOs, and others—that the Agreement envisions.
- Many RFMOs have taken aggressive action to address IUU fishing, such as the creation of “black lists” of IUU vessels that are denied fishing opportunities, stronger requirements on the monitoring, control and surveillance of vessels, institution of trade-tracking and catch-documentation schemes, etc.
- A number of new RFMOs have come into existence in the past decade or so, including in the North Pacific and South Pacific, with the aim of bringing effective management to certain previously unregulated fisheries.
- In 2015, the United States and the Russian Federation signed a bilateral agreement to combat IUU fishing. Despite serious friction in the U.S.-Russian relationship on other matters, this agreement is allowing the agencies of both governments to cooperate more effectively in dealing with IUU fishing, particularly in the Bering Sea and North Pacific regions.
- In early October, the United States, eight other States and the European Union will sign the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean.
- Over the past few years, both the United States and the European Union have instituted a variety of controls to prevent the importation and sale of illegally harvested fish in their respective markets.

I wish I could say that these actions, and others like them, have solved the problem of IUU fishing. Although they constitute significant and commendable efforts—and reflect a remarkable degree of political will of many nations to address this problem—we need to do more.

### **Next Steps in Combatting IUU Fishing**

#### *1. Promote widespread adherence to, and full implementation of, the PSMA.*

The entry into force of the Port State Measures Agreement in 2016 represented a true milestone in the fight against IUU fishing. It gave the international community, at the global level, its first legally binding tool with which to prevent illegally harvested fish from entering the stream of commerce. Now we must ensure widespread adherence to, and full implementation of, this key treaty. That the United States is a party to the PSMA gives us the legitimacy our Nation needs to work with others in doing just that.

At this stage, I recommend a focus on three things simultaneously. The United States should:

- Encourage more States to join the PSMA, particularly developing States whose ports are used often by vessels for landing, transshipping, packaging and processing fish. Some significant States that currently remain outside the PSMA are China, Brazil and Mexico.
- Contribute further expertise and resources to developing States, directly and/or through the FAO, both to help those States that are already parties to the PSMA implement its requirements and to encourage other developing States to join and implement the PSMA.
- Support FAO in creating a global mechanism to facilitate the exchange and publication of information relating to the PSMA, which will, among other

things, help States determine whether particular vessels seeking entry into their ports have engaged in or supported IUU fishing.

*2. Expand fish “traceability” programs.*

In an ideal world, a consumer seeking to buy a fish in a market or to order a fish in a restaurant would have access to the information necessary to know where the fish was caught, who caught the fish, that the fish was caught in accordance with applicable rules and that the fish is actually the species that the seller claims it to be. Although we are still many years away from living in such a world, we have begun to take steps to improve the “traceability” of fish products from the moment of harvest to final sale.

We should continue down this road. To do so effectively, the United States Government will need to collaborate not only with other governments and international organizations, but also with many partners in the seafood industry and civil society. I note that quite a few industry and other non-governmental groups in the United States are already working actively in this regard. It also appears that many U.S. consumers are willing to adjust their purchasing behavior in favor of buying fish that they know have been caught legally and sustainably.

*3. End subsidies that contribute to IUU fishing.*

For years, the United States and other like-minded nations have sought to create a strong set of international rules to end harmful subsidies to the fisheries sector, subsidies that exacerbate overfishing and contribute to IUU fishing. We have repeatedly secured commitments on paper to do just that, including in Agenda 2030. And yet, final agreement on these “disciplines” on fisheries subsidies has eluded our grasp. We should demand that all States fulfill the pledge they made in Sustainable Development Goal 14 to end such subsidies by 2020.

*4. Build the Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels.*

This database, constructed by FAO with the support of many States and other entities, contains accessible information about vessels engaged in fishing and related activities. That information includes registration, vessel characteristics and ownership, previous vessel names, previous owners and operators, authorizations to engage in fishing and related activities, history of compliance, etc. Clearly, the availability of such information will aid in the fight against IUU fishing. For example, States will be able to use the Global Record in helping to determine whether to allow a vessel seeking access to its ports to do so.

FAO released the Global Record earlier this year. It is accessible at: <http://www.fao.org/global-record/information-system/en/>. The database currently includes information on more than 8,400 vessels, uploaded by 49 States, including the United States. But it is still a work in progress. The United States will need to work with others to continue building the Global Record, and to keep all of its information up-to-date, with the goal of making it truly comprehensive.

*5. Accede to the Law of the Sea Convention.*

The United States has been a prominent player in the worldwide effort to combat IUU fishing despite the fact that we have not adhered to the basic international instrument on ocean governance, the 1982 Convention on the Law of the Sea. It is not at all clear, however, that we will be able to maintain a leadership role as a non-party to this treaty.

The most compelling reasons for the United States to join the Convention concern the benefits that that the United States would reap regarding enhancement of our national security interests, recognition of the outer limits of our continental shelf, and the ability to sponsor U.S. companies to engage in deep seabed mining.

But joining the Convention would also lend greater legitimacy to our efforts to urge others in the fight against IUU fishing. Today, other nations reluctant to join the PSMA can point to our non-adherence to the LOS Convention and say that we are being hypocritical. China, for example, makes this point when our government raises concerns about Chinese behavior, including allegations of IUU fishing by Chinese vessels, in the South China Sea.

**Preliminary Comments on the Maritime SAFE Act**

In late August, a bill was introduced in the Senate called the Maritime Security and Fisheries Enforcement Act, or Maritime SAFE Act. I commend the sponsors of this bill for their willingness to take on these issues, and am particularly pleased at the bipartisan nature of this proposed legislation.

The basic purposes of the bill are fully consistent with the needs I perceive to take further action against IUU fishing. I support the intention to improve global data

sharing, to promote international collaboration, to foster implementation of the PSMA, and to strengthen internal coordination on fisheries enforcement here in the United States.

The bill may well undergo change as it moves through the legislative process. If I can be of assistance to this Subcommittee or to others in the Senate or in the House during this process, I would be pleased to do so.

At this early stage, I might simply note that the bill places perhaps too heavy an emphasis on what the United States can do on its own. While there clearly are things that our government should do unilaterally to advance our efforts, real success will lie in working with other nations, particularly developing States that lack the capacity to fight IUU fishing effectively. We will also need to work with those outside of government, including the fishing industry, scientific organizations, environmental NGOs and others.

#### **Conclusion**

Thank you once again for this opportunity to testify. I would be pleased to answer any questions.

Senator SULLIVAN. Thank you, Ambassador, and just one of the issues I wanted to highlight, you mentioned the subsidies and the Trade Promotion Act that passed the Congress a couple years ago. There's a whole new section on trade agreement. Now the U.S. Trade Representative has to go after the illegal trade subsidies of our trade partners. So we're making progress there.

Ambassador BALTON. Thank you.

Senator SULLIVAN. Dr. Athreya.

#### **STATEMENT OF DR. BAMA ATHREYA, SENIOR DEMOCRACY SPECIALIST, BUREAU FOR DEMOCRACY, CONFLICT, AND HUMANITARIAN ASSISTANCE, USAID**

Dr. ATHREYA. Chairman Sullivan, Ranking Member Baldwin, and Members of the Subcommittee, thank you so much for the opportunity for USAID to speak today, and we would also ask that our written testimony be submitted for the record.

Senator SULLIVAN. Without objection.

Dr. ATHREYA. We are particularly pleased to be able to speak to you about a very important topic: the criminal conduct and, in particular, the widespread human trafficking that is connected with the over-exploitation of fisheries.

Under our Administrator, Ambassador Greene's leadership, USAID has reaffirmed its commitment to ending human trafficking in all forms and in all industries around the world. Our experience shows that IUU fishing and human trafficking have common drivers. We believe that we need to address the environmental and human rights challenges together in order to have a stronger and more transformational impact on both the environmental degradation and the human rights violations associated with IUU fishing.

So let me start by just talking for a minute about why this is a development priority for USAID. Seafood is the world's most widely traded food commodity, supporting a \$500 billion global economy. Fisheries and aquaculture assure the livelihoods of 10 to 12 percent of the world's population. More than 90 percent of those are people working in small-scale operations in developing countries.

Fisheries make a significant contribution to food security around the world and again particularly in the developing world. Fish provide more than 3.1 billion people with almost 20 percent of their animal protein.

This is an important underpinning industry for global development, but these gains cannot continue unless we address the over-exploitation and associated criminal activities.

At USAID, ending human trafficking is a priority. Trafficking in persons corrupts global commerce and it threatens global security. Empowering people and communities at risk of human trafficking helps our development objectives by disrupting the cycles that keep people in poverty around the world.

Equally important, we do see well-managed wild fisheries as a development pathway that can support self-reliance; food security; decent work; economic growth; and women's empowerment; and, as noted by a recent National Intelligence Council report, ensuring the economic and food security of vulnerable populations strengthens our own national security.

How widespread is the problem of trafficking in the fishing sector? We and other donors are investing in more and better research about the extent of the problem. One recent study, a prevalence study, done in Southeast Asia by the International Justice Mission, identified up to 80 percent of the migrant workers in Southeast Asia that were interviewed for the study had experienced trafficking at some point in their participation in fishing or as crew on fishing vessels—80 percent. So in that region, at least, trafficking seems to be the norm and not the exception. Clearly, we have to tackle this issue.

USAID has actively focused on the issue of human trafficking in fisheries since 2014 when we raised this problem within the U.S. Government interagency discussions about IUU fishing. We have seen how over-exploitation and illegal exploitation of fishery resources is a driver for labor abuse in fisheries and vice-versa. Scarce fish mean fisheries are less profitable, trips are longer and more dangerous, and fishers are more isolated. These conditions create a pull for labor abuses because ship owners and captains are looking for fishing crews to work under more and more isolated and dangerous conditions.

At the same time, boats crewed by fishers working under these exploitive conditions continue to drive over-fishing and are associated with other illegal behaviors.

For the past few years, USAID has addressed these challenges through our programming and also by acting as a convener within the U.S. Government as well as the broader donor community. We have regularly led meetings on this subject with U.S. Government colleagues from State Department, Commerce Department, Labor Department, Department of Homeland Security, and the U.S. Trade Representative, to ensure that we coordinate our work and identify trends and opportunities to disrupt cycles of human trafficking. We've also facilitated the same types of conversations within the broader donor community, private foundations, bilateral donors, et cetera, both in Washington, D.C., and particularly in Southeast Asia.

We have described some of our key investments in our written submission. I just want to make a few broad points about our portfolio here. One major theme in our programs is bringing stakeholders together. For example, in our recently launched Seafood Alliance for Legality and Traceability, we are directly investing in

collaboration. The initiative itself is a partnership with the Packard Foundation, Moore Foundation, and Walton Family Foundation, and it is a global alliance for knowledge exchange and action to promote legal and sustainable fisheries through improved transparency in seafood supply chains. We believe transparency and traceability will directly benefit workers themselves—workers on boats—by making invisible people visible.

Technology for the detection of crimes at sea is another consistent theme in our programming. Through USAID's Supply Unchained Initiative, we have solicited innovative approaches to addressing labor exploitation on boats by using technology to connect directly with workers and allowing for the real-time reporting of problems and abuses. This is also linked with our approach to sustainability in the seafood sector. We've integrated labor concerns, for instance, into our Oceans and Fisheries Partnership, which is promoting electronic catch documentation to improve fisheries management for sustainability and biodiversity to improve biodiversity. But the electronic catch documentation traceability systems being developed can be dual purpose. They can also help provide visibility in terms of the workers on the boats.

In closing, we'd like to highlight once again the importance of the whole-of-government approach to this issue. No single organization can solve these complex and inter-related challenges and we have benefited enormously from the insights we've received from NOAA, State Department, Labor Department, Justice Department, and so many other colleagues.

In turn, we hope USAID's programs support our colleagues' priorities on law enforcement, trade, and regulatory fronts. We believe solutions are possible if we all work together.

Thank you once again for your time and I look forward to your questions.

[The prepared statement of Dr. Athreya follows:]

PREPARED STATEMENT OF DR. BAMA ATHREYA, SENIOR DEMOCRACY SPECIALIST,  
BUREAU FOR DEMOCRACY, CONFLICT, AND HUMANITARIAN ASSISTANCE, USAID

Chairman Sullivan, Ranking member Baldwin, Members of the subcommittee, thank you for inviting me to speak to you today about an important issue that touches upon our work: the criminal conduct arising from overfishing that has led to severe human rights violations, in particular widespread human trafficking. We appreciate the importance of working across the U.S. government to end the exploitation of resources and people.

USAID is committed to combating human trafficking in all forms and industries around the world. A prevalence study conducted by a USAID partner in Thailand, Issara Institute, revealed that in the research area, nearly 80 percent of the fishing vessel workers may have been trafficked. Our experience shows that Illegal, Unregulated, and Unreported (IUU) fishing and human trafficking have common drivers and USAID understands that addressing environmental and human rights challenges together creates stronger and more transformational impact on both sectors.

At USAID, ending human trafficking is a priority. Trafficking in persons corrupts global commerce and threatens global security. Empowering people and communities at risk of exploitation disrupts cycles of poverty. We also see well-managed wild fisheries as a development pathway that can support self-reliance, food security, decent work, economic growth, and women's empowerment. I'd like to highlight some of our findings and programs.

People are surprised by the scale of the seafood sector globally. Seafood is the world's most widely traded food commodity, supporting a \$500 billion global economy. They are a significant source of foreign currency earnings for many developing countries, providing net export revenues of US\$ 42 billion in 2014, higher than other major agricultural commodities—including meat, tobacco, rice and sugar—

combined. The *Food and Agriculture Organization (FAO) estimates* that fisheries and aquaculture assure the livelihoods of 10–12 percent of the world’s population with more than 90 percent of those employed by capture fisheries working in small-scale operations in developing countries. A recent study suggests that 50 percent of seafood workers are women, often engaged in post-harvest processing.

Finally, fisheries make a significant contribution to food and nutrition security, particularly in developing countries. Fish provide more than 3.1 billion people with almost 20 percent of their animal protein. But maintaining and enhancing these benefits requires us to unwind the unvirtuous spiral we’ve described by creating the reverse situation where sustainable fisheries support decent work.

USAID has actively focused on the issue of human trafficking in fisheries since 2014, when we raised this problem within U.S. Government interagency discussions about IUU fishing. We have seen how *overexploitation and illegal exploitation of fishery resources is one of the drivers for labor abuse in fisheries*. Scarce fish means fisheries are less profitable, trips are longer and more dangerous, and fishers are more isolated. These conditions create a “pull” for labor abuses as ship owners and captains look for fishing crew to work under poor conditions. At the same time, boats crewed by fishers working under these exploitive conditions continue to drive over-fishing and are also associated with illegal fishing behaviors.

*For the past few years, USAID has been an influential convener within the government as well as the broader donor community.* We have regularly convened U.S. Government colleagues from State, Commerce, Labor, Homeland Security, and the U.S. Trade Representative to coordinate our work and identify trends and opportunities; and we’ve facilitated a number of events with the broader donor community in both Washington, D.C. and in Southeast Asia. As a result, USAID investments have been consistently aligned with broader U.S. government priorities in this area, and with the programmatic investments of other funding agencies and private donors.

In developing our programs we coordinate closely with other U.S. agencies that also address this issue, including State/JTIP and Department of Labor’s Bureau of International Labor Affairs. We also coordinate with other donor agencies.

Indeed one of our main projects, the Seafood Alliance for Legality and Traceability (SALT) is an example of how we are directly investing in collaboration. The SALT initiative is a partnership with the Packard Foundation, Moore Foundation and Walton Family Foundation to form a global alliance for knowledge exchange and action to promote legal and sustainable fisheries through improved transparency in seafood supply chains. SALT brings together the seafood industry, governments, civil society groups, academics and other stakeholders to accelerate learning and support collaboration on innovative solutions for legal and sustainable seafood, with a particular focus on traceability—the ability to track the movement of seafood through supply chains. The program has held three global workshops since its launch in October 2017, each of which have included human rights activists and experts working to end human trafficking in this sector. Going forward, specific activities will be driven by the collective recommendations from these workshops. We believe new transparency and traceability solutions will directly benefit workers on boats, as participants stated in our most recent workshop in Bangkok, by “making the invisibles visible.”

Technology for the detection of crimes at sea is a consistent refrain in our programming. We have investments in tech-enabled detection programs to address labor exploitation and to improve fisheries management to achieve ecological sustainability and conserve marine biodiversity. Our key programs in these areas are focused on Southeast Asia, which produces 50 percent of the world’s seafood and is recognized as a hotspot for human trafficking in fisheries.

I’d like to describe two relevant projects using technology to detect human trafficking at sea. *Golden Dreams*, implemented by Thailand-based Issara Institute and also supported by the Walmart Foundation, uses social media to connect migrant workers at risk with each other through a Burmese-language smartphone app, to revolutionize safe migration, jobseeker empowerment, ethical sourcing due diligence, and anti-human trafficking. The app serves as a platform for learning and exchanging information, reviews, ratings, comments, and advice about employers, recruiters, and service providers, in both home and destination countries.

*The IM@Sea project*, implemented by the International Labor Rights Forum (ILRF) in partnership with Iridium Go! explores how satellite-based vessel-tracking technology can advance U.S. efforts to identify and counter human trafficking in the global fishing industry. With narrowband satellite devices, video cameras, data collection tools, and a risk assessment system, ILRF and IM@SEA partners tested a sophisticated, cost-effective way to generate labor and environmental risk profiles on two fishing vessels with a small trial set of crew. This project recognized that trust

is as important as technology, and built a protocol, including binding agreements with vessel owners, that can be replicated to foster more ethical practices on fishing vessels.

On the sustainability side, the *Oceans and Fisheries Partnership* is a collaboration between USAID and the Southeast Asian Fisheries Development Center (SEAFDEC) that works to strengthen regional cooperation to IUU fishing, promote sustainable fisheries and conserve marine biodiversity in the Asia-Pacific region through the development of transparent and financially sustainable Catch Documentation and Traceability (CDT) systems to help ensure that fisheries resources are legally caught and properly labeled. The program has documented labor conditions at both its main project sites, and is exploring ways to integrate labor practices into its approach.

I'd like to share one final example of our integrated approach to this issue: *USAID in Ghana* is addressing the challenge of child labor in fishing, particularly on Lake Volta, through its existing Feed the Future program implemented by the University of Rhode Island Coastal Resources Center. A community-based approach targeting parents and guardians who are in poverty and lack knowledge of the negative impacts of child labor is complemented with livelihoods support, resulting in children spending more time in school than fishing. The project partners have also drafted an anti-trafficking policy document for the Ministry of Fisheries and Aquaculture Development (MOFAD) and the Fisheries Commission, in collaboration with Ministry of Gender, Child and Social Protection, to be incorporated into ministries' policies.

In closing we would like to highlight once again the importance of a whole-of-government approach to this issue. No single organization can solve these complex and interrelated challenges. For the past few years, USAID has been acting as a convener of regular discussions among our U.S. government colleagues, other donors, and other stakeholders to ensure that our investments to address human trafficking in the global fishing sector effectively leverage, and wherever possible partner with, other allies working on these issues. Our programs have benefited enormously from the insights we have received from NOAA, State Department, Labor Department, Justice, Department of Homeland Security and so many other colleagues. In turn we hope that our programs are now better aligned with our colleagues' priorities on the law enforcement, trade and regulatory fronts. We believe solutions are possible if we all work together. Thank you again for your time, and I look forward to your questions.

Senator SULLIVAN. Thank you, Dr. Athreya.  
Dr. Doremus.

**STATEMENT OF DR. PAUL DOREMUS, DEPUTY ASSISTANT  
ADMINISTRATOR FOR OPERATIONS, NATIONAL MARINE  
FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE**

Dr. DOREMUS. Good morning, Mr. Chairman, and Members of the Subcommittee. Pleased to have the opportunity to testify before you today and likewise ask that my written testimony be accepted into the record.

Senator SULLIVAN. Without objection.

Dr. DOREMUS. Thank you, Mr. Chairman.

The United States is a global leader in sustainable seafood and is committed to preventing illegally harvested or fraudulently marketed fish from entering the global stream of commerce.

Fourteen Federal agencies have a role in implementing U.S. actions to combat IUU fishing and seafood fraud domestically as well as internationally. Interagency coordination of these efforts has been managed through a Working Group on IUU Fishing and Seafood Fraud, co-chaired by NOAA and the State Department.

The working group coordinates actions to combat IUU fishing, strengthen enforcement cooperation, enhance partnerships, and implement a risk-based traceability program for seafood entering into U.S. commerce.

The National Security Council identified combating IUU fishing as one of this Administration's environmental priorities and, in fulfillment of this priority, NOAA engages in international cooperation and assistance with a particular emphasis on providing training and strengthening efforts to combat IUU fishing in foreign countries. These activities promote maritime security through increased monitoring, control, and surveillance. NOAA, in partnership with USAID, the State Department, U.S. Naval Forces Africa, and the U.N. Food and Agricultural Organization, has been engaged in the capacity of building initiatives around the world.

In June 2016, the Agreement on Port State Measures entered force. The U.S. supports successful international implementation of the Port State Measures Agreement because assisting nations with implementation ultimately will reduce the level of IUU fish products being landed and exported around the world. To this end, the Office of Law Enforcement in the National Marine Fisheries Service developed and has been delivering an international training program for providing technical assistance to global partners.

NOAA also works to combat IUU fishing pursuant to domestic authorities. The Magnuson-Stevens Fisheries Conservation and Management Reauthorization Act of 2006 requires NOAA to identify countries whose vessels engage in IUU fishing in a biennial report to Congress. Once NOAA identifies such a nation, we consult with them to encourage appropriate corrective actions which, if not taken, can lead to a negative certification and prohibitions from importing certain fisheries products into the United States.

Finally, the U.S. also is a leader within the Regional Fisheries Management Organizations on monitoring, control, and surveillance efforts needed to combat IUU fishing. Through these organizations, we're working closely with countries around the world to develop strong enforcement tools and management measures.

For NOAA, one of the most significant recent program developments is the Seafood Import Monitoring Program. This program establishes for imports of certain seafood products the reporting and recordkeeping requirements needed to prevent IUU fish, fish products, and misrepresented seafood from entering U.S. commerce. Through these requirements, the Seafood Import Monitoring Program provides additional protections for our national economy, global food security, and sustainability of our shared ocean resources.

It helps level the playing field for fishermen and seafood producers around the world who play by the rules. This is a risk-based traceability program requiring the importer of record to report data and retain records that allow for tracking of products from the point of harvest to the point of entry into U.S. commerce.

By direction of the 2018 Appropriations Act, shrimp and abalone must now comply with the Seafood Import Monitoring Program's requirements by December 31 of this year. We will require foreign shrimp and abalone seafood products to be accompanied by harvest and landing data, and chain of custody records when entering the United States.

NOAA also is establishing an analogous domestic program for reporting on shrimp and abalone aquaculture to include those species in SIMP. In addition, NOAA's implemented a number of inter-

national catch documentation and trade programs designed to prevent illegal trade in seafood products.

On the enforcement front, both NOAA and the Department of Commerce are strongly committed to preventing IUU fish and fish products as well as fraudulently labeled seafood from entering the United States. We have begun to explore ways to improve enforcement. Opportunities include administrative subpoena authority, which would increase NOAA's ability to get information it needs to support investigations involving importation of IUU fish products, including documents related to the storage, processing, packaging, and transport of fish. In addition, the ability to share information, including with other international organizations, is an important element in combating IUU fishing.

Finally, to effectively address trafficking in IUU fish and fish products, NOAA needs clear prohibitions on the submission of false information related to shipments of fish.

To conclude, combating IUU fishing is a priority for this Administration. NOAA is undertaking a variety of strong actions and initiatives to help level the playing field for U.S. industry, ensure public confidence in U.S. seafood, and promote maritime security.

I look forward to working with members of the Subcommittee and your staff on actions needed to counter IUU fishing.

Thank you for the opportunity to testify. I'll be happy to answer any questions.

[The prepared statement of Dr. Doremus follows:]

PREPARED STATEMENT OF DR. PAUL DOREMUS, DEPUTY ASSISTANT ADMINISTRATOR FOR OPERATIONS, NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

### **Introduction**

Good morning, Chairman Sullivan, Ranking Member Baldwin, and Members of the Subcommittee. My name is Paul Doremus and I am the Deputy Assistant Administrator for Operations within the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) in the Department of Commerce. Today, I will describe the agency's work to combat illegal, unreported, and unregulated (IUU) fishing and seafood fraud as well as the nexus between our work and maritime security. The United States is a global leader in sustainable seafood and is committed to preventing illegally harvested or fraudulently marketed fish from entering the global stream of commerce.

As a result of sound science, strong management programs, and enforcement controls, the United States has successfully reduced domestic overfishing to its lowest level in decades and rebuilt a record number of historically depleted domestic stocks. IUU fishing and seafood fraud undermine these efforts. Entities that engage in IUU fishing circumvent conservation and management measures and avoid the operational costs associated with sustainable fishing practices. IUU fishing also undermines the reputation of legitimate fishing and seafood operations and the consumer confidence on which they rely. Because the United States imports more than 90 percent of its seafood, NMFS works to ensure that this high demand for imported seafood does not create incentives for illegal fishing activity. Some countries are overwhelmed by the increasing demand for their fisheries products, while many lack the necessary management and/or enforcement capacity to sustainably manage their marine resources. Furthermore, the way other countries manage our shared marine resources can directly affect the status of fish stocks of importance to the United States. Thus, the United States has a critical role in promoting the consumption of sustainable and legally caught seafood.

### **IUU Fishing and Seafood Fraud—Definitions and Clarifications**

IUU fishing encompasses a wide range of activities. In general, illegal fishing refers to fishing activities conducted in contravention of applicable laws and regulations, including those adopted at the regional and international level. Unreported

fishing refers to fishing activities that are not reported or are misreported to relevant authorities in contravention of national laws and regulations, or reporting procedures of a relevant regional fisheries management organization (RFMO). Unregulated fishing occurs in areas, or for fish stocks, for which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law. Fishing activities are also unregulated when occurring in the management area of a RFMO by vessels without nationality, or by those flying a flag of a State or fishing entity that is not party to the RFMO in a manner that is inconsistent with the conservation measures of that RFMO.

In general terms, seafood fraud is “the act of defrauding buyers of seafood for economic gain.” Seafood fraud occurs in a variety of different ways—from intentional mislabeling and species substitution, to falsifying trade documentation, to short-weighting product (charging consumers more for less product). Regardless of the manner in which the fraud occurs, seafood fraud is illegal, undermines confidence in the marketplace, and can have serious negative consequences for fisheries resources, fishermen, the seafood industry and consumers. IUU fishing and seafood fraud can overlap when the origin or species of a seafood product is fraudulently labeled in an effort to conceal IUU fishing activity, such as hiding that it is a protected species or that it was harvested illegally from a protected area.

#### **Current Scope of Our Work**

Fourteen Federal agencies have a role in implementing U.S. actions to combat IUU fishing and seafood fraud, both domestically and internationally. Interagency coordination on these efforts has been managed through an interagency working group on IUU Fishing and Seafood Fraud, co-chaired by NOAA and the State Department. The working group coordinates the implementation of a suite of actions to improve international tools to combat IUU fishing, strengthen enforcement cooperation both domestically and internationally, enhance partnerships with industry and other stakeholders, and implement a risk-based traceability program for seafood entering U.S. commerce.

The National Security Council identified combating IUU fishing as one of this Administration’s international environmental priorities, under the Combating Conservation Crimes initiative. The initiative calls for NOAA to promote adoption and implementation of global and regional counter-IUU fishing measures, support the provision of technical assistance to developing States, strengthen interagency collaboration to combat IUU fishing, implement the Seafood Import Monitoring Program, and accelerate the development and use of innovative technologies to detect and deter IUU fishing.

In fulfillment of this Administration’s initiative to combat IUU fishing, NOAA engages in international cooperation and assistance, with particular emphasis on providing training to strengthen efforts to combat IUU fishing and trafficking of IUU fish products. These activities promote and enhance maritime security through increased monitoring, control, and surveillance of fishing activities. NOAA, in partnerships with the U.S. Agency for International Development (USAID), State Department Bureau of International Narcotics and Law Enforcement Affairs, U.S. Naval Forces Africa, and the Food and Agriculture Organization of the United Nations, has been engaged in capacity building initiatives around the globe, including Africa, Southeast Asia, Latin America and the Caribbean. Since 2008, the U.S. Coast Guard and NOAA, in partnership with the State Department and USAID have conducted numerous workshops across Southeast Asia on combating IUU fishing and implementing fisheries law enforcement best practices. Since 2013, NOAA has also collaborated in efforts to train African fisheries management and enforcement officials, as well as prosecutors. The purpose of these workshops is not only to strengthen fisheries enforcement and prosecution, but to promote interagency cooperation and regional coordination.

In June 2016, the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA) entered force. The United States supports successful international implementation of the PSMA because assisting nations with the implementation of the PSMA will, ideally, reduce the level of IUU fish products being landed and exported from nations around the world. Thus, the NOAA Office of Law Enforcement (OLE) developed an international training program for providing technical assistance to its global partners. OLE’s Port State Measures Inspector Training Program curriculum focuses on the operational aspects of implementing the PSMA with emphasis on roles and responsibilities of PSMA inspectors, methods to detect IUU fishing activity and the ability to conduct thorough fisheries inspections of foreign-flagged fishing and fishing-sup-

port vessels that enter global ports. Likewise, by working to increase awareness and competence of global law enforcement partners to combat IUU fishing and crimes related to IUU fishing (such as human trafficking, documentation fraud, and trafficking in protected fish and wildlife), NOAA seeks to prevent illegal fishing and related activities at the source before the fish and seafood resulting from these activities enter global commerce.

NOAA also works to combat IUU fishing pursuant to its domestic authorities. The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSA), which amended the High Seas Driftnet Fishing Moratorium Protection Act, requires NOAA to identify countries in a biennial report to Congress whose fishing vessels engage in IUU fishing activities. Once NOAA identifies such a nation, we consult with them to encourage appropriate corrective action. If the Nation does not take appropriate action, it receives a negative certification, and the Nation may be prohibited from importing certain fisheries products into the United States. Since the Act's reauthorization, NOAA has consulted with France, Italy, Libya, Panama, People's Republic of China, Tunisia, Colombia, Ecuador, Portugal, Venezuela, Ghana, Republic of Korea, Mexico, Nicaragua, Nigeria, and the Russian Federation to resolve IUU fisheries issues as required by the Act. In accordance with the Act, every two years NOAA reports to Congress the details of these consultations and other efforts to improve international fisheries governance.

Finally, the United States is also a leader within RFMOs on regional issues related to monitoring, control, and surveillance and efforts to combat IUU fishing, working closely with countries around the world to develop strong enforcement tools and effective conservation and management measures. NOAA provides policy guidance and technical expertise in the development of these tools and measures. NOAA also supports groups working to counter IUU fishing under the framework of existing RFMOs and regional fishery management arrangements, such as the International Commission for the Conservation of Atlantic Tunas and the Western Central Atlantic Fishery Commission. To help advance these efforts, support has been provided for the development of traceability tools and technologies to improve monitoring, control, and surveillance in hot spot regions. To illustrate, grants have been awarded to partners with the aim of improving traceability tools, developing technologies such as mobile software applications to bridge information gaps, and conducting studies to improve knowledge of the international trade and commerce of protected species.

#### **Addressing Seafood Fraud**

The Food and Drug Administration (FDA) is the competent authority to address seafood fraud practices through improper labeling and other statements or claims on the label that may mislead the customer once the product enters into U.S. commerce. NOAA's Seafood Inspection Program assists the FDA in administering its authorities under a Memorandum of Understanding with that agency. For example, when seafood products are presented for inspection, identification of mislabeling (to include low net weights, species identification, product integrity and country of origin) is included in the scope of the inspection, when practical. Violations are either corrected through the Seafood Inspection Program's work or referred to the FDA or applicable state authorities for review and final disposition.

#### **Seafood Import Monitoring Program**

The Seafood Import Monitoring Program (SIMP) establishes, for imports of certain seafood products, the reporting and recordkeeping requirements needed to prevent IUU fish and fish products or misrepresented seafood from entering U.S. commerce. Thus, the SIMP provides additional protections for our national economy, global food security and the sustainability of our shared ocean resources. It helps to level the playing field for fishermen and seafood producers around the world who play by the rules. This is a risk-based traceability program—requiring the importer of record to report key data and to retain records that allow for tracking of the product from the point of harvest to the point of entry into U.S. commerce. These requirements, which apply to imports of 13 species and species groups identified as particularly vulnerable to IUU fishing or seafood fraud, went into effect January 1, 2018. Compliance for shrimp and abalone was stayed, however, until a comparable traceability program for domestic aquaculture could be established. Per direction of the 2018 Appropriations Act, shrimp and abalone must comply with SIMP's requirements by December 31, 2018. We will require foreign shrimp and abalone seafood products to be accompanied by harvest and landing data and chain of custody records when entering the United States. NOAA is establishing an analogous domestic program for reporting on shrimp and abalone aquaculture to include these species in SIMP. NOAA also anticipates finalizing a Commerce Trusted Trader Pro-

gram in the coming months, which will offer streamlined reporting and record-keeping requirements for U.S. importers who elect to implement robust internal traceability and auditing measures that meet the counter-IUU fishing and seafood fraud objectives of the SIMP. In addition to the SIMP, NOAA has implemented a number of international catch documentation and trade tracking programs designed to prevent illegal trade of seafood products moving in trade. These include programs for tunas, swordfish, and Patagonian toothfish.

#### **Enforcement Authorities**

Both the Department of Commerce and NOAA are strongly committed to preventing IUU fish and fish products as well as fraudulently labeled seafood from entering the United States. Most prohibitions and enforcement tools currently available to NOAA are focused on harvesting violations within federally-managed fisheries.

NOAA has begun exploring ways to improve enforcement. This analysis includes the areas described below:

- 1) Administrative Subpoena Authority—Administrative subpoena authority would increase NOAA's ability to get the information it needs to support investigations involving the importation of IUU fish or fish products including documents related to the storage, processing, packaging and transportation of fish. While many other agencies have Administrative Subpoena authority to assist in the investigation of suspected violations related to the safety and accurate labeling of a multitude of food items, no such equivalent authority exists for NOAA to do the same for most fish and fish products.
- 2) Data Sharing—The ability to share information (including with other governments and international organizations) is a critical element in combating IUU fishing.
- 3) Additional Prohibitions—To effectively address trafficking in IUU fish and fish products, NOAA needs clear prohibitions on the submission of false information related to shipments of fish (*e.g.*, harvesting vessel, ocean area of catch, species).

#### **Threat detection and evidence gathering**

A number of entities, including non-governmental organizations, have been promoting the use of technology, including satellites and vessel transponders required for maritime safety (*i.e.*, automatic identification system (AIS)), to identify areas of the ocean where suspected IUU activity is taking place. Some of NOAA's polar orbiting satellites have a Visible Infrared Imaging Radiometer Suite (VIIRS) capable of detecting the lights on the high seas which can be associated with fishing vessels. Using these data, a number of private-sector services now offer the ability to see where vessels are and believe this information could be helpful in ending IUU fishing.

Maritime domain awareness (MDA), which is the effective understanding of everything associated with the marine environment that can impact security, safety, the economy or the environment, has long been of keen interest to the United States. While NOAA has a significant interest in MDA, other agencies, like the U.S. Navy, share that interest and have a number of systems that provide MDA. NOAA has worked directly with many of these agencies to focus these tools in the effort to identify and take action on IUU fishing.

However, knowing where fishing vessels are operating is really less than half of the problem. Additional information and evidence of illegal activity is required to bring an enforcement action which can be challenging to collect.

#### **Conclusion**

Combating IUU fishing is a priority for this Administration. As demonstrated in my testimony, NOAA is undertaking a variety of strong actions and initiatives to combat these activities to help level the playing field for U.S. industry, ensure public confidence in U.S. seafood, and promote maritime security globally.

I look forward to working with Members of the Subcommittee and your staff on the proposed legislation and actions needed to counter IUU fishing and enhance maritime security.

This concludes my testimony. Thank you again for the opportunity to testify before your Subcommittee today. I would be happy to answer any questions you may have.

Senator SULLIVAN. Thank you, Dr. Doremus.

And we are joined by the Ranking Member of the Full Commerce Committee, Senator Nelson, who I know being the Senator from Florida, has a lot of interest in these issues. So I'm going to offer the opportunity for Senator Nelson to make a brief opening statement.

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

Senator NELSON. Thank you, Mr. Chairman, and to the Ranking Member, thank you.

Indeed, this is a subject matter that is of considerable interest to the entire committee and certainly to my state and what I want to do is underscore a number of things that you all have already said.

Climate change and global mismanagement of fish stocks are driving our oceans to conditions that we've never seen before. Internationally, each coastal fishing nation is responsible for managing the fish stocks that fall within their domestic waters.

This Committee has passed legislation that has allowed the U.S. to be a leader in fishery conservation and management and we stand as that leader for the rest of the world and that was through the Magnuson-Stevens Act and subsequent Acts. We made improvements that have resulted in an unprecedented era of rebuilding over-fished stocks in the U.S.

It has been especially important in the waters around Florida, which is the source of millions of dollars of shrimp, snapper, grouper, spiny lobster, and stone crab that are enjoyed by so many American restaurants and households around the country.

The entire state, from the bait shop to the boatyard, from the airport to the seaport, relies on the waters off our coast.

Another piece of legislation we've worked on in this committee, the Modernizing Recreational Fisheries Management Act, otherwise known as the Modern Fish Act, seeks to improve the Nation's fishery conservation and management laws to expand fishing opportunities for saltwater anglers while making sure we conserve the fishery resources for the future. This legislation received bipartisan approval in this committee earlier in the year and we're hopeful that the Senate is going to act on it soon.

This Committee has worked in a bipartisan way, but at the same time, many coastal nations do not manage their fish stocks sustainably. They don't enforce conservation measures effectively or coordinate management of shared stocks with other fishing nations. You all have testified to this fact and because other nations are not doing their part. These gaps are allowing for the illegal, unreported, and the unregulated fishing that is occurring.

And this global problem appears to be increasing as some bad actors attempt to avoid the stricter fishing rules created to address the declining fish stocks and so the U.S. must continue to lead the way, so that our commercial and recreational anglers can continue to operate and benefit.

While our fishermen are playing by the rules, more must be done to address illegal, unreported, and unregulated fishing that threatens so much of the world fish population. So thank you, Mr. Chairman, for this opportunity.

Senator SULLIVAN. Thank you, Senator Nelson.

Now I'm going to begin the questioning, and I want to ask Admiral Abel.

Sir, I want to get a little bit more in detail on that interdiction of the Chinese fishing vessel *Run Da*. Now as I mentioned in my opening statement, the Chinese are perhaps the largest state sponsor of illegal over-fishing, something that Ranking Member Nelson just touched on.

How does that square with their perceived cooperation in apprehending this fishing vessel? So my point is, they were clearly cooperating on this one, but as a state they're probably one of the big bad actors and problem governments on these topics.

So you and perhaps Ambassador Balton, in your previous job—I know you worked a lot—can you give an example of how this cooperation occurred? Are you confident the Chinese will take appropriate punitive actions against the master of this vessel or do you think this was more of a show versus trying to hide what they're doing more dramatically as a government?

Vice Admiral ABEL. Mr. Chairman, thank you for the question.

It's an interesting collection of folks that work for the Northern Central Pacific. I mentioned our Pacific Guard and the fact it brings together Canadians that are flying out of Japan, Chinese ship-riders, Russian cooperation, as well as the South Koreans, all working together.

Your comment about the approach we take with the Chinese, we certainly cooperate when we can and certainly on this case we did.

When I served up with you up in the 17th District, we also did a similar case of IUU fishing that was a Chinese vessel and there's one before that. So the last three we have had Chinese.

While *Run Da* has not been—they haven't adjudicated yet and they haven't taken final action, the Chinese will destroy the vessel. They will scrap the vessel is the ultimate of what they do with that. So they appear to take it seriously and their cooperation is critical as far as getting onboard the vessel, inspecting the vessel as a Chinese-flagged vessel, to then take action.

So it's an interesting conundrum where we compete and we collaborate at the same time.

Senator SULLIVAN. At the same time from a government perspective, they're very problematic in a lot of these areas?

Vice Admiral ABEL. Yes, sir, and they consume about a third of the world's fish. So certainly as their middle class rises and the protein need goes up, there's going to be more of a demand in China for fish.

Senator SULLIVAN. Ambassador Balton, do you have any comments from your previous job?

Ambassador BALTON. Thank you, Senator.

In my experience, cooperation with China on fisheries issues has improved gradually over time but it's not been linear. We are getting better data from China. There has been some more transparency. China's government has been devoting more resources to management and enforcement of their fishing vessels. All that's on the positive side. I would say they've also been participating more in international efforts.

But, for example, in the South China Sea, a recent arbitrable decision found that there was widespread IUU fishing by Chinese vessels in that sea supported by the Chinese Government.

Senator SULLIVAN. And Chinese Coast Guard and Naval Fleets to protect the IUU fishing?

Ambassador BALTON. So the arbitrable award found. Yes, sir. So it's—

Senator SULLIVAN. That's a real problem, right?

Ambassador BALTON. Well, it's certainly a problem for the countries in that region, yes. The U.S. doesn't have particular fishing interests there, but it is evidence that we have a long way to go with China, yes.

Senator SULLIVAN. Great. Dr. Doremus, I wanted to ask. I know NOAA focuses on a lot of these issues. Are you doing work at NOAA, or is USAID doing work, to better support our partners around the world by enhancing their maritime domain awareness capability and capacity? I'll put that out to either NOAA or USAID witnesses.

Dr. DOREMUS. Thank you, Mr. Chairman, and perhaps we both could comment. From our vantage point, our authority centers most squarely on efforts to tackle IUU fishing. There's clearly a nexus between IUU activities and maritime domain awareness. There's an extensive effort within the Federal Government and outside the Federal Government to improve various types of detection technologies, including use of remote-sensing capabilities and other, more recent, augmentations of those capabilities with software to interpolate fishing behavior and the like. So we have very extensive mechanisms for sharing information across our Federal agency partners that relate to maritime domain awareness, particularly, but not only with the Coast Guard and the U.S. Navy.

Senator SULLIVAN. Dr. Athreya.

Dr. ATHREYA. Yes, I mean, I'll just mention sort of one example. Yes, we are working to strengthen the capacities, particularly in the Asian Region, on maritime domain awareness, but more particularly on solutions that involve transparency and traceability, and working with the RFMOs.

So our Oceans and Fisheries Partnership is a collaboration with the Southeast Asian Fisheries Development Center, SEAFDC, and it working to strengthen regional cooperation to combat IUU fishing through the development of electronic catch documentation and traceability systems that can be implemented throughout the region.

Senator SULLIVAN. Thank you.

Senator Baldwin.

Senator BALDWIN. Thank you.

Admiral Abel, on July 1 of this year, the Chinese Coast Guard moved from being under the State Oceanic Administration to being under the command of its military governing Central Military Commission.

Last month, your Commandant discussed China's investment in and use of its Coast Guard really as a de facto enforcement arm in the South China Sea. Admiral Schultz also noted that the U.S. Coast Guard is in discussion with the Indo-Pacific Command and

that, if asked for assistance, that the U.S. Coast Guard could have a presence in that part of the world next calendar year.

Admiral, is the Coast Guard capable of establishing a presence in the South China Sea, and, if so, what do you see as the Coast Guard's role and how would this impact the operations that the Coast Guard is already doing?

Vice Admiral ABEL. Ranking Member, thank you for the question.

As far as the request from the Department of Defense to support INDOPACOM, we're working with them right now as far as requirements for a potential Coast Guard cutter to deploy over there.

I would say, though, that the Coast Guard already has a fairly large presence on that side of the Pacific in a number of ways. The Oceana Maritime Security Initiative or OMSI is a way that we actually ride Navy ships with our law enforcement authorities to board on behalf of the United States. We also have a number of bilateral agreements where we take ship-riders from other Coast Guards and other Navies to help them enforce the fragile fishing stocks that they have that make it difficult out there. We also help man up every quarter as a regional command center that helps those islands deal with the threat to their fishing.

I would also say two different ways we're also doing something different out there. One would be our Fast Response cutters are showing up in Alaska. They're proving themselves to be very, very robust cutters that are going to extend our reach and our sustainment and our seakeeping to extend that, and, interestingly enough, our Buoy Tender Sequoia just finished a three-week patrol, did 30 international boardings and found on 10 of those that the vessel monitoring system that's required was not properly functioning.

So we're helping these nations patrol their own waters so that the Rule of Law for individual EEZs is consistent from nation to nation.

Senator BALDWIN. Thank you.

Ambassador Balton, global population is expected to exceed 9.7 billion by 2050, with the largest growth coming in Asia and Africa.

Fish consumption has also increased from an average of 9.9 kilograms, 21.8 pounds, per person in the 1960s to over 20 kilograms, or about 44 pounds per person, in 2015. Worldwide depletion of fish stocks could cause nutritional deficiencies in countries that depend upon food from the oceans as a crucial protein source.

So I'm wondering, have you looked into this aspect of the issue and, if so, how can we prevent a potential food shortage and potential international conflicts that would result from food shortage?

Ambassador BALTON. Senator, I think you're right to be worried about these trends, and I don't know that there is a good answer to your question.

I think the best that we can do is to put more of the fish stocks we have on a sustainably fished basis. As has come out in the hearing so far, we, the United States, have done reasonably well at that over the last quarter century or so, and it is a mixed bag internationally.

It's not all doom and gloom, but the tools for sustainable fisheries are now becoming more available, even to developing countries. We

do need to help them become better managers of their fishery resources and we need to reduce the other stressors on the oceans that are also competing in a sense with human needs for these fish stocks.

Senator BALDWIN. Thank you.

Senator SULLIVAN. Senator Wicker.

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

Senator WICKER. Thank you.

Dr. Doremus, on Page 2 of your testimony, you mention the Interagency Working Group on IUU Fishing and Seafood Fraud, chaired by NOAA and the State Department.

Let me ask if we need to expand on that? Senator Coons and I have a bill called The Maritime SAFE Act, which would add to that a whole-of-government approach and it would direct that the intelligence community be included in this working group, as appointed by the Director of National Intelligence.

Are we on to something here? Would it help to be more all-inclusive and take a whole-of-government approach and, specifically, would it help us to add the intelligence community in this effort?

Dr. DOREMUS. Thank you, Senator Wicker, very much, appreciate your support of these efforts.

The Administration is currently reviewing the SAFE Act. I can't comment specifically on that now, but more generally to the inter-agency collaboration that you noted at the outset of your question, we do have very effective cross-agency collaboration.

I think it has been broadly recognized among the panelists here that that's a central component of being able to continue our steady progress against IUU fishing and I do think that that approach—which you're characterizing as a whole-of-government approach—is an essential ingredient of our ability, long term, to be able to set and best use the institutional capabilities that we have among the Federal Government agencies, as well as with the Regional Fisheries Management Organizations and our other government partners around the globe in tackling this problem.

Senator WICKER. Right now, does the intelligence community act as a part of your working group?

Dr. DOREMUS. At this point in time, I think we always have opportunities for improving sharing of information. We do share information through a number of existing channels that do involve intelligence agencies.

Senator WICKER. OK. Well, let me shift then to an issue with Mexico. Mexican crew boats called *lanchez* engage in frequent illegal fishing in U.S. Federal waters, including in the Gulf. They typically run drugs up from Mexico into Texas and then fish their drift nets on boat rides back to Mexico and the proceeds, I understand, help finance ongoing cartel operations.

It's troubling to me, based on information I have, that five times the amount of red snapper are caught in this way—five times more—than my Mississippi legal fishermen are allowed to catch.

How is our cooperation going with the Mexican Government and how can we improve our efforts to combat illegal fishing, particularly by Mexican *lanchez*?

Dr. DOREMUS. Thank you, Senator. This has been recognized as a significant problem for some time, and we've been working very closely both with the U.S. Coast Guard in gathering information about violations, providing that information to the Government of Mexico, and then also working very closely with the Government of Mexico in providing that information and understanding how they are deploying it through their legal authorities to prosecute violators of our laws.

Things are progressing well. We are not in the place we were a number of years ago. I think the signs of progress are very promising. We have shared information and the Mexican Government has shared information with us, charging documents, court proceedings, and documentation of the sanctions that they've levied. So we believe we're moving in a very positive direction on this problem. It will require sustained effort by all of us.

Senator WICKER. OK. Vice Admiral Abel, who owned this *Run Da* ship? Was it privately owned by a Chinese company?

Vice Admiral ABEL. Chinese vessel, sir, returned to the Chinese, and, Senator, your question about intelligence, the Coast Guard has a foot in both camps and certainly we're members of the intelligence community. So in our enforcement activities, we also work with intelligence so that we can levy all of the exquisite capabilities that the United States has on intelligence, large oceans, many targets, sea change, temperatures, and salinities to try to forecast where the illegal activity could be and then the intelligence means to track those. So already we're the interlocutor between the Coast Guard and fishing enforcement and intelligence.

Senator WICKER. OK. But I was asking about this Chinese ship. Is it privately owned, and to follow up on the Chairman's point, why would they help with one privately owned ship and not with others? Do you think they're favorites of the regime? What would the difference be there?

Vice Admiral ABEL. Sir, I'm not sure I have the answer on that one, but I will certainly follow up as far as the actual ownership of the vessel. It was Chinese-flagged, though.

Senator WICKER. Thank you. Thank you, Mr. Chairman.

Senator SULLIVAN. But we don't know if that was state-owned or privately-owned?

Vice Admiral ABEL. I'll take that one for the record, sir.

Senator SULLIVAN. Senator Nelson.

Senator NELSON. To follow that up, the Chinese have twice as many vessels to support their fishing fleet. Coast Guard Captain Jay Caputo has written that the Coast Guard has little capacity to work with other countries, citing the struggles to meet U.S. fisheries enforcement obligations and he notes that about the Chinese fleet.

Do you agree, Admiral, with that assessment?

Vice Admiral ABEL. Senator, I guess I would describe that we have many layers of fishery enforcement. The first, of course, is within our own EEZ, which is enforcing domestic fisheries in our own fleet, making sure it's a level playing field, you know, that folks can get back from supporting their families in a safe manner. We do that. We dedicate a 100,000 hours of boat, cutter, and air-

craft hours every year. Last year, it was up 10 percent, making sure we enforce that. We also look at incursions.

Senator NELSON. And you do that very well.

Vice Admiral ABEL. Yes, sir. So that's one demand on your Coast Guard.

Certainly we do the high seas enforcement, as well, which does include the Chinese threat; and then we work with other nations in their EEZs, like we mentioned, off of Africa or the Pacific Islands.

So if we had more Coast Guard, could we do more patrolling? Absolutely. We're optimistic that the increased range, reach, and endurance of the Fast Response cutters, as well as the offshore patrol cutters, will give us more capability per hull so we can get after this threat.

Senator NELSON. So, Ambassador Balton and Dr. Doremus, climate change and sea level rise are already changing ecosystems and that forces fish populations to move. Some islands in the Pacific may even be close to underwater in another 30 years.

What is it going to mean for sustaining the fish populations and being able to get to them?

Ambassador BALTON. Senator, it's going to be bad news. As I think Senator Sullivan mentioned already, there's evidence that the warming sea surface temperatures are pushing at least some fish stocks from tropical areas toward the poles. We've seen fish showing up in waters off Alaska that are not typically there and stocks even pushing up into the Arctic Ocean for the first time as the Arctic Ocean melts.

The sea surface temperature warming is not the only stressor connected to climate change. There's also acidification, coral degradation, other types of marine pollution. So the oceans are facing a variety of challenges and they need all of which need to be addressed if we're going to achieve sustainability.

Senator NELSON. Doctor?

Dr. DOREMUS. Senator, thank you for your question. We can devote considerable scientific effort to understanding ecosystem dynamics, how these ecosystems are changing, how changes in ocean conditions are affecting the distribution of a variety of living marine resources. These are very complex dynamics.

They're very hard to predict; but we are dedicated to understanding and trying to respond through science-based advice to our management system through the Regional Fisheries Management Councils as aggressively as possible to changing conditions, population size, and distribution and what that means for management decisions and the use of those resources.

Long term, in terms of global fishing supplies, the comment has been—the observation has been made during our proceedings that there are extraordinary pressures for increased seafood consumption, demographically driven pressures, and one of the additional things that we think should be considered, the ability that exists now, and possibly in greater measure, to take advantage of the cultivation of fish through aquaculture techniques to be able to meet some of those supply needs in the future. It can be done sustainably. That might help with the problem, but long term, yes,

sir, there are many changes that we need to respond to that are making the whole equation a lot more complicated.

Senator SULLIVAN. Senator Inhofe.

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

Senator INHOFE. Thank you, Mr. Chairman.

I often say, Dr. Doremus, back when I enjoyed life I was a builder and developer in an area around South Padre Island, Texas. That's a long ways from Oklahoma, but nonetheless I spent a lot of time down there. So I've watched over the years.

What I want to do is get you to expand a little bit more on Senator Wicker's questioning. I've seen times when the red snapper population was great and would go up and down and now you folks got in there and I think have been doing a very good job recently. Recently I was down there, that was when they actually lifted the restrictions they had on fishing for red snapper in that area and it's had just a great—really a great improvement.

One of the problems, though, was with the Mexicans that were coming up and were mass fishing in different ways that were really very harmful. In fact, a lot of them, they were actually just killing a lot of the red snapper because they'd use the nets. They'd disappear. That was really a serious problem. So I assume at one point you put some restrictions on Mexican fishing in those waters and then lifted those restrictions later, or have they been lifted? Explain the process. What do you go through when you make a determination that you need to do something to enhance the fish population, using red snapper as an example? What indications are there when you restrict some of the fishing? What's the process? What do you go through?

Dr. DOREMUS. Thank you, Senator. I think the overarching basis for all of our management decisions and our collaboration with the states on red snapper is based on our assessments of the population size and distribution of red snapper and how that would affect our ability to set different guidelines for the allowable catch through different segments of the red snapper industry.

The presence of illegal fishing by launch activity from Mexico complicates the matter considerably. It undermines the conservation-based measures that are taken through the Gulf Management Council primarily for red snapper and corresponding state efforts.

So we collaborate very closely with Coast Guard on identifying and trying to enforce proscribed fishing activities by those that are not licensed and authorized to fish in or fish outside of our regulatory system.

We provide that information to the Government of Mexico and we work very closely with them to understand how they respond through their domestic laws to—

Senator INHOFE. Do you get cooperation from the Mexican Government?

Dr. DOREMUS. Yes, we have, sir, and that is improving on a regular basis, and we feel it is moving in a positive direction, continued sharing of information, continued verification of practices that the Mexican Government is embarking on will be key to our future success.

Senator INHOFE. Well, anyway, whatever you have been doing is really recent and I wonder if you made any changes at that time. My concern is that we know firsthand about the problems of the Mexicans coming in and not complying with our rules, which I think our domestics pretty much do. Admiral Abel, you've got a big operation down there in that South Padre Island. I've been very familiar with it for many years. What's the process that would involve you to start looking to try to find illegal methods of catching fish by Mexican nationals?

Vice Admiral ABEL. Senator, I appreciate the question. This year, we've seen some record-breaking incursions. We're up to 50 already, which exceeds last year. So we've seen a lot more.

We've stepped up aviation patrols, which then helps the Fast Response cutters get there on scene. Typically, what happens is the vessel is taken to Station South Padre Island. The crew is taken off and handed over to the CBP. They're interviewed for any information that we can get from the crew.

The way the catch is stored on vessel means it cannot be consumed. That is actually destroyed at sea. We wait 45 days for the Mexican Government to ask for their vessel back, 20 years they've never asked for one back, and then the vessel is destroyed. So that is the process we go through but we're seeing increasing levels. But I do know, and I think in 2015 and 2017, Mexico was labeled an IUU country through sanctions.

Senator INHOFE. What does that mean, IUU?

Vice Admiral ABEL. I'd defer to the doctor as far as what that means internationally, but we've documented enough of these cases that it put them on this list.

Senator INHOFE. Well, it does seem to be working, and I'm familiar—I've actually talked to some of the people in your shop down there, and I'm interested in how they coordinate with NOAA and I think you're doing a good job.

The other thing I didn't have time to ask, I will just ask something for the record, because I'm concerned about the rider agreements. I don't quite understand how that works, particularly the agreement we have with China, which there has been concern voiced already, but the Chairman and I were in South China Sea. We were watching what's going on with the development of the Seven Islands and the fact that when you know what's going on there, you can't come to any conclusion other than they're preparing for World War III and so any time we have something like this agreement, it's kind of scary to me.

So I'd like to have you maybe for the record get something back to me on what we can do to avoid problems with countries like China when they're given that opportunity to be in agreement with us.

Good. Thank you.

Senator SULLIVAN. Senator Cantwell.

**STATEMENT OF HON. MARIA CANTWELL,  
U.S. SENATOR FROM WASHINGTON**

Senator CANTWELL. Thank you, Mr. Chairman, and thanks for holding this important hearing. I've followed the comments of our witnesses, but I want to go back to the issue as it relates to fish-

eries enforcement and the need in determining cutters and where they go.

This is such a vital aspect of what we're doing in the Pacific Northwest and I know you still have decisions to make.

Is the Pacific Northwest mission important in those considerations and in determining where the rest of the cutters will go?

Vice Admiral ABEL. Senator, absolutely. As you know, the offshore patrol cutters, the first four we have decided are going to the West Coast, two will go up to Kodiak, Alaska, two will be down at our base in San Pedro LALB, and we're looking at where the next will come.

We have a five-part test where we decide where cutters should go. The first is logistics. The engineers would love to have all the ships together because then you get common maintenance, spare parts, logistics, shore facilities, and the operators.

The second part, of course, would like the opposite. They want to disburse. They want to put them where the mission is, minimize transit time, and make sure you're where the work is.

Next is port. Will the port support it? Does it require dredging, peer interface? People is the next one, spouse employment, schools, available housing, costs of living, and the last part is the environmental impact to make sure we're good there. So that five-part test, we're just beginning to embark on hulls five and six as far as where they will be based on the West Coast, Senator.

Senator CANTWELL. Thank you. But fisheries enforcement is not being met and obviously we want to make sure that that is considered. That's part of this hearing, is how are we going to make enforcement work better and having the resources to do so. It's great that witnesses have been able to articulate about what you can do with Fast Response and we agree and I'd also be remiss if I didn't mention obviously expanding the Arctic mission writ large with icebreakers. We want to make sure that the Coast Guard continues to expand in the Pacific Northwest and the Arctic.

We think this is a very, very important issue. I don't know if you have any thoughts on that.

Vice Admiral ABEL. Ma'am, the presence in the Arctic is critical and where we stand right now is very fragile. We have one and a half icebreakers and I hate saying the *Healy* is a half but it's a medium icebreaker. She doesn't give us assured access year-round to where we need to be.

The Coast Guard is committed to six icebreakers. At least three of those must be large icebreakers and we need one right now, and we certainly look forward to getting the funding that we're seeking and awarding that contract and getting that ship online by 2023 and giving some relief to the *Polar Star* that has served the watch well. She's going to go through a service life extension program in between her annual requirements, which puts us at risk, but our nation has to invest in this national asset, this polar security cutter.

Senator CANTWELL. Thank you. I couldn't agree more. I want to ask about stock assessments, too, and, Admiral Balton, I would ask our Deputy Assistant at NOAA, I know sometimes they're caught in what they can and can't say.

Do we need more money for stock assessments and helping us manage fisheries? To you, Admiral Balton?

Ambassador BALTON. I may not be the best person to answer that. My sense is that relative to most other countries, we do a very good job assessing stocks in U.S. waters. We probably have some of the best science on which to base fisheries management measures here in the U.S.

It's true nationwide but I would say particularly in the Pacific Northwest and off Alaska, I think some of the very best fisheries management in the world takes place around there. Would the scientists and the fisheries managers in the U.S. do an even better job with even more money to do better assessments? The answer is yes, probably that's true. Is that the best use of some added dollars if your concern is a worldwide one? Probably not.

Senator CANTWELL. I heard what you said earlier about the worldwide issue, and I'm a huge supporter of what you said. I think this protein problem is real and one of the easiest layups would be to get the U.S. more involved in helping with better fisheries management around the globe.

In fact, I was able to convince the Chilean Government to come to the University of Washington and hear about the Magnuson-Stevens Act and understand exactly why we're so successful in the Northwest in fisheries management. So I agree wholeheartedly.

Now we probably have a pretty robust debate here in Congress about what the United States' role should be in doing that. You know, I wish someone would help us. I actually think it is meaningful for a lot of political reasons, as well as for stability within regions, but there's nothing that says we can't upgrade Magnuson-Stevens to even more scientific information about stock assessments here in the United States.

So I guess I would like to have both of those goals met because I think that the challenge that you all have articulated as it relates to our oceans, very important that we come up with more science and data to help drive us.

So thank you very much, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Cantwell.

Senator Blumenthal.

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

Senator BLUMENTHAL. Thanks, Mr. Chairman. Thank you all for being here today.

Mr. Doremus, you're in charge of enforcement of the Fisheries Management System, correct?

Dr. DOREMUS. Yes, sir.

Senator BLUMENTHAL. I know you have a connection to Connecticut.

Dr. DOREMUS. I do, indeed.

Senator BLUMENTHAL. So we appreciate your public service and your allegiance to Connecticut and—

Senator SULLIVAN. I'm not sure he stated any allegiance to Connecticut, just for the record, but if you want to question him on that, you can do that.

Senator BLUMENTHAL.—he doesn't have to state it. I can see it in his face.

Senator SULLIVAN. There you go.

[Laughter.]

Senator BLUMENTHAL. But in all seriousness, as you may know, the fishing industry in Connecticut is still vibrant and active but increasingly threatened by a system that appears to most of our fishermen as a cruel and irrational, sometimes ridiculous, joke in their view and there's a lot of evidence to support it.

Quotas on their fishing are enforced. They are compelled to throw back perfectly good fish that they catch as a result of quotas that are based on totally obsolete, out-of-touch limits. They are out-of-touch and obsolete because the fish stocks have moved with water temperatures changing. The changes in water temperatures are due to climate change, a factor out of their control, and so they have to obey quotas and limits set by a system that's enforced against them when abroad the fishing industries of other countries are permitted to catch basically whatever they want, even though there may be rules, there may not be.

The fishing fleets of other countries essentially are free to operate with impunity and are lawless. So we are decimating our fishing industry with a system that seems obsolete in its limits and constraints, although we share the view that over-fishing is a bad thing, and yet they are competing with fishing fleets abroad that seem to be immune from any real enforcement or penalties. That's their view of the world and, frankly, it's my view of the world right now.

So what do we do about that kind of system?

Dr. DOREMUS. Thank you, Senator. This is a very complex issue. I think at root in terms of the issues that you're observing in the Northeast, there are fundamental challenges to responding quickly to the science and the changing distribution of stocks.

Our Fishery Management Councils and our Science Centers and our entire science enterprise is working very aggressively to improve our ability. I think in the end of the day, maintaining the rigor and our science-based management decisionmaking process is the best way to address that.

Senator BLUMENTHAL. But when you say—and I apologize for interrupting, but as you know, our time here is limited. When you say changing quickly, the question is whether there are changes at all. It's not quickly. It seems like it's stuck in some kind of bureaucratic morass, and I recognize there are fishery councils.

Isn't there a fundamental problem with this system under the Magnuson-Stevens Act?

Dr. DOREMUS. In terms of the rapid changes I was referring to, environmental changes that are, I think, putting a lot of pressure on the system, I think structurally it is a sound system.

I speak regularly with our Fisheries Management Councils, with our science community. They understand the challenge of responding quickly. We are seeing unprecedented changes in the populations that we monitor, their size, their distribution, and, yes, sir, we need to get better at the management side responding to those changes. It is a very large problem and it's particularly evident in the Northeast.

On the international front, I think the range of activities and focus areas that have been identified through this hearing, working with other nations to build their ability to detect, enforce, and prosecute illegal fishing is the long-term order of the day. We will continue to work on that through our capacity-building efforts, through our work in international fisheries management organizations of various types, and with our other agency partners who share responsibility for a rules-based system on an international scale.

I do think, as Ambassador Balton recognized, U.S. generally does set the standard for science-based management. Yes, we can improve it, and I think we can do more to help the rest of the world kind of achieve a similarly high bar for sustainable management, particularly as there are such great pressures environmentally and demographically on wild fish resources.

Senator BLUMENTHAL. Well, thank you. I appreciate that the system is complex, but it's really hammering our fishing industry in the Northeast—it's Connecticut, it's Massachusetts, because it's completely stuck. It's not responding to the scientific changes that are occurring.

You've said they are occurring rapidly. I would agree with you, but the system isn't responding rapidly and that is having a real-life impact on people's livelihoods and on the health and welfare and economies of Northeastern states, like Connecticut, Rhode Island, and Massachusetts.

Thank you, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Blumenthal.

And as this Committee works the reauthorization of the Magnuson-Stevens Act, trying to address some of your concerns, which you've raised consistently on this committee, we certainly want to try and work with you on that.

Just a couple additional questions and points. You know, you may have noticed a lot of members on this Committee actually have an overlap with the Armed Services Committee; several of them, including the Chairman of the Armed Services Committee, Senator Inhofe, and Senator Wicker chairs the Subcommittee on the Navy and the Marines. I chair the Subcommittee on Readiness, and just a couple points, Admiral, in particular.

You know, the NDAA the President signed this past year, does call for the authorization of six additional icebreakers, and I think that's exactly what the Coast Guard wants. So that's in the NDAA. It's in the law now. We, of course, have to fund it.

Second, your point on perhaps a permanent deployment of a cutter to the South China Sea, I think it would be important to brief this Committee and the Armed Services Committee. It's an important area, no doubt, but as you know, we also believe there's a lot of demand for the Coast Guard assets in our own waters and I for one would question the wisdom of a permanent deployment of a Coast Guard vessel to the South China Sea when the Navy, in my view, can be doing the job out there but maybe you and the Commandant can brief this committee and the Armed Services Committee on that, if you're looking to do that.

Again, I think I certainly would have some questions about that, but let me get back to just a couple final questions. We have a vote here in a couple minutes, so we're going to have wrap up.

But, Ambassador Balton and really for all the witnesses here, you're hearing a bipartisan skepticism from a number of members and I think frustration with regard to this dichotomy that although our system isn't perfect, we're certainly trying to do a rules-based system within our EEZ.

We do it pretty darn well, although there are challenges. We do it according to science and data, and then we have other countries, China, Mexico, you heard a lot about today, outside the EEZ that are just rampaging globally, and even trying to get within our zone.

So it's frustrating because we think we're doing the right thing and others are not abiding by the rules and we don't have enough enforcement assets.

What are some of the international accords and agreements that the United States is a party to or leads in that help us with this challenge, which is the challenge of other countries? Obviously you can have an EEZ that's well managed and sustainable but, you know, the fish don't pay attention to the 200-mile zone. They're all over the ocean.

Are there gaps in the international agreement regime that can help us or if countries who are international partners just don't want to play and kind of do a double-faced/two-faced approach to this, is that just going to be a continuing source of frustration? What are your thoughts on that? I'll open that up to any of the witnesses.

Ambassador BALTON. Thank you, Senator. I guess I'd start by saying the situation may not be quite as bad as you outline. There are a lot of other countries who do a good job in fisheries management and have proven to be good partners with the United States.

Senator SULLIVAN. Yes, and I think that's a good point, and I appreciate you highlighting that.

Ambassador BALTON. The other thing I would say is that things have actually gotten better at the international level over the course of my time doing this, basically the last quarter century. We now have a better international system, a series of international agreements that are linked, international organizations that are working together more effectively on this. I'm not saying the system is perfect. I'm not saying it's even necessarily good, but it's certainly better than it used to be, and it does give us a series of tools to use.

One that I highlighted in my testimony I'd like to come back to since you asked is this thing called the Port State Measures Agreement. Every fish caught at sea must be landed somewhere to enter the stream of commerce and this agreement requires parties to prohibit the landing or trans-shipment in their ports of illegally caught fish.

If properly implemented, this would go a long way toward helping at least with the IUU problem. There's a lot more I could point to but those are things that come to the top of my mind.

Senator SULLIVAN. Thank you. Anyone else just on that? Doctor?

Dr. DOREMUS. Senator, I would be happy to comment a little bit, and I do fully agree with the observations made by Ambassador Balton.

I would add to that a key element of this is our ability to work with other countries in building their capacity to detect, enforce, and prosecute illegal fishing behavior within their own EEZs. That's where a considerable amount of IUU fishing takes place, through that, plus the strengthening of the Port States Measures Agreement, on an international basis.

We'll do a much better job than we are and it's progressively improving, I think, over time.

Senator SULLIVAN. So you think it might be more of an issue of lack of capacity as opposed to lack of good intentions?

Dr. DOREMUS. I think that that's the considerable part of the problem, yes.

Senator SULLIVAN. OK. Good. Admiral, any thoughts on this?

Vice Admiral ABEL. As far as helping other nations enforce their own EEZ, is that your question, Senator?

Senator SULLIVAN. It's just whether we have gaps on the international regime that addresses a frustration that we have, which is: we seem to be playing by the rules but not all other countries do.

Vice Admiral ABEL. I think helping other nations with their capability and capacity to enforce their own EEZs is critical to this and let me just clarify, sir. The ask from INDOPACOM is for the Coast Guard to do some work for them. There has been no decision to have a permanent presence in the South China Sea. I look forward to briefing you on the Coast Guard work and the DoD work that we'll be doing for INDOPACOM.

Senator SULLIVAN. Great. Thank you. Dr. Athreya, any thoughts on this last question from me?

Dr. ATHREYA. Thank you, Senator, and just coming back to the human trafficking front, one of the things we observe is that it is in fact not just lack of capacity but also lack of political will on the part of governments to enforce actions to address criminalities, including human trafficking, and so from our perspective, we are interested in the challenge of the jurisdictional issues and there's a big gap there in terms of when you identify victims, whose responsibility is it to follow up on the crimes.

The other big problem, which we are supporting and other U.S. agencies are supporting some work to address, is the financial enablers, right. We don't—jurisdiction is one thing when you're talking about the vessel itself. Who are the other enablers in terms of the financial intermediaries, the shell companies that sometimes own the vessels?

So, you know, we think there's actually a big gap and actually our colleagues at State Department's Office to Combat and Monitor Trafficking in Persons are doing some excellent work to support initiatives to do more research on the legal gaps.

Senator SULLIVAN. Great. Thank you for your work in all these areas. It's really important.

Senator Baldwin.

Senator BALDWIN. Thank you.

You actually just touched on my question in terms of the human rights enforcement and labor trafficking enforcement. So I'm going to try to combine two questions into one.

My last question was about future demand for fish with a growing population as well as a population that is consuming more of their protein with fish and seafood.

Dr. Athreya, your explanation of how the environmental impacts that are challenging our fisheries and the human rights work, together—in terms of longer trips at sea and increased isolation was very descriptive and very helpful for me to figure out.

I would think those two factors would really collide to make these problems worse in the coming years and decades.

So I kind of wanted to ask this to the entire panel. Depleted fisheries or unsustainable level of fishing in an area can result in these fishermen and industries putting fishing industry resources, such as vessels and certainly ports to other uses, including illegal ones and including forced labor.

I want to figure out how you work together and cooperate to more effectively prevent participation in these criminal activities to compensate for the lower fish yields and how do you perceive your organization's role in mitigating these threats? Let's start with you, Admiral Abel.

Vice Admiral ABEL. Thanks, Senator. Certainly complex question. Some of the ideas that you have in the SAFE Act as far as better collaboration of the whole of government, some of the things that are already going on, I think it's institutionalizing that and making that formal is certainly a good thing, but as you mentioned, this is a national problem and international problem.

We have to work within non-governmental agencies, science, because it's a world challenge that we have to deal with here, and I think by national agreements, working with other nations to enforce their EEZs, and the fact that we get to a point where nation states respect nation states and sovereignties are protected. I'm also concerned, as far as the national security issue of a \$20 billion illegal enterprise that those funds certainly are going to activities that could threaten our nation, as well.

So sovereignty issues are a concern. You mentioned protein, security, food security is a concern particularly these fragile nations that we need to work with and the last one is the ill-gotten gains from \$20 billion of this illegal activity. I think all three of those are national security issues and we need to view it as such.

Ambassador BALTON. Not much to add, Senator. You are right and as others have testified, there is a link between vessels engaged in illegal fishing on the one hand and other types of wrongdoing at sea, migrant trafficking, human trafficking, drug trafficking, piracy. I think the whole of government approach that is embedded in the Maritime SAFE Act is a good concept to pursue.

Dr. ATHREYA. Thank you so much, Senator, for the question, and our approach to ending this sort of vicious cycle of ships going out further, fish being more expensive to catch, and therefore you've got to cut costs somewhere and you do it by essentially using slave labor.

I mean, the answer to that is to create a virtual spiral in our view and so USAID as a development agency, what we're trying to

do is to really say, and I think many of your colleagues on the panel today have raised this as have my fellow panelists, we have good examples of effective fisheries management.

How do we take those examples and build the capacity of governments that have an interest in sustainable fisheries management and how do we then make that a source of decent employment, decent work for folks, so that kind of interrupts the vicious cycle of continued depletion of resources, continued exploitation of people by providing viable, sustainable alternatives in the long run?

A couple of other things I'll say. It really is very important to us because, you know, USAID has a particular role again in sustaining these positive solutions to problems—very important to us to be working with our colleagues across government on law enforcement efforts because we also need to build the capacity to again disrupt criminal behavior and that is something that we can best do by working with our partners in other agencies to see what we can do.

What our partners around the world can often do is bring the human intelligence. We work with grassroots community-based organizations. We work with RFMOs. They may see the problems happening and not know how to bring them to the attention of law enforcement officials to address. So that's another piece that we continue to contribute over time, and thank you very much for the question.

Dr. DOREMUS. Thank you, Senator. I can only accent the observations already made about tackling the broad problem of illegal, unreported, and unregulated fishing. I think we have a lot of the mechanisms and it's this continued commitment to collaboration across Federal agencies and steady and continued work with other countries to reduce that type of behavior.

You prefaced your question with a very compelling and comprehensive observation that seafood supply is not meeting demand and on a global basis, while output from wild captured fisheries has been flat for over 20 years now and the increase in demand has been met through farmed products, largely produced in other countries. We have a robust domestic aquaculture industry; largely shellfish, very little fin fish. So I do think to address that very, very large question of supply that you raise, it is a food security question long term on a global basis.

We need to get more in the game of sustainable aquaculture production, both domestically as well as through international bodies and the private sector where they're setting very high standards and enforcing standards for sustainable production of farmed fish, very much the same as we do in the wild capture world, with our commitment to science-based sustainable fisheries management.

Senator SULLIVAN. Thank you. And just on that last point, we want to make sure that that approach is also sustainable and non-harmful to the wild stocks, which are so important in my state.

Dr. DOREMUS. Absolutely, Senator. We need to be very cognizant of that.

Senator SULLIVAN. Well, listen, this was a really informative hearing. I want to thank all four of our witnesses.

The record will remain open for two weeks. During this time, Senators may submit questions for the record. Upon receipt, the

witnesses are respectfully requested to submit their written answers, we had some requests already from some of the members, to the Committee as soon as they are able.

I want to thank the witnesses again for appearing on this very important topic. We've got a lot of work to do but I think, as most people recognize, there's a strong bipartisan interest in getting some solutions to these complex problems.

This hearing is now adjourned.

[Whereupon, at 12:09 p.m., the hearing was adjourned.]

## A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. EDWARD MARKEY TO  
HON. DAVID BALTON

*Question 1.* The East Asia and Pacific region is rife with IUU fishing and associated challenges. According to the Global Slavery Index, ten countries in the Indo-Pacific, including China, have either a “high-” or “medium-risk” of using modern slavery in their fishing industry—more than any other region. Additionally, a recent Human Rights Watch report noted that Thailand’s high-seas fishing fleet is widely reported to use forced labor and engage in labor abuses including beatings and even murder.

In the South China Sea, IUU fishing continues to be a significant problem, exacerbating existing and sometimes-violent sovereignty disputes. Geopolitical instability, along with growing human populations and declining fish populations, are likely to make the situation even worse.

How have you seen IUU fishing exacerbate regional instability in this region and around the world? Can you provide some examples?

Answer. I believe that IUU fishing is primarily an economic and environmental problem. I am nevertheless aware that some of the same vessels that engage in IUU fishing activities also use forced labor and engage in other crimes. The nexus between IUU fishing and these other illicit activities provides yet another reason to tackle the problem.

IUU fishing can also contribute to regional instability. In the South China Sea, instability arises mostly from conflicting claims of several nations to sovereignty over various islands and other land features, which in turn creates conflicting claims to sovereignty, sovereign rights and jurisdiction with respect to the waters surrounding these islands and other land features. IUU fishing can thrive in such situations, where nations dispute each other’s authority to adopt and enforce fishing rules. Where IUU becomes rampant, fish stocks are at much greater risk of depletion, causing economic hardship and environmental damage, and further exacerbating regional tensions.

*Question 2.* Given your experience with international negotiation on these matters, how do you think that the U.S. can best work with other nations to help address IUU fishing and reduce this threat to regional stability?

Answer. Over the past 20 years, the United States and other nations have developed a variety of tools with which to combat IUU fishing. For example, following the adoption of the 2001 International Plan of Action to Prevent, Deter and Eliminate IUU Fishing, the Food and Agriculture Organization of the United Nations (FAO) issued Technical Guidelines designed to assist States, individually and collectively, in this effort. (See FAO Fisheries Department, FAO Technical Guidelines for Responsible Fisheries, No. 9 (2002)).

More recently, the Port State Measures Agreement (PSMA), a treaty that entered into force in 2016, has given nations a potentially powerful instrument in this regard. As I outlined in my written testimony, I recommend that the United States should at this stage:

- Encourage more States to join the PSMA, particularly developing States whose ports are used often by vessels for landing, transshipping, packaging and processing fish. Some significant States that currently remain outside the PSMA are China, Brazil and Mexico.
- Contribute further expertise and resources to developing States, directly and/or through the FAO, both to help those States that are already parties to the PSMA implement its requirements and to encourage other developing States to join and implement the PSMA.
- Support FAO in creating a global mechanism to facilitate the exchange and publication of information relating to the PSMA, which will, among other

things, help States determine whether particular vessels seeking entry into their ports have engaged in or supported IUU fishing.

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RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. EDWARD MARKEY TO  
DR. BAMA ATHREYA

*Question.* The East Asia and Pacific region is rife with IUU fishing and associated challenges. According to the Global Slavery Index, 10 countries in the Indo-Pacific, including China, have either a “high-” or “medium-risk” of using modern slavery in their fishing industry—more than any other region. Additionally, a recent Human Rights Watch report noted that Thailand’s high-seas fishing fleet is widely reported to use forced labor and engage in labor abuses including beatings and even murder. Can you describe how IUU fishing and forced labor are intertwined? By addressing one, will we help to address the other?

*Answer.* Globally, the marine capture fishery is estimated to legally employ over 30 million fishers, who work aboard 4 million fishing vessels; if IUU-caught products are equivalent to approximately 20 percent of the legal catch, this suggests that the crews involved in IUU fishing likely number in the thousands or more. IUU fishing vessels are inherently operating for financial gain, and seek to avoid costs associated with license fees, ship maintenance, and minimum standards of crew treatment, safety and sanitary conditions. Further, recent research highlights that crew on IUU fishing vessels work under conditions that are consistent with the ILO definition of forced labor, and are subject to egregious human rights abuses, including excessive working hours (*e.g.*, 18–20 hours/day), physical abuse, lack of food and water, coerced indebtedness, abandonment in remote locations, and in some instances, murder.

The self-perpetuating cycles among fisheries declines, increases in forced labor, and broader community conflicts have been documented in academic research. The interconnected relationships between human rights abuses, illegal fishing, and degradation of marine resources highlight the benefits of an integrated approach in responding to these issues.

Currently, weak fisheries management has resulted in stock depletions and sector instability. In some cases, this has led small-scale fishers to join the crew of larger vessels, leaving them more vulnerable to trafficking. In other cases, depletion has pushed fishing vessels farther offshore, increasing fisher isolation and vulnerability to labor exploitation and abuse.

Forced labor contributes to over-fishing and creates economic disadvantages for companies and fishing families that play by the rules. When we take actions to reduce forced labor in fisheries, it will help strengthen fisheries management and contribute to improved food security, stronger livelihoods and biodiversity conservation.

We are better able to identify *both* illegal labor and harvesting practices when seafood supply chains are transparent. Weak rule of law and opaque supply chains open the door to forced labor and illegal harvesting practices in fisheries. Increased transparency in the supply chain helps us design more efficient interventions to reduce human rights abuses, conserve fisheries and identify and target criminal networks.

*Traceability systems* are a common approach used to ensure the legality of natural resource products, such as fish and timber, and the labor conditions under which various commodities are produced (*e.g.*, agriculture and clothing). Demand for fisheries catch documentation and traceability by governments and industry is growing, and we are currently building partnerships to support and promote integrated traceability systems that could have significant impacts on issues of both human rights and the sustainability of fisheries. Our Oceans and Fisheries Partnership and Seafood Alliance for Legality and Traceability, which we described during the hearing, are examples of how USAID is investing in better transparency and traceability in this sector.

We know that strong fisheries management helps sustain fisheries resources and provide decent livelihoods for fishers. For example, working with fishers to replace destructive gears and adopt more ecologically sound approaches, the *ECOFISH project* in the *Philippines* resulted in a *24 percent* increase in fish biomass over an area larger than the size of Connecticut compared to unmanaged areas. We also helped establish registration and licensing schemes in the municipal fisheries sector in the Philippines to act as a key deterrent to IUU fishing—*1.6 million* municipal fishers have registered.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROGER F. WICKER TO  
DR. PAUL DOREMUS

*Question 1.* How does NOAA and the Coast Guard enforce the use of Automated Information Systems (AIS) on fishing vessels, and what are the current gaps in vessel tracking (ex: vessels going dark)?

Answer. Vessels, including fishing vessels, 65 feet or more in length operating within U.S. waters are subject to AIS carriage requirements under regulations promulgated and enforced by the U.S. Coast Guard.

AIS comes with some inherent gaps with regard to vessel tracking for law enforcement purposes. AIS was developed in response to the Maritime Transportation Security Act of 2002 as an anti-collision and Safety of Life at Sea (SOLAS) tool. Thus, AIS was originally designed for ship-to-ship communication and not designed for vessel tracking. Thus, there are concerns that using AIS to track fishing vessels will result in IUU fishing operators powering off their units, misrepresenting their reported locations, or falsifying their reporting vessel identification information, potentially jeopardizing the system's purpose and primary function as a safety-at-sea measure. Furthermore, each nation sets its own AIS requirements for vessels in the Nation's exclusive economic zone, complicating efforts to use AIS for vessel tracking.

*Question 2.* What can be done to improve the tracking of vessels for purposes of monitoring IUU fishing?

Answer. Requiring vessel identification information to be pre-programmed into an AIS unit by the manufacturer, while eliminating the option for the operator to adjust the identification field once it has been assigned, would reduce the ability for vessels to falsely report their information.

Intergovernmental organizations, such as regional fisheries management organizations, have made progress in implementing measures that encourage, and in some cases require, vessels to obtain an International Maritime Organization (IMO) number, a number that is designed to remain with a vessel from its time of launch until its scrapping. While some IUU fishing operators have been known to falsify these numbers, IMO numbers are considered the most consistent, tangible, and uniformly applied vessel identifier. Therefore, attempts at subterfuge could be less effective in an international environment if IMO number requirements were expanded to include most commercial fishing and fishing-support vessels. The launching of the United Nations Food and Agricultural Organization's Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels, and the development of several regional counter-IUU fishing networks, where national vessel registry information and alerts of known and suspected IUU fishing activity are shared, have also enhanced the availability of vessel information globally and increased transparency on vessel activities.

*Question 3.* Are there other forms of technology available that would be better suited for vessel tracking that are not being used or are underutilized, and if so, why?

Answer. NOAA is working with other Federal partners to evaluate the effectiveness of other satellite-based technologies for use in the detection of IUU fishing activity. While some of these technologies can provide "indicative" information that fishing activity may be occurring, they generally cannot provide stand-alone evidence of IUU fishing.

NOAA is also exploring the use of Unmanned Aerial Vehicles (UAVs) as a means to enhance patrol efforts in specific areas for maritime domain awareness and enforcement. NOAA is currently working with other agencies to assess what increases in visibility already-deployed UAV assets can provide as well as the costs and time commitment needed to deploy them.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JAMES INHOFE TO  
DR. PAUL DOREMUS

*Background:* The National Oceanic Atmospheric Administration (NOAA) has worked extensively with the recreational fishing community to rebuild the red snapper population in the Gulf of Mexico. Studies have shown stock has tripled over the last 10 years—as of May of 2018 the red snapper was removed from the overfished status list.

I am proud to see the work that NOAA has done, but the United States is not the only country on the Gulf Coast. My understanding is that in the 2015 and 2017 Biennial Report to Congress for IUU fishing Mexico was decertified for illegal fishing and restricted from using U.S. ports, but now Mexico has been recertified.

*Question 1.* Can you explain the current efforts that NOAA is using to prosecute illegal fishing activities and the process NOAA used to recertify Mexico for fishing in the Gulf of Mexico?

Answer. Mexico was identified for IUU fishing in the 2015 Report to Congress and negatively certified for failure to adequately address the issue (and re-identified for more recent cases) in the 2017 Report to Congress. For reasons described below, Mexico was positively certified in April 2018.

Once a nation is identified under the High Seas Driftnet Fishing Moratorium Protection Act, the United States enters into a two-year consultation process to encourage that nation to take appropriate corrective measures to address the IUU fishing issue for which it was identified. To warrant a positive certification, a nation must provide documentary evidence that demonstrates the corrective action taken by the Nation. For IUU fishing violations that include foreign fishing in U.S. waters (such as the case with Mexico) or fishing in violation of international measures (such as violations of regional fishery management organization conservation and management measures), the United States seeks documentary evidence that falls into two broad categories: enforcement action or adoption or revision of laws to enable effective action to combat IUU fishing in the future. Specifically, evidence could include:

- Charging documents showing the fines levied for the violations;
- Documentation showing the requirement for revocation of fishing licenses and/or forfeiture of catch and gear;
- Court proceedings identifying individuals and/or entities charged, infractions, and rulings; or
- New implementing authorities, shown through documentation of laws and regulations, designed to combat IUU fishing and addressing the issue for which the Nation was identified, including measures which provide nations with greater regulatory authority over their fishing fleets.

In response to its 2015 identification and subsequent negative certification, Mexico provided a description of measures taken, and provided the following information regarding each of the identified cases targeted for prosecution and imposition of sanctions:

- Charging documents including: names, copies of individual's national identification cards, case numbers, mugshots, and photographs of individuals signing consent notifications;
- Court proceedings identifying individuals and/or entities charged, infractions, and rulings;
- Implementing authorities; and
- Documents detailing the sanctions levied upon each party charged.

Upon reviewing these corrective measures, NOAA issued a positive certification in relation to Mexico's 2015 identification. We are currently reviewing Mexico's response to the 2017 identification and will issue a certification (positive or negative) in our 2019 Report to Congress.

*Question 2.* What indicators/metrics did NOAA use to determine if there is actual compliance from Mexico? Is there measurable data to show they are in compliance? Answer. Please see the previous answer.

*Question 3.* Following improved cooperation from Mexico on prosecution and resulting recertification, has NOAA observed a significant difference in illegal fishing by Mexican launch as in the Gulf of Mexico?

Answer. While Mexico has taken corrective action on the identified incursions into U.S. waters, incursions are still taking place. It may take more time for the full-expected deterrent effect of the increased corrective actions taken by Mexico to be realized. NOAA will continue to closely monitor such incursions into U.S. waters to determine the effectiveness of the corrective actions taken by Mexico.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. EDWARD MARKEY TO  
DR. PAUL DOREMUS

*Question 1.* On January 1, 2018, the Seafood Import Monitoring Program (SIMP) went live for 11 priority species. The program establishes a risk-based traceability system for seafood imports in order to help prevent seafood products from illegal, unreported, and unregulated (IUU) fisheries from entering the United States. Can you please provide an update regarding the implementation of SIMP for these first eleven priority species? Have any seafood products been traced back to IUU fisheries, and if so, what actions have been taken?

Answer. NOAA worked extensively with the seafood industry over a year-long implementation period, to support an orderly implementation of the current regulation for the eleven high-priority species. Earlier this year, the Seafood Import Monitoring

Program (SIMP) was successfully implemented with no significant disruption to imports of legally harvested seafood.

*Question 2.* So far, NOAA has not identified any seafood products as having originated from IUU fishing activities through SIMP. However, violations of SIMP requirements, and of requirements under other NOAA import programs, have been identified and investigations are ongoing in these cases. Do you think that SIMP is helping to combat IUU fishing on a global scale? If so, how?

*Answer.* A key objective of SIMP is to prevent the United States from serving as a market for IUU-caught seafood, and NOAA believes that SIMP has prompted industry, as well as the countries from which the United States imports seafood, to improve documentation of harvest, transshipment, processing and trade. In our view, these improvements are helping to disincentivize and deter IUU fishing and seafood fraud by increasing the possibility that IUU-caught seafood will be detected. SIMP ensures that U.S. seafood importers take responsibility for the legal catch and truthful representation of their imports. In addition, traceability information collected at the time of entry into U.S. commerce under SIMP has improved sharing and analysis of data among those relevant regulatory and enforcement authorities for imported seafood with access to SIMP data—marking a significant step forward for combating IUU fishing.

The scope and counter-IUU fishing benefits of SIMP will significantly expand in 2019 with the inclusion of shrimp and abalone imports, as the United States imports more shrimp than any other seafood species. On March 23, 2018, President Trump signed into law the 2018 Appropriations Act, which directed the Secretary of Commerce to lift the stay of effectiveness of the SIMP regulation for shrimp and abalone within thirty days and to establish a compliance date for shrimp and abalone of no later than December 31, 2018.

*Question 3.* President Obama’s Task Force on Combating IUU Fishing and Seafood Fraud called for improved interagency coordination for monitoring and enforcement against IUU activities, and to develop collaborative partnerships as part of a global effort against IUU fishing. Can you describe the importance of a whole-of-government approach for addressing IUU fishing?

*Answer.* As a general principle, addressing IUU fishing requires scientific, regulatory, and enforcement expertise, as well as expertise from other agencies that necessitates a whole-of-government approach. Ideally, this starts with scientific efforts to assess stocks and understand their habitat and life history. Regulatory agencies can then use this information to determine the appropriate actions needed to achieve a maximum sustained yield. The resulting regulations are only effective if there is a monitoring and enforcement regime in place and backed by a strong legal framework.

In the U.S., at least fourteen Federal agencies implement U.S. actions to combat IUU fishing and seafood fraud, both domestically and internationally. Interagency coordination on these efforts have been managed through an interagency working group on IUU Fishing and Seafood Fraud, co-chaired by NOAA and State Department. The current whole-of-government approach enhances inter-agency cooperation, reduces duplication and conflict in U.S. government approaches to IUU fishing and expands our influence on these issues by coordination in the application of available resources.

*Question 4.* Do you think NOAA’s level of coordination with other Federal agencies is presently sufficient to effectively combat IUU fishing? If not, could you provide a specific example of an additional means of interagency coordination that would be beneficial?

*Answer.* Combating IUU fishing, both within the United States and abroad, is one of NOAA’s core missions that is achieved through strong Federal partnerships and interagency collaboration. Through coordination with the U.S. Coast Guard, U.S. Customs and Border Protection, U.S. Agency for International Development, and U.S. Department of State, among others, NOAA is proactively engaging to detect and prevent IUU fishing and will continue to leverage our partnerships to maximize our ability to maintain a level playing field for law abiding fisheries. One area for potential growth may be in further identifying opportunities and implementing mechanisms to share data relevant to combating IUU fishing and seafood fraud with interagency partners.