

REPORT

ON THE HOOK:
HOW THE UNITED STATES ENABLES ILLEGAL,
UNREPORTED, AND UNREGULATED FISHING



ACKNOWLEDGMENTS

This report was made possible by the dedication and support of many people. I would like to express my deepest appreciation to the following individuals for their invaluable contributions, insights, and thoughtful review. I am also grateful to the David and Lucile Packard Foundation and the Walton Family Foundation for their generous support of this project and of NRDC's Illegal, Unreported, and Unregulated Fishing (IUU) Initiative.

To Irene Gutierrez (NRDC) and Vanessa Rivas Villanueva (CEA Consulting): Thank you for your dedication and meticulousness and for the heroic late nights needed to bring this report over the finish line.

To the Exulans team—Gregg Casad, Meaghan Brosnan, Mike Cenci, and Robert Farrell: Thank you for your thorough work, for bringing the detail to this body of research, and for being so easy to collaborate with.

To the expert reviewers and colleagues who lent their guidance throughout and who kindly reviewed drafts of this report: Ben Freitas (WWF), Beth Lowell (Oceana), Molly Masterton (NRDC), Elizabeth Murdock (NRDC), and Brad Sewell (NRDC).

To Catherine Morse, Dillon Hanson-Ahumada, and Paula Chavez: Thank you for your deep dive into the U.S. Customs Database and for your number crunching and fact checking.

To Tina Swanson at the expert NRDC Science Center and the brilliant NRDC Publications team of Leah Stecher and Mary Heglar: Thank you for your encouragement and insightful guidance.

Thank you to the friends and family members who patiently endured many conversations about this report. You're too extensive to name individually, though special appreciation goes out to Evan Muchmore, Liz Grubin, Renee Sharp, and Jenn Phillips.

Finally, a huge thank you to the many officials we interviewed. You were willing to share your knowledge and perspectives, and I am are grateful for your insights and patience in responding to many follow-up questions.

About NRDC

NRDC is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing. Visit us at nrdc.org.

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Executive Summary

Illegal, unreported, and unregulated (IUU) fishing is any fishing conducted in conflict with or outside of, laws regulating seafood harvest. It is a complex global practice that thwarts fisheries management and drives overfishing. In so doing, it jeopardizes the health of the world's fish populations, harms marine habitats, and threatens food and national security. The United States has publicly committed to fighting IUU fishing in order to protect both the health of our oceans and the livelihoods of honest fishermen. Unfortunately, while the United States has strong fisheries management and enforcement that largely prevents IUU fishing in its own waters, U.S. consumers unwittingly buy massive amounts of imported IUU-fished seafood each year, making the country a major driver of global IUU fishing. The United States is the world's number one seafood importer, and as much as 32 percent of seafood imports sold in U.S. markets is harvested through IUU fishing practices.

To understand how the United States can stop the flow of IUU-fished seafood into its commerce stream, NRDC conducted in-depth research of the U.S. seafood import process from 2016 to 2019, treating as a case study the largest port complex in the nation: the Ports of Los Angeles and Long Beach (LA/LB), including Los Angeles International Airport (LAX). Nearly 30 percent of all seafood imported into the U.S. enters through these ports. NRDC supplemented the Ports of LA/LB research with interviews focused on seafood imports into the Ports of Seattle and Tacoma, including the Seattle-Tacoma International Airport.

Our research revealed that the United States is ill equipped to effectively stop IUU-fished and fraudulently labeled shipments from entering the country. There are four fundamental reasons:

1. The electronic import control system the United States uses to analyze seafood imports is too reliant on human analysis to quickly identify most high-risk seafood shipments. To keep up with the bewildering volume of seafood it imports every day, the United States needs a more sophisticated electronic import control system that can proactively identify suspicious shipments.

- 2. The U.S. investigatory and enforcement capacity is grossly inadequate. Although we have dedicated and skilled enforcement officers, a lack of comprehensive and consistent in-port law enforcement at both federal and state levels severely hampers the United States' ability to screen seafood imports. NRDC found that Customs and Border Protection (CBP) lacks seafood-specific training for its officers, the National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement (OLE) is grossly understaffed, and state law enforcement partners are underutilized and underfunded.
- 3. Federal interagency partnerships and federal/ state partnerships are not being leveraged fully. The nation's system for monitoring seafood shipments relies on interagency coordination within the federal government and on federal/state collaboration to identify high-risk shipments, conduct inspections, and block IUU imports. State and federal agencies have distinct and crucial roles in barring IUU-fished shipments, but agencies often operate at cross purposes, impairing investigations.

4. The Seafood Import Monitoring Program (SIMP) has not been implemented robustly enough to realize its potential. In 2017 NOAA made an important investment by instituting the SIMP, a seafood traceability program intended to enable more targeted and proactive seafood import screening. If successful, it will block IUU-fished products at the point of entry as opposed to after they appear in U.S. markets. While the SIMP holds great promise to be a key tool in stopping IUU and fraudulent seafood shipments, the United States must implement the program more robustly so that it can live up to its potential. Further, the three problems described above have undermined the program's utility.

If the United States wants to meet its commitment to fight IUU fishing globally, it must stop IUU-fished seafood from entering its \$20 billion domestic seafood import market. The first step is to reform the U.S. import control system for seafood. While a great deal of attention has been focused on efforts to counter IUU overseas, we are currently overlooking one of our most important tools: leveraging the United States' massive domestic market for seafood to disincentivize IUU fishing. By implementing NRDC's recommendations, the nation can effectively address the detrimental impacts of illegally fished and fraudulent seafood while fulfilling its commitment to eliminate IUU fishing and protect U.S. fishermen who fish fairly.

Background



A school of pennantfish, pyramid and milletseed butterflyfish swimming over Rapture Reef in Papahānaumokuākea Marine National Monument, Hawaii.



Snapper and sharks seized by the Coast Guard from a lancha near the U.S.-Mexico maritime border.

ILLEGAL, UNREPORTED, AND UNREGULATED FISHING DECIMATES OUR OCEANS AND IS DETRIMENTAL TO THE SOCIAL AND ECONOMIC WELL-BEING OF THOSE WHO DEPEND ON THEM

Healthy fisheries—where harvest of fish is well regulated and where fishermen abide by applicable laws and requirements—are integral to the economic and social well-being and national security of the United States and countries across the globe. In many societies, rich and poor, fishing undergirds the entire community. In 2016 roughly 59.6 million people worldwide were involved in capture fisheries or aquaculture, and employment from secondary

seafood sectors, such as processing and distribution of catch, boosted this number to between 254 million and 266 million people. In the United States, commercial and recreational fishing supported about 1.7 million jobs in 2016 and generated \$212 billion in sales.

Billions of people depend on fish as a key food source. For impoverished populations, consistent access to fish is especially important; the high-quality protein in fish supports cognitive development and reduces the risks of malnutrition and disease.³ In some less developed countries, fish provides up to 50 percent of annual animal protein intake.⁴

Migrant workers on a fishing boat docked in Phuket, Thailand.

However, IUU fishing disrupts this entire system. It drives overfishing and severely hampers efforts to manage fisheries sustainably. 5 National and international governments, industry, and fishermen rely on sciencebased fisheries management and enforcement of fisheries laws to ensure enduring and sustainable fish stocks. ⁶ But vessels that engage in IUU fishing practices do not comply with such laws, and their catches are hidden from fisheries management regimes, making it impossible to incorporate IUU harvests into fisheries management decisions. IUU vessels are also less likely to observe rules designed to protect the marine environment from the harmful ecological impacts of fishing activity, such as fishing gear restrictions that protect marine habitats or by-catch regulations, time and area closures to protect juvenile fish, or rules that ensure fishing occurs outside marine protected areas.7

Illegal fishing hurts those fishermen who are trying to play by the rules. An estimated one-third of the world's annual catch is illegally fished.⁸ In terms of fish biomass, IUU fishing amounts to between 22 and 56 billion pounds, or more than 400,000 to nearly one million 40-foot shipping containers of seafood every year.⁹ Thanks to high demand for seafood in major market countries around the globe, regulatory gaps, and weak enforcement of the rules, the benefits of avoiding the costs of regulatory compliance create an unfair advantage for IUU fishermen over those who follow the rules and absorb the costs of sustainable fishing practices.¹⁰ In fact, IUU fishing results in economic losses of up to \$23.5 billion annually. U.S. fishermen alone lose an estimated \$1 billion annually in profits due to the market distortion of IUU fishing.¹¹

Moreover, IUU fishing is closely linked to extensive human rights abuses and transnational crime. As overfishing has depleted nearshore fish stocks, boats have had to fish farther from shore, raising the cost of fishing and exerting downward pressure on wages. The challenge of turning a profit in the seafood industry has led to labor shortages, which has caused the sector to rely on the most desperate and vulnerable populations, often migrants from developing countries. These workers are subject to numerous abuses, such as recruitment by agencies charging prohibitive fees to secure employment, physical and sexual abuse while on board vessels, withholding of pay, isolation from access to social services and legal resources, and many more violations. 12 Not only does the United States import large quantities of seafood tainted by forced labor or human rights abuses, but such issues have been found in U.S. fleets as well. 13 Ame Sagiv of Humanity United explains, "In the United States, we are not shielded from the issues of forced labor or human trafficking in our seafood purchases.... This is not a problem that we are distanced from: It is in our everyday."14

Eradicating IUU fishing is a prerequisite to ending overfishing. It also would confer major environmental benefits, could improve labor conditions in the fishing industry, and would result in fairer prices for fishermen who follow the rules.

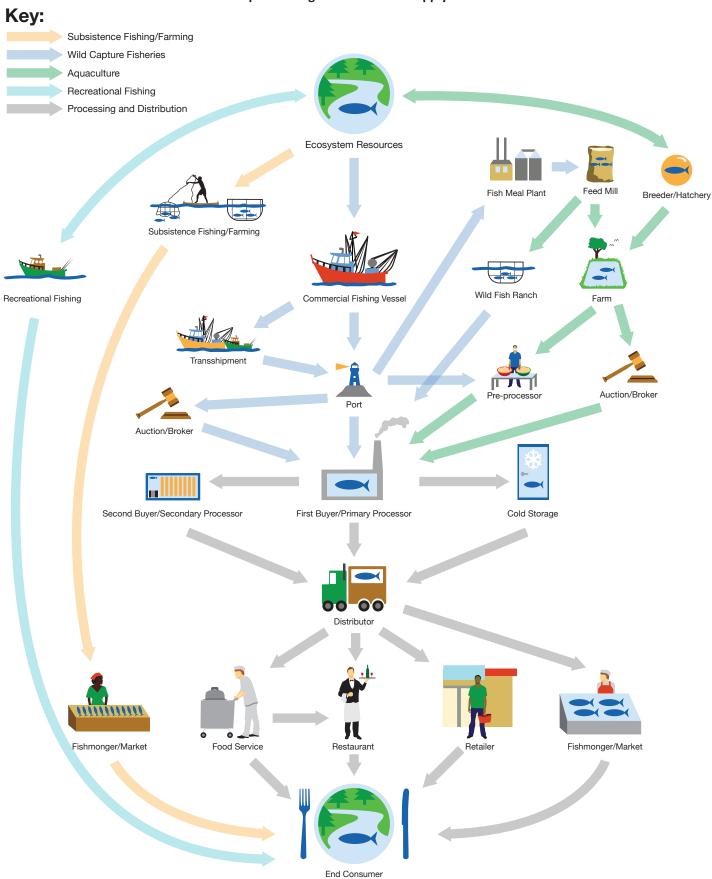
THE UNITED STATES CAN PLAY A UNIQUE AND IMPORTANT ROLE IN COMBATING IUU FISHING

Solving the problem of IUU fishing is a daunting challenge. Full surveillance of every coast and ocean is nearly impossible, and many countries have weak fisheries laws or poor enforcement. Further, seafood products have complex and obscure supply chains, and once processed, in many instances the naked eye cannot accurately distinguish one species of fish flesh from another. A seafood product often travels thousands of miles before reaching the consumer's plate. Given its global nature, solutions to IUU fishing must enlist a wide range of actors all along the seafood supply chain, including end markets, such as the United States (see diagram of seafood supply chains on page 7).

This country has tremendous market power to drive changes in the seafood industry. Over eighty percent of all seafood consumed in the United States is imported. ^{16,17} In 2018 a hefty 6.1 billion pounds of edible seafood valued at \$22.4 billion entered the United States, making the country the number one importer of seafood by value in the world. ¹⁸ Consumers rely on government agencies to ensure that this seafood is safe to eat, is legally obtained, and is in fact the type of fish the grocer, menu, or package says it is. Yet we know that an estimated 20 to 32 percent of all wild-caught seafood imported into the United States is fished using illegal or unreported methods, meaning that U.S. consumers are unwittingly rewarding these fishing operations through their purchases. ¹⁹

For the United States, ending IUU fishing has become an environmental and moral imperative—not to mention the fact that eradicating illegal catches would help U.S. fishermen. However, even though the nation has one of the most effective and responsibly run fisheries management

Simplified Diagram of Seafood Supply Chains







The Port of Long Beach, California.

systems in the world, it has become clear that the United States cannot rely on this alone, or on its influence in international fisheries management organizations, to preserve the world's fishery resources.

In 2014, the United States stepped up its domestic and international leadership to combat IUU fishing when President Obama established an interagency Task Force to Combat IUU Fishing and Seafood Fraud (IUU Task Force). The agencies involved in the task force developed 15 recommendations for the country to improve both its domestic and its international efforts to counter IUU fishing and seafood fraud. The United States has since made progress on the international recommendations by becoming a signatory to the Port States Measures Agreement—an internationally binding treaty that allows countries to deny port privileges to IUU fishing vessels, expands the number of capacity-building trainings for low-resourced countries, and harnesses the power of military cooperation.

These are important steps, but if the nation is to be an international leader in combating IUU fishing, it must do more domestically. To this end, the United States has created the SIMP, a program requiring full supply chain documentation from point of harvest to point of entry into U.S. commerce for 13 fish species and species groups that NOAA deems to be at greatest risk of IUU fishing. However, the SIMP must go further to effectively screen for IUU seafood imports. Additionally, NRDC found that there is a pressing need to dramatically improve federal, state, and local government intelligence sharing and coordination, and also found a profound lack of domestic enforcement capacity. Until the United States addresses its domestic seafood import control problems, it will continue to be a major market for illegal and unethically caught seafood. By allowing illicit seafood to reach U.S. markets, the United States is perpetuating the global crisis we promised to fight.

UNDERSTANDING WHY THE UNITED STATES FAILS TO BLOCK IUU IMPORTS

NRDC conducted an independent investigation to understand how NOAA and other relevant U.S. agencies work to prevent IUU seafood from entering U.S. commerce—and why their efforts so often fall short. The NRDC investigation included more than 50 interviews with officials from federal and state government and experts from the industry. All interviews were confidential, and names were withheld from this report by mutual agreement. For additional information about our research and analysis, see Appendix I.

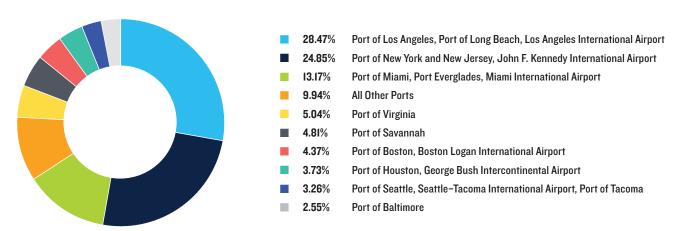
Our objective was to understand where the United States is falling short in preventing IUU-fished seafood from entering its markets and how it can better exert its power to disincentivize illegal fishing. Our investigation also assessed the on-the-ground impact of the SIMP.

This investigation focused on the Ports of Los Angeles and Long Beach because of their influential role in U.S. commerce and seafood imports. These two ports form the San Pedro Bay port complex—the largest port complex in the nation—and account for roughly 40 percent of the nation's containerized import traffic.21 Each year, these ports move more containers than any other port complex in the Western Hemisphere, with the Port of LA moving more than eight million containers alone.²² Between 2012 and 2018, the ports were responsible for nearly 30 percent of seafood imports by volume (see Figure 1).²³

Additionally, roughly 60 percent of the seafood imported into these ports are species NOAA has initially determined to be "at risk" of IUU fishing—a share larger than the national average of 40 percent (by volume).24 NOAA is monitoring these species and species groups particularly closely in the early years of SIMP implementation. That the Ports of LA/LB import such a high percentage of SIMP species makes these ports particularly relevant for our evaluation of this early stage of the SIMP.

Our research uncovered a number of failings that allow illegally caught and fraudulent seafood to flow into the United States, such as insufficient electronic screening of suspicious imports and inadequate law enforcement capacity. Some of these challenges may be specific to the Ports of LA/LB, but most of them stem from chronic and systemic challenges. To understand these failings in greater detail and to illuminate a path forward, it is important to first see how the U.S. seafood import system works, including both the technological and the human-reliant components.

FIGURE 1: AVERAGE SEAFOOD IMPORTS BY PORT. 2012 TO 2018



Source: U.S. Census Seafood Import Database.

Overview: The U.S. Seafood Import Process Is Complicated and Relies on Extensive Human Analysis

Identifying and then stopping IUU-fished seafood shipments within the staggering volume of seafood imported into the United States each day is an incredibly complex and difficult task. Federal agencies have overlapping jurisdictions, many agencies are poorly funded and understaffed, and the import screening system uses antiquated technology that cannot keep up with the volume of seafood imported into the country each year. In fact, Customs and Border Protection (CBP) reported that from 2004 to 2008, it inspected only 1.0 to 2.4 percent of all seafood imports for compliance with customs fees and import paperwork, while the Food and Drug Administration (FDA) inspected roughly 2 percent of seafood imports for compliance with food safety regulations. 25 These tiny numbers help explain why such a large percentage of seafood imported into the United States is IUU fished. While NOAA reports that it inspects 30 percent of all seafood imports through its Seafood Inspection Program, those inspections are part of a self-selecting and voluntary fee-for-service program targeting seafood fraud, rather than IUU fishing. Such inspections are therefore unlikely to find IUU-fished products.²⁶

These low inspection numbers occur despite many agencies overseeing the screening of imported goods. CBP is the gatekeeper for all imports into the United States and must authorize the release of all goods into the country.²⁷ CBP has the power to detain shipments for further inspection and to delegate clearance of those shipments to a relevant federal agency such as NOAA. NOAA is the lead agency in charge of ensuring seafood imports are not IUU-fished or fraudulent.

The FDA and NOAA are the "responsible agencies" for edible fisheries products. While CBP is in charge of ensuring that a shrimp shipment, for example, complies with customs regulations, the FDA is responsible for ensuring that it adheres to human health and safety standards, and NOAA is charged with enforcing laws requiring the shipment to be of legal origin. Among the natural resource laws under NOAA's purview are the Magnuson-Stevens Act, the nation's bedrock fisheries conservation management law; the National Marine Sanctuary Act; the Lacey Act; the Marine Mammal Protection Act; and the Endangered Species Act. NOAA requires importers to provide key information to confirm compliance with regulatory obligations regarding harvest and import of key species, such as the location of catch, fishing method, and the shipper's country of origin.²⁸

KEY FEATURES OF U.S. IMPORT SYSTEM

INTERNATIONAL TRADE DATA SYSTEM: The entirety of the United States' import database system is a compilation of many discrete systems collectively called the International Trade Data System (ITDS).²⁹ ITDS is the result of an interagency initiative to establish a "single window" through which all of the import and export data required by federal government agencies are submitted. Forty-seven partner government agencies participate in the ITDS: for seafood imports, the FDA and NOAA are CBP's partners in screening incoming goods.

AUTOMATED COMMERCIAL ENVIRONMENT (ACE): This is the software/hardware system that was developed by CBP to be the "centralized online access point" or "technical backbone" of the ITDS initiative.³⁰ ACE is the electronic interface through which importers report their imports and through which CBP evaluates the admissibility of these products for import to the United States.31

Basic ACE Requirements for Seafood Imports: For CBP, seafood is treated like any other commodity. Within 15 days of a shipment's arrival at a port of entry, importers must file an entry manifest, evidence of the right to make entry, a commercial invoice (port of entry, information about buyer and seller, description of merchandise, quantities, purchase price, country of origin), a packing list, and any other documents necessary to determine merchandise admissibility.³² NOAA requires that seafood importers also submit the following key information through ACE: product identification code, quantity, scientific name, U.S. Fish and Wildlife Service description code, country of origin, processing dates, processing type, importer identification, harvesting vessel name, and routing information (i.e., geographic areas through which commodities have been routed between the original country of departure and the final destination).33

If a seafood import does not have reporting requirements beyond the basic CBP and NOAA requirements described here, it must only pass CBP and NOAA's basic screen before entering the United

Automated Broker Interface: Since the import process for any good is complex, most importers choose to hire a broker to handle the inputting of information into the ACE system. Most import information is filed through an automated broker interface (ABI) —a CBP-approved data entry system that communicates with ACE to upload required import information.34 Though they must meet minimum CBP requirements, ABI systems are run by private companies, and there are multiple unique ABI systems in existence. Each has its own user interface experience and each links to ACE in a slightly different way. Further, there is no common vocabulary among different ABI systems, which can make it more difficult to analyze import information.35

With about six billion pounds of edible seafood imported into the United States each year, it would be impossible for CBP or NOAA to physically inspect the documentation for every seafood shipment that enters the United States or for each shipment to undergo review for compliance with natural resource laws and regulations. 36 Instead, the import process for seafood and all other commercial goods is administered through a complex series of databases that allow CBP and relevant government agencies to clear shipments for import and track them. To home in on which seafood imports CBP or NOAA should review, the agencies rely on shipments setting off specific triggers within these databases.

There are five ways a seafood import can trigger analysis beyond the basic data submission requirements of CBP and NOAA:

- 1. Missing U.S. Customs import data: If there is missing information in any required data field in the ACE electronic import control system (see box, above), ACE will trigger an alert for CBP to review the import information. If CBP cannot resolve the problem of the missing data, the agency will then likely ask NOAA to review that shipment for legality.³⁷
- 2. Automatic flag: NOAA or CBP can create automatic flags in the ACE system to help block IUU-fished imports. For example, either agency might create a flag for shipments from a known IUU fishing vessel or a specific species from a certain region. Once such a flag is raised, state or federal investigators can further investigate a potentially illegal or mislabeled shipment when it arrives for clearance into a port. At the Ports of LA/LB, for example, Russian crab, Mexican abalone, and sea cucumber have all been of special interest to NOAA, so NOAA has requested that CBP set up automatic flags for these species at different points in recent years.38

This method is only as effective as the flags that CBP and NOAA officials create. Since the flags are not autogenerated and do not automatically incorporate new information or new trade flows, they can become very quickly outdated. Further, it is difficult to create a flag that captures IUU shipments without being so general that it creates an unmanageable number of alerts. The efficacy of the automatic flag system is wholly dependent on NOAA's capacity to regularly update information, to coordinate with CBP, and to follow up on potential violations.

3. Agency regulation: Agencies regulate some seafood imports more closely than others. For example, imported tuna is subject to more stringent import regulations than, say, farmed salmon, and every tuna importer is required to provide the information necessary under the Tuna Tracking and Verification program to prove compliance.

Failure to do so will trigger a flag in the system. Similarly, Patagonian toothfish imports must comply with the Antarctic Marine Living Resource Conservation Act: these shipments receive an automatic flag in the ACE system that tells CBP to hold the shipment until the responsible federal agency—in this case, NOAA releases it.³⁹ Once an automatic flag is in place, CBP will alert NOAA about the flagged seafood shipments, and NOAA will conduct additional review and, potentially, an inspection.

Additionally, the SIMP automatically screens 13 species and species groups of seafood and requires additional reporting and recordkeeping for all shipments containing those species. 40 The SIMP's additional requirementssuch as reporting the location of catch, fishing method, flag state of harvest vessel, and evidence of authorization to fish—are designed to capture key supply chain information that will enable NOAA analysts to detect suspicious shipments for further investigation. For example, if an importer reports that a shipment of red snapper (one of the species covered) was harvested in the Pacific Ocean, a CBP or NOAA analyst examining SIMP data in ACE would ideally hold the shipment for further inspection, as red snapper do not live in the Pacific.

4. Intelligence and tips: A NOAA special agent or state law enforcement officer might gather intelligence about a shipment or a series of shipments that suggests an IUU or fraudulent seafood operation. For example, a federal or state law enforcement officer might detect inconsistent paperwork, work with another government agency to track an illegal import scheme, or analyze trade flows for a high-risk seafood commodity. An officer might also receive an outside tip about an IUU shipment or operation; in the past, reliable sources have offered highly specific information that has led to active investigations.

Once a lead proves fruitful, a law enforcement officer would likely ask NOAA and/or CBP to support an investigation by sharing or gathering additional import data—such as information about a particular import company, fishing operation, or transshipment vessel. Sources for tips and intelligence are built on relationships that are cultivated over years and built on trust. This method of intercepting IUU-fished shipments is absolutely critical, yet it is also resource intensive, so it must be part of a larger, overarching system to thoroughly block IUU-fished shipments.

5. Random audit: NOAA special agents could decide to conduct a random audit of a shipment that comes into port, or state officials could audit a shipment that has entered a state's seafood market. Since the SIMP came into effect, NOAA OLE has been conducting regular random audits. As with leads that arise from intelligence or tips, if a random audit discovers IUU-fished seafood, a field officer would ask NOAA and/or CBP to support an investigation by sharing or gathering additional import data and other information.

Random audits are crucial to creating a culture of compliance within the seafood industry. Without them, there would be far less incentive for all actors in the seafood supply chain to comply with import requirements. Yet it is important to note that law enforcement officers are far less likely to randomly intercept an IUU-fished shipment than to intercept one from a targeted search. So, while random audits are essential to enforcement, they have important limitations.

In most cases, if there is no flag on a shipment, once CBP has reviewed the data entered into ACE and confirmed that a seafood shipment meets its requirements for entry (e.g., customs duties have been paid), CBP will release the shipment for entry into the United States.⁴¹

In other instances, where additional reporting requirements apply-such as with a SIMP species or species group—NOAA then has the option to verify that an importer is in compliance with the applicable laws. If NOAA law enforcement personnel are available, the agency may review the shipment. The review could range from examining paperwork (e.g., to see whether the harvesting vessel has a legitimate fishing license) to conducting an inspection of the product at the port. 42 If warranted, NOAA might launch an investigation in coordination with a federal prosecutor to bring the case to court for trial or settlement. In instances where nothing is amiss, or where there is no interest in or availability of staff to conduct an investigation, CBP may authorize delivery or subject the goods and their entry documents to additional scrutiny once NOAA clears the shipment.⁴³

Unless one of the five triggers described above applies to a shipment, seafood imports will flow into the United States unimpeded and will do so quickly. And in fact, the vast majority do. Because imported seafood is fresh or frozen, there is a practical need for it to move swiftly through the customs process. The rapid flow of seafood imports is good for commerce, yet it exacerbates the challenge of detecting and blocking IUU and fraudulent seafood.

With adequate advance notification, checking a shipment can occur before it arrives in port. For example, to give NOAA additional time to examine import paperwork, the Antarctic Marine Living Resources program requires

preapproval before any toothfish are imported, and importers must submit import preapproval paperwork 10 days in advance. 44 Yet, this program is the exception: although U.S. seafood importers have the option of submitting import paperwork up to 15 days in advance, they are not required to do so. If the SIMP required advance reporting, law enforcement agencies would have some lead time to anticipate the arrival of a suspicious shipment and to arrange for an inspection before the product enters the stream of commerce.

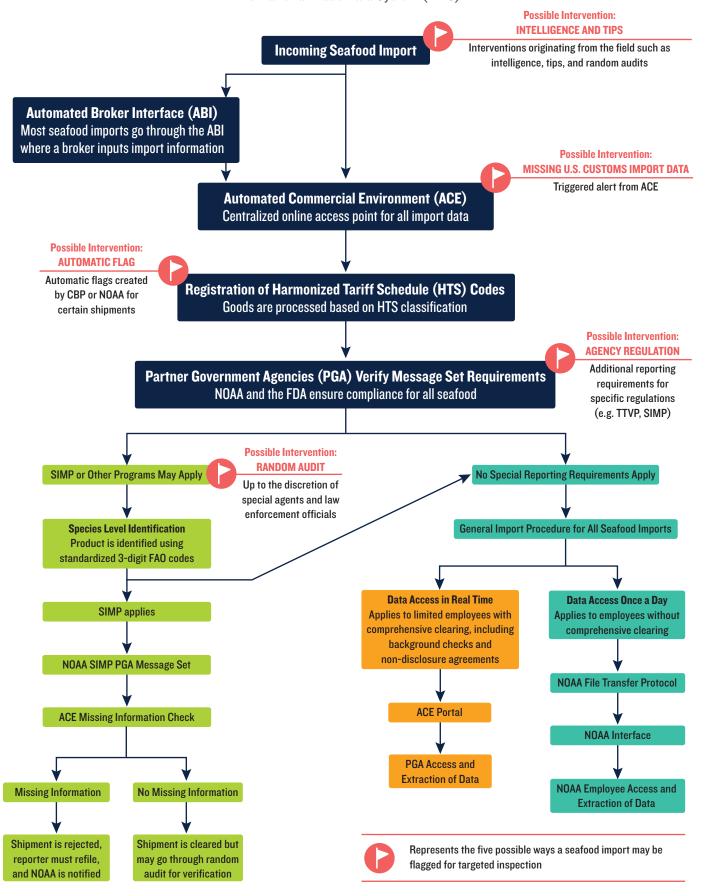
To further complicate efforts to detect IUU or fraudulent shipments prior to or upon their arrival into U.S. ports, many of the NOAA law enforcement analysts who review seafood import data are unable to access this data in real time. Given the sensitivity of the information, CBP requires that analysts undergo a full background check and sign a nondisclosure agreement before they are given real-time access to ACE. 45 As of 2017, only about 25 NOAA employees had such access (though this number may have increased since SIMP compliance began). 46 NOAA analysts without real-time access can also review ACE data, through a separate interface created by NOAA's National Marine Fisheries Service (NOAA Fisheries). But new data is added to the interface only once every 24 hours, creating a significant time lag. 47 This solution is helpful in expanding access to seafood import data, yet the time delay interferes with NOAA's ability to track down suspicious shipments quickly, before they enter the stream of commerce.

An important exception to the NOAA Fisheries interface arrangement is the collaboration between CBP and NOAA OLE at CBP's Commercial Targeting and Analysis Center (CTAC) in Washington, D.C., where the agencies work together directly to detect and flag potentially suspicious seafood shipments. A small team of NOAA OLE analysts located at CTAC has direct access to other member agencies' data systems and CBP's import processing, targeting, and law enforcement systems. 48 This team is able to identify suspicious shipments prior to their U.S. arrival and place holds on selected shipments for physical examination. 49 This collaboration between NOAA and CBP has led to successful case development and key learnings about illicit seafood imports.⁵⁰

As should be clear by this point, the U.S. seafood import system is not simple, with overlapping jurisdictions and many gaps that allow IUU-fished seafood to slip through (see diagram on page 13). ACE and the SIMP are important tools, but even these technologies rely heavily on human intervention and the work of analysts. To make any real progress in preventing IUU-fished seafood from entering the United States, the system needs to be overhauled.

Screening Process for U.S. Seafood Imports

International Trade Data System (ITDS)



Flaws in the System: Why U.S. Import Controls Fail to Exclude IUU Seafood From U.S. Commerce

The import flow described in the previous section is the process by which CBP evaluates the roughly 1.5 billion pounds of seafood that enter the Ports of LA/LB every year.⁵¹ While the system has had some success in uncovering IUU-fished and fraudulent seafood, it is plagued by systemic problems. As a result, a large amount of IUU and fraudulent seafood still gets into the United States, including through the Ports of LA/LB.

NRDC's research into how the United States currently monitors and screens seafood imports at the Ports of LA/ LB illuminates four specific domestic challenges the United States faces in stamping out IUU fishing: (1) an outdated electronic import control system, (2) lack of capacity, (3) a failure to fully leverage key partnerships, and (4) weak SIMP implementation.

FINDING 1: THE ELECTRONIC IMPORT CONTROL SYSTEM THE UNITED STATES USES TO ANALYZE **SEAFOOD IMPORTS IS NOT OPTIMIZED TO** REGULARLY IDENTIFY HIGH-RISK SEAFOOD **SHIPMENTS**

Given the incredible volume of seafood the United States imports each year, it would be impossible to conduct enough field investigations to effectively block IUU-fished seafood from U.S. markets. Thus, the U.S. seafood import process must be built on an electronic import control system that can sift through a huge amount of import data to identify high-risk shipments. The SIMP covers 40 percent of imports. Still, as the system functions currently, NOAA and CBP clear enormous volumes of seafood without any scrutiny at all, as there are not enough specific indicators to identify shipments at high risk of being IUUfished or fraudulent.

As described in the previous section, placing additional automatic flags in the system can allow more widespread screening of seafood import data. Provided there is an adequate number of NOAA law enforcement analysts to follow up on an automatic flag or a shipment that does not comply with agency regulations, this approach enables CBP and NOAA to screen high volumes of seafood and to follow up selectively on shipments that may be suspect. Yet this system of identification works only if the agency regulations and automatic flags effectively capture highrisk seafood shipments and if the system can be quickly updated to incorporate new intelligence to target a specific type of shipment. These conditions are not currently met.

Moreover, NOAA is simply unable to consistently review the staggering volume of seafood import data each day.

NOAA Fisheries' Office of Law Enforcement is extremely understaffed, and technology solutions that could assist with their work have not been fully deployed.



Chief Warrant Officer Gary Clark, commanding officer at Coast Guard Station Grays Harbor, Washington.

FINDING 2: THE UNITED STATES' INVESTIGATORY AND ENFORCEMENT CAPACITY IS GROSSLY INADEQUATE

The United States' in-port capacity to inspect, investigate, and block IUU-fished seafood is grossly inadequate for the scale of the task at hand. NRDC found that a lack of resources and/or capacity undermined the efficacy of all three key agencies tasked with detecting IUU-fished and fraudulent shipments at the Ports of LA/LB: CBP, NOAA, and the California Department of Fish and Wildlife (CDFW). There is not only a lack of personnel, but also a lack of resources available to law enforcement analysts and investigators. For example, there is poor access to key intelligence and information systems and impaired interagency communication. NRDC identified a number of capacity-related challenges that must be addressed in order to establish a robust in-port enforcement presence to block IUU and fraudulent seafood from the U.S. commerce stream.

I. CUSTOMS & BORDER PROTECTION AGENTS LACK SEAFOOD-SPECIFIC TRAINING AND OTHER RESOURCES TO IDENTIFY SUSPICIOUS SHIPMENTS

CBP monitors all U.S. trade, prevents illicit items from entering the country, and has a consistent in-port presence, making the agency a natural first line of defense against illegal seafood imports. Yet CBP officials do not have

fisheries expertise or training in IUU fishing.⁵² This is especially surprising given that IUU fishing operations are often entangled with transnational drug and human trafficking, tax evasion, and money laundering—all highpriority CBP enforcement concerns. Although CBP is well resourced and expert in discovering certain types of illicit imports, it is largely reliant on NOAA to investigate seafood shipments. However, NOAA's extremely limited investigatory capacity makes it impossible to follow up on all leads.

CBP has a far greater physical presence at the Ports of LA/ LB than do NOAA law enforcement officials. Commenting on the pronounced difference between CBP and NOAA personnel at the ports, one official stated that one "can't even compare" the two, estimating that the ratio of NOAA to CBP enforcement agents is "1 to 100."53 This official also said that being on the front lines in large numbers gives CBP the tremendous advantage of being well acquainted with trade flows and port personnel. CBP officials also have direct access to ACE. Yet because CBP officials do not generally have training on IUU fishing or seafood fraud, CBP's engagement in rooting out IUU seafood imports is currently dependent on individual CBP agents taking personal interest in environmental and natural resource issues. The same official said that in instances when a CBP agent focuses on a seafood-related case and engages NOAA, there are "great examples of federal agencies working together."54

With some additional resources and attention to IUUfished imports, CBP could become a force multiplier for U.S. counter-IUU efforts. Moreover, deliberately including counter-IUU efforts in CBP's purview could enhance CBP's own investigative work.55

2. NOAA IS TOO UNDERSTAFFED TO FULLY MONITOR SEAFOOD IMPORTS AT THE PORTS OF LOS ANGELES AND LONG BEACH

NOAA's Office of Law Enforcement (OLE) relies on special agents, enforcement officers, and other staff to enforce U.S. resource protection laws, including those that apply to seafood imports. NOAA special agents work in the field and are responsible for inspecting shipments both at random and in response to specific intelligence, including following up on shipments that analysts at CBP or NOAA have flagged via ACE. Special agents are most often the lead investigators for seafood-related violations. However, even when CBP does flag a suspicious shipment, NOAA has limited availability to pursue investigations consistently because NOAA OLE's responsibilities are extensive.

NOAA OLE's enforcement jurisdiction includes the United States' Exclusive Economic Zone (EEZ), which covers 3.36 million square nautical miles. The agency is also responsible for more than 95,000 miles of U.S. coastline, five National Marine Monuments, and 13 National Marine Sanctuaries.⁵⁶ NOAA OLE conducts on-the-water

enforcement, engages in criminal and civil investigations, and does outreach and compliance assistance with state agencies and other federal agencies. NOAA OLE is charged with enforcing more than 40 laws—which, as one NOAA official put it bluntly, is far more than the agency can handle,57

The NOAA OLE West Coast division, which includes Washington, Oregon, California, and extends inland to Idaho, North and South Dakota, and Montana, provides a clear example of understaffing. For that entire area, there are a total of nine special agents and nine enforcement officers.⁵⁸ This means that just 18 officials are responsible for enforcing more than 40 statues in an area covering 339,375 square miles of land, a 222,471 nauticalsquare-mile EEZ, and 7,863 miles of tidal shoreline. The West Coast division is responsible for monitoring 16 international airports, 21 seaports, and other border crossings for imports and exports of seafood products.⁵⁹

For the entirety of Southern California, which includes the Ports of LA/LB, there is just one special agent and one enforcement officer, meaning that a Special Agent could spend more time traveling from one enforcement activity to the next than working on site. 60 For example, a special agent could begin his or her day in the Port of LA working with CBP on a seafood inspection, travel to a remote part of the coast to investigate a black abalone poacher, then respond to a marine mammal harassment call, before finally writing up reports to describe the day's enforcement activities.

There are simply too few special agents to provide the kind of coverage necessary to comprehensively block IUU-fished seafood from entering the United States. When asked about NOAA's in-port presence, state law enforcement officials said there is almost none at all, and one said there is "virtually no interaction" with NOAA throughout the year. 61 One official said that though NOAA OLE is often enthusiastic about conducting joint operations, there is "almost never" any follow-up from NOAA.62

The federal agents we spoke with were not able to (or did not feel at liberty to) quantify what percentage of seafood is inspected by NOAA each year and how many inspections the agency conducts, yet inspections seem to be infrequent.⁶³ For example, a NOAA special agent who has covered the Ports of LA/LB said that seafood inspections occur about once a month.⁶⁴ One NOAA OLE official in a leadership position stated that enforcement agents try to be proactive yet are almost entirely reactive. 65 That is, the majority of inspections are conducted in response to specific intelligence or tips, and seldom is time left over for enforcement agents to complete random inspections. Since the most successful cases result from specific intelligence, it makes sense for enforcement agents to focus their efforts on inspections that are more likely to be fruitful. Nonetheless, to clamp down on IUU-fished imports, the U.S. government must create a culture of compliance by

building and prosecuting cases and by conducting random inspections, and it must be able to pursue most—rather than very few—leads.

Furthermore, NOAA law enforcement is not adequately staffed for successful detective work. It simply does not have the personnel or coverage structure to respond to calls at 2 a.m. or to follow a lead over the weekend, nor the bandwidth to focus the workday on case development and follow-through. ⁶⁶ As a result, leads are often lost, or state law enforcement is unable to pursue a case because the official cannot get key information that only NOAA can access.

3. HIRING CHALLENGES WORSEN NOAA'S CAPACITY DEFICIENCIES

Without prompting, nearly every NOAA interviewee mentioned that vacancies and gaps in NOAA staffing interfere with the agency's ability to achieve program objectives. ⁶⁷ Officials noted that even when positions have been authorized and there is adequate funding, prolonged hiring delays have occurred. ⁶⁸ For instance, the NOAA OLE West Coast division operated with five vacancies for nearly three years despite the positions being authorized and funded. ⁶⁹ The hiring process took so long that talented candidates withdrew and took positions elsewhere. ⁷⁰ In addition to exacerbating NOAA's capacity problems, prolonged hiring delays have resulted in a loss of institutional knowledge and relationships. ⁷¹

Asked about the source of the problem, office leaders pointed to the NOAA Workforce Management Office's inability to process applications in a timely manner. It is apparent that the office's issues are a well-known concern within NOAA. Its dysfunctionality will continue to hamper NOAA unless the issues are resolved.

4. STATE AGENCIES, CRUCIAL PARTNERS IN HALTING IUU IMPORTS, ARE UNDERUTILIZED AND UNDERFUNDED

State law enforcement agents play a critical role in countering IUU seafood imports, but they currently do not have the resources to effectively block IUU-fished and fraudulent seafood imports from U.S. commerce. An official in NOAA OLE's West Coast division agreed that the states do "a tremendous amount of enforcement." He emphasized that NOAA relies heavily on state officials, such as those employed by the California and Washington Departments of Fish and Wildlife, to be the boots-on-the-ground "eyes and ears" for the intelligence that leads to interdicting fraudulent or IUU seafood. To

This is the case for a variety of reasons. Chief among those is the states' much larger natural resource enforcement capacity. CDFW, for example, has a total of 465 wildlife police officers, including its own Marine Enforcement Division with 45 dedicated marine wildlife officers, in contrast to NOAA's West Coast division of 18 agents and officers covering seven states. ⁷⁶ State law enforcement

officers thus can have a far greater in-port presence than can NOAA OLE. Further, state law enforcement operates as an investigative force rather than adhering to a traditional 9-to-5 work schedule. And state law enforcement agents have the benefit of operating squarely within their jurisdiction once seafood is admitted into the state commerce stream (whereas NOAA jurisdiction over imported shipments is limited to the port of entry).

However, while CDFW has greater law enforcement capacity than NOAA at the Ports of LA/LB, the agency would still benefit from additional resources. The CDFW officials we interviewed emphasized that they do not have the resources they need to establish an in-port presence.⁷⁷ One high-level CDFW official plainly stated that halting IUU-fished and fraudulent seafood imports would require a daily law enforcement "footprint" at the state's major ports.⁷⁸ Having full-time employees stationed at key California ports would be far more efficient than trying to track down the source of a seafood shipment once it enters the marketplace. Once a shipment becomes dispersed into restaurants and grocery stores, it is far more difficult to identify the bad actors who caught, processed, or sold the illegal or fraudulent seafood. However, like NOAA special agents, CDFW officers are responsible for enforcing so many statutes that the agency cannot assign personnel to be at each major port in California every day. 79 One CDFW officer stated, "If I had a magic wand" to stop illegal wildlife and seafood transit, "I'd increase law enforcement presence at the ports—that's the most important thing. It makes sense to stop shipments there."80

FINDING 3: FEDERAL INTERAGENCY PARTNERSHIPS AND FEDERAL/STATE COLLABORATIONS ARE NOT BEING LEVERAGED FULLY

NRDC found that federal and state coordination to block IUU-fished seafood is severely impaired, posing another major obstacle to U.S. efforts to combat IUU fishing.

As mentioned above, NOAA's authority to halt and inspect suspicious seafood imports extends only as far as the ports and ends once a shipment clears into the United States—at which point it falls under state jurisdiction. As a member of the 2014 Task Force on IUU Fishing and Seafood Fraud, NOAA advocated for its authority to be extended beyond the ports and into the states, but this was not granted.81 As a consequence, NOAA special agents and enforcement officers will often avoid participating in or contributing to a state-led investigation because they are concerned about working extra-jurisdictionally. For example, CDFW officials stated that since they are not entirely certain where federal authority ends and state jurisdiction begins, they will sometimes hesitate to engage in seafood investigations at the port level, even though doing so would be far more efficient than trying to build a case from later in the supply chain.82 The result is that CDFW conducts inspections within the federal borders of the ports only if a partner

federal agency requests them, and this happens only a few times a year.⁸³ CDFW law enforcement officers similarly feel hamstrung by the unclear nexus between federal and state enforcement authority.

Despite the clear need for more federal and state government cooperation, communication is poorly established or broken, and state and federal officials lack clarity and direction as to how they can support NOAA's IUU-fishing countermeasures. There is a need to create systems that facilitate regular communication and information sharing among state and federal officials and from NOAA headquarters to the field level.

1. BREAKDOWNS IN STATE AND FEDERAL COLLABORATION

Formalized partnerships between NOAA OLE and state natural resources agencies are an essential part of the U.S. seafood import control system, yet ineffective collaboration and communication severely undermine their success.

The primary such partnership is NOAA's Cooperative Enforcement Program (CEP). Through the CEP, states enter into a yearly legally binding joint enforcement agreement (JEA), which provides up to \$18 million in federal funding to the states to enforce federal acts and regulations related to fisheries. Because the JEA is rewritten annually, it can reflect any changes in NOAA enforcement priorities from year to year.

This partnership should be mutually beneficial. NOAA contributes its access to ACE, as well as international contacts and networks that are critical to investigating and developing IUU seafood cases. NOAA investigates international leads and has the relationships to delve into international supply chains. In return, state law enforcement agents provide on-the-ground enforcement coverage and can capitalize on in-state relationships with venders, restaurant owners, and suppliers to pursue leads and receive tips. One state enforcement official said that the importance of NOAA OLE to serve as a complementary detective force to the states could not be overstated.84

The CEP is intended to foster collaboration and information sharing between state and federal agencies, yet our interviews revealed that federal and state law enforcement officers do not interact regularly and that information sharing between the states and federal agencies is exceedingly rare or infrequent.85 State enforcement officers will often feed information to NOAA OLE with the hope that NOAA will engage in the investigation, yet they are often unable to secure that support on an appropriate timeline, or at all. 86 Fish and Wildlife officials from both Washington and California report that they have tried to conduct joint operations with NOAA or to invite NOAA into a case, yet NOAA has been unavailable or seemingly disinterested in engaging.87 The result is that state officials have lost leads or been unable to develop a promising IUU case.

Multiple state officials cited examples of attempting to loop NOAA into a case either because they needed information only a federal official could provide or because the case involved violations of federal law.88 One state enforcement officer recounted multiple conversations with a NOAA official who enthusiastically agreed to conduct joint operations for shark fin shipments at an airport using the agent's detective dog. But despite numerous follow-ups, they were never able to schedule a joint operation.89

It is important to note that this lack of follow-through occurs despite generally congenial interpersonal interagency relationships, underscoring the fact that these are structural impediments rather than individual failings. While state officials do not sense any ill intent on NOAA's part, it is clear that NOAA's inability to fully collaborate to pursue state-initiated investigations profoundly impedes the United States' effectiveness in stopping IUU and fraudulent seafood shipments. The partnership between NOAA and the states could be more effective - NOAA could contribute to additional investigations, and the agency is not fully leveraging the state's field-level law enforcement presence to investigate and interdict IUU products.

2. LACK OF INFORMATION SHARING WITHIN AND **BETWEEN AGENCIES**

There is also weak information flow and communication between NOAA OLE headquarters personnel and NOAA field-level officials. Having a regular and uninterrupted flow of information from HQ to field officers is essential because HQ staff have access to ACE, relationships with CBP, information-sharing agreements with other countries, and international contacts who can assist in identifying species, companies, and individuals of concern. Yet NRDC found that OLE HQ officials and field staff often operate independently. This is partly because HQ-level officials do not manage OLE law enforcement officers who work in the field, so there is no established communication channel between them. Yet HQ staff need information and support from field agents to investigate leads and gather evidence. Without routine information flow to and from OLE HQ, it is difficult to piece together the details that would result in an IUU case. Conversely, if HQ-level intelligence were to feed into port-level seafood import screening, and if state and federal field agents could then follow up with an investigation and their own intelligence, broad and complex networks of illicit activity could be illuminated. In the words of a former chief state law enforcement officer, "Large-scale poaching and trafficking commonly involve criminal networks, and it takes a network to take down a network."90

Information flow between NOAA and state officials tends to be equally blocked. One state law enforcement officer said that state personnel often get their information from the internet because they are unable to get it from NOAA.91 Providing select state law enforcement officials with direct access to NOAA's electronic import control interface would dramatically improve states' investigatory power and help remedy poor communication. However, CDFW and the Washington Department of Fish and Wildlife (WDFW) officials also cited a need for more information on IUU fishing trends, countries where IUU fishing is most likely to take place, and the strategies bad actors employ to harvest and traffic IUU seafood. This requires cooperation and regular communication between NOAA and state officials that go beyond widening access to ACE. Without having a more sophisticated understanding of the broader picture of IUU crime, state law enforcement officials have difficulty thinking creatively and strategically about how to combat organized IUU fishing operations.

If information were flowing correctly, a NOAA OLE analyst at CTAC might identify a suspicious shipment in ACE and share the information with regional NOAA OLE officials, who would then alert a NOAA special agent at the port. There, OLE personnel would work with state partners to hold and inspect the suspicious shipment. In the ideal reverse process, a CDFW law enforcement officer might share a tip and the results of an initial investigation with a NOAA special agent, the special agent would alert colleagues at the regional level, and these officials would then gather additional information about the shipment to pursue an investigation with state partners. In both scenarios, other federal agencies such as the FDA or the U.S. Fish and Wildlife Service could inform the process.

Without any formal systems for feedback and follow-up on intelligence, however, federal and state officials lose track of time-sensitive leads and information. 92 It is worth noting that in 2019, a new law that establishes an interagency IUU Task Force was passed; this affords an opportunity to foster such information sharing among federal agencies in the future.93

3. UNCLEAR GUIDANCE ON IUU PRIORITIES FROM NOAA HQ

Both state and federal officials noted that there are opportunities for NOAA HQ to provide clearer guidance on IUU priorities and state law enforcement responsibilities, through JEAs. Each state's JEA directs state officers to align their work with NOAA OLE priorities, but these instructions are often unclear.94 For example, the 2019 California JEA between CDFW and NOAA had only a general reference to IUU seafood operations, though it did reference SIMP implementation.95 That JEA gave CDFW the discretion to use time for IUU seafood import countermeasures or in support of other federal laws, rather than a specified number of hours dedicated to IUU enforcement. The flexibility may be helpful in some regards yet results in less CDFW attention paid to IUU seafood imports.

In contrast, the JEA between the state of Washington and NOAA OLE specifies the number of hours that enforcement officers should dedicate to counter IUU seafood imports and the times of year that the effort should occur. Previous Washington JEAs have required seafood inspections of cargo at ports, airports, and cold storage facilities and inspections at different stages of the seafood supply chain during peak import and export periods.96

The JEA program is an important vehicle for funding state enforcement efforts as well as prioritizing IUU and seafood fraud enforcement. However, there are inconsistent directives between different states' JEAs and, at times, a lack of clear emphasis on counter-IUU operations.

WEST COAST CASE STUDY: BUILDING COLLABORATION AND INFORMATION SHARING TO COMBAT IUU SEAFOOD IMPORTS

On the West Coast, federal and state agencies have previously used the regular convening structure of the Pacific Fisheries Management Council (PFMC) to coordinate seafood import operations and investigations.97

The PFMC offers a key opportunity to strengthen federal and state coordination. More than 20 years ago, a subset of PFMC members formed the Enforcement Consultant Committee (EC). The EC is composed of a wide array of federal and state agency fisheries enforcement officials, including regional and field-level officials from the U.S. Fish and Wildlife Service, NOAA, the Coast Guard, CBP, CDFW, the Oregon Department of Fish and Wildlife, WDFW, and others. Regional and field law enforcement leaders have been able to leverage their attendance at council meetings to design and execute regional strategies and plans to address fisheries compliance.

In past years, the EC has identified enforcement needs, planned multiple joint operations to address illegal seafood imports and exports, organized trainings, and offered a key relationship-building opportunity.98 As an example, in 2017 all of the enforcement entities involved in JEA work agreed to use the PFMC forum to discuss JEA priorities, including combating IUU fishing and detecting and investigating IUU-fished seafood imports.99 The plans the EC developed that year were launched through joint federal and state operations and included inspections at all levels of the marketplace.100

Bodies like the EC have been effective in exchanging intelligence and planning operations. NOAA HQ must stay connected to local efforts—and vice versa—to ensure that analysis and policy-level work support field operations. PFMC meetings afford such an opportunity.



FINDING 4: THE SIMP IS A KEY STEP IN IMPLEMENTING SEAFOOD TRACEABILITY. BUT IT MUST BE STRENGTHENED AND EXPANDED TO **REALIZE ITS POTENTIAL**

Fully traceable seafood supply chains are a prerequisite for having sustainable fisheries, trading in ethically caught seafood, and combating IUU fishing. Illuminating each step a seafood product takes from the point of harvest all the way to the consumer's plate is the only way to hold each supply-chain actor accountable to catch limits, other fisheries management laws, and ethical labor practices. Without traceability requirements, it is easy to conceal practices such as fishing without the proper authorization, commingling legally and illegally caught fish during processing or transshipment, or fishing within closed areas, for example.

Recognizing that it was in the "national interest to prevent ... illegally harvested or produced seafood from entering U.S. commerce," the 2014 Presidential Task Force on IUU called for the creation of a seafood traceability program.¹⁰¹ In response, in 2016 NOAA established the Seafood Import Monitoring Program (SIMP), which creates mandatory reporting requirements for 13 species and species groups that NOAA deemed priorities to include in the program. The SIMP requires importers to record certain additional information into ACE upon entry into the United States, information that allows NOAA to more easily trace the shipment's supply chain and better spot illegal and fraudulently fished species. Theoretically, SIMP data will give NOAA the information the agency needs to identify the highest-risk shipments and to direct their limited resources accordingly. This should both increase the rate of inspections and improve their quality, meaning that inspections will be better targeted to identify shipments at high risk of containing IUU seafood.

The program is a major accomplishment and a crucial step toward combating IUU fishing. However, at present the

SIMP has significant limitations, the most concerning of which are weak implementation, lack of full supply chain traceability requirements, and a failure to include all species rather than the 40 percent of species and species groups currently covered under the program. Further, the very same systemic problems described in Findings 1-3 undermine the SIMP's effectiveness.

NOAA officials emphasize that the program is a key toolbut not a silver bullet—in the fight against IUU fishing. 102 According to NOAA leadership, when implemented fully, the SIMP, alongside similar international traceability rules such as the European Union's Catch Certification Scheme, should lead to a "cultural change" in the seafood industry. 103 In theory, as more of the world's major markets begin to require seafood traceability, the seafood industry will be compelled to make investments in supply chain traceability systems. Eventually, opaque and winding seafood supply chains will be illuminated, and CBP and NOAA will be better able to identify and apprehend bad actors. However, at the moment, the SIMP is not nearly comprehensive enough or adequately enforced to bring about such a change.

I. UNEVEN IMPLEMENTATION

Better implementing the SIMP requires training officers on its use and capabilities, communicating clearly about the program both within NOAA and to other agencies, and building capacity to implement the program. However, there are varying accounts of the on-the-ground impact of the SIMP, suggesting that implementation and impact have been uneven:

- Some NOAA and CBP officials have stated that the program is already enabling import officials to identify IUU seafood product prior to its entering into the commerce stream, thus enabling federal and state officials to direct their efforts more effectively. 104 However, in contrast, CBP officials stationed at the Seattle/Tacoma port and airport did not know what the SIMP was or what it sought to accomplish.¹⁰⁵
- The SIMP both requires and has led to more inter- and intra-agency coordination. For example, some HQ and regional NOAA offices are coordinating to reduce duplication of effort and are sharing best practices for evaluating SIMP import data. 106 And CBP and NOAA officials are coordinating at CTAC in Washington, D.C. Yet CTAC comprises only a small group of analysts, and it is unclear whether this coordination is improving the rate of IUU seafood interdiction. 107
- The SIMP is still a work in progress, and areas requiring improvement have emerged. For example, CDFW and WDFW law enforcement personnel have stated a desire for greater clarity on the mechanics of requesting information from NOAA OLE's analytical team on shipments related to SIMP compliance. 108

NOAA Fisheries leadership and staff have noted that a lack of capacity compromises SIMP implementation and enforcement efforts. 109 State officials looking for greater guidance on enforcing the SIMP were surprised to learn that NOAA OLE's official analytical team consisted of just five people. These five have to support all of NOAA OLE's analytical needs, not just those related to the SIMP. 110

2. OUTDATED ELECTRONIC IMPORT CONTROL SYSTEM

It is clear that the systemic problems of an outdated electronic import control system undermine the program's impact. As of the time of this writing, CBP and NOAA officials must manually sort through the raw import data in ACE for SIMP enforcement. The officials conducting the analysis are qualified, yet their task is monumental. Relying on targeted or even random audits to screen for IUU seafood imports and the slow process of manually searching SIMP data will compromise the program. Moving quickly to automate SIMP analysis is essential.

Ideally, SIMP data should be used to modernize ACE so that it can proactively flag suspicious shipments. NOAA officials have said that as the program matures, they will have the raw data needed to develop artificial intelligence systems and predictive learning techniques to use within ACE to automatically flag suspicious seafood. ¹¹¹ Yet, as previously noted, it is unclear when and if the SIMP data will be used to develop the software that will automatically screen for IUU seafood. At present, NOAA and CBP analysts are still searching reams of import data to identify suspicious shipments.

At an even more basic level, the ACE interface is not designed to allow importers to comply with the SIMP's reporting requirements. Legally, NOAA requires that importers of SIMP species to the United States provide their Unique Vessel Identifier (UVI) and Authorization to Fish documentation at the time of entry (if the importer has that information available), two critical pieces of information that governments can use to quickly identify potentially high-risk IUU shipments. However, technical constraints currently prevent ACE from requiring an importer fill out these fields—meaning that an importer who has a UVI or an Authorization to Fish but does not wish to disclose it could bypass that field entirely. However, the state of the stat

The failure to collect these data elements at the time of entry is a lost opportunity that impairs NOAA's ability to find and block IUU-fished and fraudulent seafood products. The Authorization to Fish is a key data element that can be used to prove legality of a harvest, so it would serve NOAA to have this information at the point of entry into the United States, as per SIMP requirements. A UVI functions like a ship's thumbprint or a UPC code. The UVI remains the same throughout a vessel's lifetime regardless of ownership or flag. 114 Painting over a ship's name is an easy and common practice for IUU fishing vessels, but a UVI,

such as an International Maritime Organization number welded onto a ship's hull or engine, cannot be changed. The United States and many international allies agree that having a global record of fishing vessels, which requires each vessel to have a UVI, is essential to combating IUU fishing and have worked to establish one. NOAA even provides funding to this international effort. Yet, by failing to require importers to provide this information at the time of entry, ACE's technological constraints hamper NOAA's ability to gather data. Information such as the UVI and Authorization to Fish allow the agency to more proactively identify at-risk shipments.

Seafood import data within ACE is not fully accessible by other agencies screening imports and monitoring for associated crimes. Given how often IUU fishing coincides with other offenses, such as human trafficking, money laundering, tax evasion, and drug smuggling, enabling interoperability among different partner agencies' import control systems to foster information sharing should be a high priority. Indeed, the 2014 IUU Task Force found that "creating an integrated program that better facilitates data collection, sharing, and analysis among relevant regulators and enforcement authorities would be a significant step forward in addressing IUU fishing and seafood fraud."117 Another potential option to promote such collaboration would be for NOAA Fisheries to build on its own seafoodspecific electronic import control interface that other relevant agencies could access.

3. NEED FOR GREATER DIRECTION FROM NOAA

A lack of clear guidance from NOAA leadership on how to enforce the SIMP also thwarts effective SIMP implementation. For example, a NOAA special agent recounted sifting through dozens of pages of records for a SIMP audit of a Vietnamese shrimp shipment. The documents were all in Vietnamese, and the Special Agent had no guidance on how to determine the documents' legality. At the state level, both the California and Washington 2018 JEAs called for state law enforcement to support SIMP enforcement, but state personnel said they needed greater guidance from NOAA on how to do so. State and federal law enforcement officials will be a far greater asset in SIMP implementation if they have more direction from NOAA on how to implement the program.

4. LIMITED COVERAGE OF THE SIMP

The majority of U.S. seafood imports are not covered under the SIMP. Since the program currently only applies to roughly 40 percent of U.S. fishery imports by volume, this creates an incentive for mislabeling SIMP-covered seafood as non-SIMP products, which is especially common for products that are similar in appearance and difficult to differentiate (such as cod, which is listed under SIMP, and other whitefish such as hake and Alaskan pollock, which

are not). When the 2014 IUU Task Force directed NOAA to create the initial traceability program that ultimately became the SIMP, the agency was charged with prioritizing the seafood species and species groups the agency deemed to be most susceptible to IUU fishing and seafood fraud. 120 As stated in the SIMP Final Rule, NOAA plans to eventually expand the rule to include all species, but it has yet to announce a timeline for doing so. In the meantime, the current partial coverage allows billions of dollars' worth of illegal products to continue to enter the United States. Without extending SIMP to all seafood species, the overall impact of the program is severely weakened.

Further weakening the overall impact of the program, the SIMP extends only from the point of harvest to the first point of entry into U.S. commerce. That the United States does not require full supply chain traceability from the first point of entry into the United States, through state commerce, and all the way to the point of sale makes it even more difficult to determine the provenance of seafood once it clears into the country. Often, by the time a case develops, the product has traveled so far from the port of entry and has become so dispersed into the supply chain that it is impossible to locate. Extending SIMP requirements to the point of sale would allow enforcement agents to trace a seafood product back to its point of origin regardless of where the investigation began.

Recommendations: How the United States Can Enforce Against IUU Fishing by Blocking IUU Imports

If the United States wants to live up to its commitment to fight IUU fishing globally, it must step up its efforts to block IUU-fished products from its domestic market. NRDC's recommendations summarize the key actions the U.S. government should take to stem the flow of IUUfished seafood into U.S. ports. A multipronged approach that adopts all of these recommendations in concert will dramatically reduce the prevalence of IUU seafood in the U.S. market. For example, boosting inspection capacity in ports alone will not eliminate IUU seafood from domestic commerce. However, pairing increased law enforcement capacity with more rigorous SIMP implementation and federal and state coordination will lead to substantive advances in blocking IUU shipments. Most of the recommendations emphasize changes at the federal level, yet the success of this suite of actions depends heavily on state leadership and state resource investment.

1. IMMEDIATELY TARGET KEY PORTS FOR ENHANCED **ENFORCEMENT ACTIONS**

More than 65 percent of U.S. seafood imports clear through four states: California, Florida, New Jersey, and New York. Nearly 30 percent of U.S. seafood imports enter through the Ports of Los Angles and Long Beach, 25 percent through the Ports of Newark and New York, and 13 percent through Miami (see Figure 1). Devoting additional government resources toward: (1) interventions to block IUU shipments and (2) strengthening state/federal and interagency collaboration at these three port complexes alone could close off much of U.S. commerce to IUU-

fished and fraudulent seafood. NOAA could implement this recommendation by directing JEA funds toward these activities and setting specific metrics—e.g., directing state law enforcement officers to work a minimum number of hours on IUU enforcement and setting quotas for seafood inspections and enforcement actions. While most of our recommendations will take considerable time, funding, and will to implement, this targeting of resources could be accomplished almost immediately.

2. DEVELOP AN AUTOMATED, PROACTIVE, AND RISK-BASED **ELECTRONIC IMPORT CONTROL SYSTEM TO SCREEN** SEAFOOD IMPORTS

While NOAA analysts are able to conduct sophisticated searches and create tailored flags to identify suspicious seafood shipments, ACE must be modernized to use predictive learning and other types of AI to target high-risk shipments automatically. With an electronic import control system that can proactively identify potentially IUU-fished shipments, NOAA OLE and state enforcement agents will be able to screen far more seafood than the current system allows.

The seafood import data the SIMP is generating could be used to design the algorithms needed to build predictive learning and other AI systems. Since the SIMP currently covers only 40 percent of seafood imports by volume, it will be necessary to acquire data to underpin the AI for the other 60 percent of seafood imports. 121 However, while NOAA has said it plans to use SIMP data to make these changes, when we asked NOAA's Office of Science

and Technology about its timeline to add AI to ACE, a spokesperson emphasized that such changes are time and resource intensive. 122 Modifications or updates to ACE must be approved by ACE's Change Control Board, and once approved, a fully vetted programmatic package can take 18 to 24 months to go from submission to actual implementation within ACE. 123 Further, any changes to ACE require funding and considerable staff time. 124 Nonetheless, these changes must be funded and prioritized.

Additionally, seafood importers should be required to enter import information into ACE at least 72 hours in advance of the product's arrival at a U.S. port. Providing federal and state law enforcement officers with lead time to analyze import data before a shipment has entered into U.S. commerce will dramatically increase the odds of intercepting an IUU shipment before it leaves the port.

3. BUILD CAPACITY AND IN-PORT PRESENCE AT BOTH FEDERAL **AND STATE LEVELS**

Build on-the-ground federal enforcement capacity:

Given that pursuing IUU-related crimes often involves unraveling a complex set of leads and criminal networks, NOAA special agents must have the capacity to operate as an investigative force to successfully pursue IUU fishing and related crimes. However, NOAA's Office of Law Enforcement is currently ill equipped to serve as an investigatory field resource because of its limited number of special agents and its extensive jurisdiction. 125 There is an acute need to hire more NOAA OLE Special Agents to establish a consistent in-port presence and to conduct investigations.

NOAA's Office of Workforce Management must fill existing staffing gaps and bring new hires on quickly so that they can receive training and begin serving in the field without delay.

Build state authority and capacity: Seafood passes into state jurisdiction once it enters the United States, meaning that state agencies are well positioned to inspect and investigate seafood as it enters the U.S. marketplace. Boosting state resources to support federal efforts and clarifying the states' role in countering IUU fishing are crucial. Ensuring that state enforcement agents have access to federal information systems such as ACE would enable NOAA to better leverage its partnerships with the states.

States provide the on-the-ground workforce to conduct investigations. In California, the state Department of Fish and Wildlife does not simply enhance federal capacity; it is the capacity. CDFW should work with California administration officials and legislators to equip the state with better tools to conduct its own IUU investigations and prosecutions. Other state agencies play a similarly vital role, and NOAA should continue to build their capacity.

Train and educate CBP officials on laws related to IUU enforcement: CBP can be a crucial ally in stamping out IUU-fished seafood imports. This is because the agency has a far more extensive presence in ports than NOAA does, and CBP agents have more direct access to ACE than NOAA personnel. Educating CBP officials in relevant laws pertaining to seafood imports, including SIMP, the Magnuson-Stevens Act, and the Lacey Act, is a relatively inexpensive and feasible way to increase in-port capacity.

NOAA has historically trained some CBP officials in identifying IUU-fished seafood, yet there is no formalized system to ensure that this knowledge is passed on as staff turnover occurs. These trainings should be formally established and routine, and CBP should become an integrated part of NOAA's and states' enforcement operations against IUU seafood. CBP leadership should support its field agents in the fight to block IUU-fished and fraudulent seafood imports.

4. STRENGTHEN INTERAGENCY AND STATE AND FEDERAL PARTNERSHIPS THROUGH IMPROVED INFORMATION SHARING. BETTER LEVERAGING OF THE COOPERATIVE ENFORCEMENT PROGRAM. AND CLEAR LEADERSHIP AND DIRECTION FROM NOAA ON COUNTER-IUU-FISHING ENFORCEMENT PRIORITIES

Establish structures for regular communication and intelligence sharing among federal and state agencies. To uncover IUU-fished and fraudulent shipments, there must be regular intelligence-sharing and communication among NOAA officials and other federal and state enforcement officials. For example, state enforcement agents can pursue cases on their own to a certain point, yet frequently need access to information that only NOAA can provide - such as an international contact or data contained within ACE - to continue their investigation. NOAA should establish formal systems for consistent and timely communication and intelligence sharing with state enforcement agents and other federal agencies. NOAA should also lead in using a regular convening, such as the Fisheries Management Council meetings, to coordinate federal and state agency enforcement activities.

Both federal and state law enforcement agents that are stationed in the field should have access to ACE or the NOAA Fisheries import control interface to pursue leads prior to shipments being absorbed into the commerce stream.

Increase funding for the Cooperative Enforcement Program, and make IUU fishing an explicit priority.

The CEP and the resulting Joint Enforcement Agreements are crucially important parts of IUU-related law enforcement efforts. It is necessary that Congress maintain or, better, increase funding for the CEP to ensure that the United States can block IUU-fished shipments from its commerce stream.

To best leverage the CEP, NOAA should make counter-IUU enforcement activities an explicit part of its Joint Enforcement Agreements with states. More specifically, resources must be directed to seafood import inspections and SIMP enforcement. Increasing funding for the CEP would boost the critically needed field presence at U.S. ports and could support regular coordination and trainings.

Strengthen SIMP implementation, expand the program to include all seafood species, and extend traceability requirements to the full supply chain. The SIMP is a critical tool in the fight to combat IUU fishing. The program holds great promise for dramatically improving the United States' ability to block IUU-fished seafood from domestic commerce, and for ultimately disincentivizing IUU fishing. As first steps in improving the program, NOAA must require importers to provide their UVI and Authorization to Fish at the time of entry, work to

verify the SIMP information importers currently provide, and develop the predictive learning and AI that will enable ACE to identify high-risk shipments automatically and proactively.

NOAA should also expand the SIMP to include all seafood species. The lack of comprehensive coverage for all species and species groups is a serious impediment to ensuring that fish products entering the U.S. market are of legal origin. Illegal fishing and seafood fraud are pervasive problems that exist in virtually all foreign fisheries; they are not limited to the few species currently covered by the SIMP.

Finally, the SIMP's reporting requirements must extend to the entire commerce stream. Extending SIMP requirements from the point of entry into the United States all the way to the point of sale will better support efforts to recall shipments that were mistakenly allowed into commerce.

Conclusion

IUU fishing exacts a terrible toll on both human and aquatic life—from marine species and ecosystems to the myriad communities that rely on healthy fish stocks to the people who endure horrid labor conditions on fishing vessels or in processing plants to get under-market seafood to consumers' plates. Preventing IUU fishing in the first place is the best way to address these problems, but eradicating IUU fishing practices requires a multipronged approach that targets all supply chain actors, including major markets that drive demand. As the world's number one market for seafood imports, the United States has a key opportunity to disincentivize IUU fishing by closing its markets to IUU imports. California is well-positioned to enhance federal counter-IUU seafood import efforts because of the state's long history of adopting visionary marine protections and its Marine Enforcement division within CDFW.

NRDC's investigation of the Ports of LA/LB highlights the major problems the nation faces in blocking IUU-fished seafood from its markets and shows how those problems play out in our largest port complex. Yet it also illuminated a path forward.

The United States has the advantages of strong governance and access to some of the most sophisticated technology in the world. Strengthening its collaborations with federal and state agencies and modernizing its electronic import control system to meet the demands of the seafood trade are necessary to protect U.S. fishermen and the billions of people and communities that fishing supports. Similar

changes must be made in ports across the country. With enhanced resources, leadership, and coordination, the United States can dramatically improve detection and interdiction of IUU seafood imports, and in so doing, shut down a top market destination for IUU-fished and fraudulent seafood products.



Appendix I

RESEARCH AND ANALYSIS CONDUCTED

NRDC conducted in-depth research of the U.S. seafood import process to better understand how federal and state government officials work to detect IUU and fraudulent seafood and prevent it from entering U.S. markets. Specifically, NRDC sought to: 1) understand the seafood import process at the major West Coast port complex—the Ports of Los Angeles and Long Beach, 2) understand the challenges federal and state officials face in detecting and stopping IUU-fished or fraudulent seafood shipments, and 3) identify opportunities for the United States to better prevent IUU-fished seafood from reaching consumers' plates. The study was initiated before the nation's seafood traceability program, the Seafood Import Monitoring Program (SIMP), took effect and was completed roughly one year after SIMP compliance began. By conducting our research before and after the traceability program was instituted, NRDC was able to assess the program's impact in the initial phases of the program.

NRDC commissioned multiple assessments by Exulans, Inc. to deepen our understanding of the challenges associated with addressing IUU seafood products entering U.S. ports, with a focus on the Ports of Los Angeles and Long Beach. Over the course of three years, 2016 to 2019, NRDC's research included more than 50 interviews with federal and state government officials and industry members. The interviewees included, but were not limited to,

representatives from NOAA, the U.S. Census Bureau, U.S. Customs and Border Protection, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and the Washington Department of Fish and Wildlife. All interviews were conducted in confidentiality, and the names of interviewees have been withheld from this report by mutual agreement.

In addition to expert interviews, NRDC conducted a review and analysis of relevant U.S. and international laws to determine how these laws are implemented and enforced. We also analyzed seafood import data to understand import volumes and trends across the United States.

To understand the magnitude of the Los Angeles port complex, NRDC conducted an independent study on U.S. seafood imports and trends from 2012 to 2018. This study period was selected for two reasons. First, in 2011 there had been significant modifications to the Harmonized Tariff Schedule (HTS) for fish and marine products, with many product categories recreated, regrouped, or eliminated. And second, when NRDC conducted this data analysis, the most recent data available were for the year 2018. Furthermore, the HTS changes made it difficult or impossible to compare import quantities and categories between the years preceding and following 2011. Data for 2019 were not included because this dataset was incomplete at the time of our research.

Appendix II

TABLE 1: PROPORTION OF TOTAL U.S. SEAFOOD IMPORTS ENTERING THE LOS ANGELES PORT COMPLEX, 2012–2018							
YEAR		PORT OF LONG BEACH	LOS ANGELES International Airport	PORT OF LOS ANGELES	LOS ANGELES PORT COMPLEX COMBINED	ALL U.S. PORTS	
2012	Pounds	103,318,127	56,480,404	1,383,288,874	1,543,087,406	5,018,274,683	
	Percentage of Total	2.06%	1.13%	27.57%	30.75%		
2013	Pounds	97,700,906	69,318,676	1,335,639,348	1,502,658,930	5,089,253,260	
	Percentage of Total	1.92%	1.36%	26.24%	29.53%		
2014	Pounds	70,721,145	80,949,733	1,388,058,241	1,539,729,119	5,315,975,949	
	Percentage of Total	1.33%	1.52%	26.11%	28.96%		
2015	Pounds	88,514,020	84,466,858	1,348,623,140	1,521,604,019	5,390,148,964	
	Percentage of Total	1.64%	1.57%	25.02%	28.23%		
0010	Pounds	67,853,951	85,902,308	1,362,874,664	1,516,630,923	5,510,909,088	
2016	Percentage of Total	1.23%	1.56%	24.73%	27.52%		
2017	Pounds	88,662,667	96,083,519	1,389,555,370	1,574,301,556	5,803,379,522	
	Percentage of Total	1.53%	1.66%	23.94%	27.13%		
2018	Pounds	105,364,114	108,015,696	1,443,889,793	1,657,269,603	6,092,020,527	
	Percentage of Total	1.73%	1.77%	23.70%	27.20%		
Study Period	Pounds	622,134,930	581,217,196	9,651,929,430	10,855,281,557	38,219,961,993	
	Percentage of Total	1.63%	1.52%	25.25%	28.40%	100.00%	

 $Source: \hbox{U.S. Census Seafood Import Database}$

ENDNOTES

- U.N. Food and Agriculture Organization (hereinafter FAO), The State of World Fisheries and Aquaculture 2018, 2018, http://www.fao.org/3/i9540en/i9540en.pdf. Lydia C. L. Teh and U. R. Sumaila, "Contribution of Marine Fisheries to Worldwide Employment," Fish and Fisheries 14, no. 1 (December 2011): 77-88, https://doi. org/10.1111/j.1467-2979.2011.00450.x.
- NOAA FishWatch, "U.S. Fisheries by the Numbers," https://www.fishwatch.gov/sustainable-seafood/by-the-numbers (accessed February 22, 2019).
- Bret Stetka, "By Land or by Sea; How Did Early Humans Access Key Brain-Building Nutrients?" Scientific American Mind, March 2016, https://www. 3 scientificamerican.com/article/by-land-or-by-sea-how-did-early-humans-access-key-brain-building-nutrients/. Some scientists contend that it was the very practice of ancient hominids eating fish and shellfish that enabled the brain development that made humans the deeply intelligent species they are today.
- FAO, The State of World Fisheries and Aquaculture 2016, 2016, http://www.fao.org/3/a-i5555e.pdf.
- Overfishing poses one of the gravest threats to ocean ecosystem health and dramatically undermines food and economic security around the globe. According to the FAO, the percentage of fish stocks that have been fished within sustainable levels has declined precipitously—from 90 percent in 1974 to only 68.6 percent in 2013. "Illegal" fishing refers to fishing that does not comply with national, regional, or global fisheries conservation and management obligations. "Unreported" fishing refers to catch that is not reported or is misrepresented to relevant authorities. And "unregulated" fishing occurs in areas or for fish populations for which there are no applicable conservation measures and the fishing is conducted in a manner inconsistent with the responsibility under international law to conserve marine resources. FAO, "Illegal, Unreported, and Unregulated (IUU) Fishing: What Is IUU Fishing?", http://www.fao.org/iuu-fishing/background/what-is-iuufishing/en/ (accessed July 20, 2020).
- Michael C. Melnychuk, Emily Peterson, Matthew Elliott, and Ray Hilborn, "Fisheries Management Impacts on Target Species Status," PNAS 114, no. 1 (January 3, 2017); 178-83, https://doi.org/10.1073/pnas.1609915114.
- National Oceanic and Atmospheric Administration (hereinafter NOAA), Presidential Task Force on Combating IUU Fishing and Seafood Fraud: Action Plan for Implementing the Task Force Recommendations, https://www.iuufishing.noaa.gov/Portals/33/noaa_taskforce_report_final.pdf (March 2015).
- FAO, Report of the Expert Workshop to Estimate the Magnitude of Illegal, Unreported and Unregulated Fishing Globally, No. 1106, February 2015, http://www.fao. org/3/a-i5028e.pdf. Ganapathiraju Pramod et al., "Estimates of Illegal and Unreported Fish in Seafood Imports to the USA," Marine Policy 48 (September 2014): 102-13, https://doi.org/10.1016/j.marpol.2014.03.019. FAO, The State of World Fisheries and Aquaculture 2018.
- David J. Agnew et al., "Estimating the Worldwide Extent of Illegal Fishing," PLoS ONE 4, no. 2 (February 2009), https://journals.plos.org/plosone/ article?id=10.1371/journal.pone.0004570. Fish biomass volume was converted into 40-foot shipping containers using Agnew et al.'s estimated volume of illegal and unreported fishing losses and the maximum weight capacity of a shipping container, which is 59,200 pounds.
- The term "flag of convenience" refers to the registration of a vessel to a country different from its home country in order to pay less tax or to escape more stringent regulations. IUU fishing vessels often use flags of convenience to escape more stringent regulatory controls and to conceal their identity from national or international regulatory bodies.
- Agnew et al., "Estimating the Worldwide Extent." World Wildlife Fund (hereinafter WWF), An Analysis of the Impact of IUU Imports on U.S. Fishermen, June 2016, https://www.worldwildlife.org/publications/an-analysis-of-the-impact-of-iuu-imports-on-u-s-fishermen.
- Environmental Justice Foundation, Blood and Water: Human Rights Abuse in the Global Seafood Industry, 2019, 8-11, 17-21; https://ejfoundation.org/resources/ downloads/Blood-water-06-2019-final.pdf.
- Human Rights Institute, Georgetown Law, The Price of Paradise: Vulnerabilities to Forced Labor in the Hawaiian Longline Fishing Industry, April 2019, 9-11; https://www.law.georgetown.edu/human-rights-institute/wp-content/uploads/sites/7/2019/05/Georgetown-THE-PRICE-OF-PARADISE-5-4-19-WEB.pdf.
- House Natural Resources Committee, "Testimony of Ame Sagiv: Oversight of NOAA's Report on Illegal, Unreported, and Unregulated Fishing," Library of Congress, November 2019, https://www.congress.gov/116/meeting/house/110213/witnesses/HHRG-116-III3-Wstate-SagivA-20191114.pdf.
- Seafood Analytics, Ecotrust, et. al., A Fresh Look at Frozen Fish: Expanding Market Opportunities for Community Fishermen: Executive Summary," July 2017, 15 $https://ecotrust.org/wp-content/uploads/Fresh-Look-at-Frozen-Fish_executive_summary-1.pdf$
- NOAA Fisheries, "Global Wild Fisheries," FishWatch U.S. Seafood Facts, https://www.fishwatch.gov/sustainable-seafood/the-global-picture (accessed May 2020). 16
- 17 FAO, The State of World Fisheries and Aquaculture 2018.
- 18 National Marine Fisheries Service (hereinafter NMFS), Fisheries of the United States 2018, NOAA Current Fishery Statistics No. 2018, February 2020, https:// www.fisheries.noaa.gov/resource/document/fisheries-united-states-2018-report. FAO, The State of World Fisheries and Aquaculture 2018. The European Union is the world's top importer if treated as a single market for seafood. Together, the three top import markets—the European Union, the United States, and Japan—are responsible for 64 percent of the total value of imported fish and fish products.
- Pramod et al., "Estimates of Illegal and Unreported Fish." It is important to note that the Pramod study "does not cover the full gamut of IUU fishing but is restricted to 'illegal and unreported' (IU) or more simply 'illegal' fishing, since unreported fishing is technically illegal because reporting is mandatory for all UNFAO countries." In other words, Pramod et al.'s estimate of IU fishing does not include "unregulated" fishing.
- NOAA, Presidential Task Force. Recognizing the role of the United States as one of the world's largest seafood markets, in 2014 President Obama declared that it was "in the national interest" to support sustainable fishing practices and combat "seafood fraud and the sale of IUU fishing products" in U.S. markets. Further, the domestically focused recommendations squarely identify the need for improved U.S. enforcement for seafood imports. For example, Recommendation 8 calls for task force members to develop a plan to optimize data collection, information sharing, and data analysis to prevent IUU-fished imports from entering U.S. commerce, Recommendation 11 underscores the critical role states and local governments play in stemming the flow of IUU and fraudulent seafood into the country and the importance of effective information sharing between federal and state officials. The task force recommendations also call for the United States to create a seafood traceability program for its seafood imports.
- City of Los Angeles, "Ports of Los Angeles and Long Beach Unveil Bold Strategies to Reduce Greenhouse Gases," November 2016, https://www.lacity.org/ $highlights/ports-los-angeles- and-long-beach-unveil-bold-strategies-reduce-greenhouse-gases.\ Port\ of\ Los\ Angeles, "By\ the\ Numbers:\ Jeopardizing\ the\ National Control of Control$ Benefits of Trade Through America's Busiest Port Complex," November 2018, https://www.portoflosangeles.org/tariffshurt#:~:text=The%20Southern%20 California % 20 ports % 20 of, the % 20 United % 20 States % 20 and % 20 Asia.
- Port of Los Angeles, "About the Port of Los Angeles," https://www.portoflosangeles.org/about (accessed June 2020). Port of Los Angeles, "Annual Container Statistics," https://www.portoflosangeles.org/business/statistics/container-statistics (accessed June 2020).
- U.S. Census Bureau, "USA Trade Online," International Harmonized System Statistics, https://usatrade.census.gov/ (accessed June 2019). 23
- "Magnuson-Stevens Fishery Conservation and Management Act; Seafood Import Monitoring Program," Federal Register 81, no. 237 (December 9, 2016): 88975-98, https://www.govinfo.gov/content/pkg/FR-2016-12-09/pdf/2016-29324.pdf. NOAA Fisheries, "Foreign Trade, U.S. Trade in Fisheries Statistics," https://www. st.nmfs.noaa.gov/apex/f?p=213:5, (accessed September 2020), analysis by WWF for all seafood imports in 2018.
- Government Accountability Office (hereinafter GAO), Seafood Fraud: FDA Program Changes and Better Collaboration Among Key Federal Agencies Could Improve Detection and Prevention, February 2009, https://www.gao.gov/new.items/d09258.pdf?source=ra.

- 26 Ibid.
- 27 U.S. Customs and Border Protection (hereinafter CBP), Importing Into the United States: A Guide for Commercial Importers, last revision 2006, https://www.cbp. gov/document/publications/importing-united-states. CBP, personal communication via telephone, May 5, 2017.
- NOAA Fisheries, "Final Rule for Electronic Reporting of Trade Data," August 20, 2016, https://www.fisheries.noaa.gov/action/final-rule-electronic-reporting-28 trade-data. CBP, CBP and Trade Automated Interface Requirements—Participating Government Agencies Message Set, publication 0875-0419, May 26, 2020, https://www.cbp.gov/sites/default/files/assets/documents/2020-Jun/ACE%20CATAIR%20PGA%20Message%20Set%20-%2026May 2020-pdf.
- $Meaghan Brosnan, \textit{NRDC IUU West Coast Ports Initiative: Exulans, Inc. Investigation Document}, \texttt{Exulans, June 2016}, \texttt{https://www.nrdc.org/sites/default/files/iuu-likes/$ west-coast-ports-initiative-exulans-inc-investigation-201606.pdf. This report was funded by NRDC. The views contained therein are those of the author and do not necessarily reflect those of NRDC. CBP, "International Trade Data System (ITDS) Factsheet," U.S. Department of Homeland Security, https://www.cbp.gov/sites/ default/files/documents/itds_capab_2.pdf, November 2013.
- CBP, "ITDS Factsheet." 30
- 31 CBP, "Automated Broker Interface (ABI) and Contact Information," U.S. Department of Homeland Security, https://www.cbp.gov/trade/acs/abi/contact-info (accessed November 2018).
- CBP, Importing Into the United States. 32
- NOAA Fisheries, "Final Rule for Electronic Reporting of Trade Data," August 20, 2016, https://www.fisheries.noaa.gov/action/final-rule-electronic-reporting-33 ${\it trade-data. CBP, CBP \ and \ Trade \ Automated \ Interface \ Requirements.}$
- CBP, "Automated Broker Interface (ABI) and Contact Information." 34
- 35 NOAA Fisheries, personal communication via telephone, June 6, 2017.
- NMFS, Fisheries of the United States 2018. 36
- 37 CBP, Importing Into the United States.
- 38 NOAA Office of Law Enforcement (hereinafter NOAA OLE), personal communication via telephone, May 5, 2017. CDFW Law Enforcement Division, personal communication via telephone, May 10, 2017.
- 39 NOAA Fisheries, National Seafood Inspection Lab, personal communication via telephone, May 11, 2017. NOAA Fisheries, personal communication via telephone, May 19, 20017.
- 40 NOAA Fisheries, "Seafood Import Monitoring Program," https://www.fisheries.noaa.gov/international/seafood-import-monitoring-program (accessed May 2020). Species covered by the SIMP are abalone, Atlantic cod, blue crab (Atlantic), dolphinfish (mahi-mahi), grouper, king crab (red), Pacific cod, red snapper, sea cucumber, shark, shrimp, swordfish, and tuna (albacore, bigeye, skipjack, yellowfin, and bluefin).
- Brosnan, NRDC IUU West Coast Ports Initiative. 41
- CBP, Importing Into the United States. 42
- Ibid. 43
- Commission for the Conservation of Antarctic Marine Living Resources, CCAMLR e-CDS User Manual, February 28, 2019, https://www.ccamlr.org/en/document/ 44 compliance/ccamlr-e-cds-user-manual.
- NOAA Fisheries, personal communication via telephone, June 12, 2017. 45
- NOAA Fisheries, personal communication via telephone, June 6, 2017. 46
- 47
- Gregg Casad, Ports 2.0—West Coast Ports Project Combating IUU Seafood Initiative Investigatory Document, Exulans, October 2018, https://www.nrdc.org/sites/ 48 default/files/iuu-west-coast-ports-project-gcasad-201810.pdf. This report was funded by NRDC. The views contained therein are those of the author and do not necessarily reflect those of NRDC
- $NOAA\ Fisheries, \textit{Office of Law Enforcement Annual Report Fiscal Year 2017}, NMFS, 2017, https://repository.library.noaa.gov/view/noaa/18375.$ 49
- 50 NOAA OLE, in-person communication, June 6, 2019.
- United States Census Bureau, U.S. Port Data, https://www.census.gov/foreign-trade/reference/products/catalog/port.html; Brosnan, NRDC IUU West Coast Ports 51
- CBP, personal communication via telephone, February 23, 2019.
- Washington Department of Fish and Wildlife (WDFW) law enforcement, in-person communication, April 8, 2019. 53
- WDFW law enforcement, retired, personal communication via telephone, March 15, 2019.
- CDFW law enforcement, retired, personal communication via telephone, June 16, 2020. 55
- NOAA Fisheries, "Office of Law Enforcement," https://www.fisheries.noaa.gov/about/office-law-enforcement (accessed December 4, 2018). 56
- NOAA OLE, West Coast Division, personal communication via telephone, October 28, 2016. 57
- NOAA Fisheries, Office of Law Enforcement Annual Report. 58
- Ibid. 59
- NOAA OLE, personal email communication, May 12, 2020. 60
- $WDFW, in-person communication, April \, 8, \, 2019. \, CDFW, in-person communication, December \, 6, \, 2019.$ 61
- WDFW, in-person communication, April 8, 2019. This same characterization of NOAA follow-up was reinforced in additional interviews. WDFW, personal 62 communication via telephone and email, December 9, 2019. CDFW, retired, personal communication via telephone, June 16, 2020.
- Brosnan, NRDC IUU West Coast Ports Initiative. 63
- 64 NOAA OLE, West Coast Division, personal communication via telephone, May 5, 2017.
- NOAA OLE, West Coast Division, personal communication via telephone, October 28, 2016. 65
- Mike Cenci, Counter IUU Measures for Seafood Imports: Recommendations Report for NRDC, Exulans, April 2019, https://www.nrdc.org/sites/default/files/iuu-66 measures-seafood-import-recommendations-interviews-mcenci-201904.pdf. This report was funded by the NRDC. The views contained therein are those of the author and do not necessarily reflect those of NRDC.

- Casad, Ports 2.0. 67
- 68 NOAA OLE, West Coast Division, personal communication via telephone, October 28, 2016,
- 69 NOAA OLE, personal communication via telephone, October 28, 2016. NOAA OLE, in-person communication, November 15, 2019.
- NOAA OLE, personal communication via telephone, October 28, 2016. 70
- NOAA OLE, West Coast Division, personal communication via telephone, October 28, 2016. CDFW, retired, personal communication via telephone, June 16, 2019. 71
- NOAA Fisheries, in-person communication, summer 2018. NOAA OLE, personal communication via telephone, June 27, 2018. 72
- Casad, Ports 2.0. 73
- NOAA OLE, personal communication via telephone, October 28, 2016. 74
- 75 Ibid.
- Samantha Murray and Tyler T. Hee, "A Rising Tide: California's Ongoing Commitment to Monitoring, Managing and Enforcing Its Marine Protected Areas," Ocean 76 & Coastal Management 182 (December 2019), https://doi.org/10.1016/j.ocecoaman.2019.104920. NOAA Fisheries, Office of Law Enforcement Annual Report.
- CDFW Special Operations and Marine Enforcement Division, in-person communication, December 6, 2019. 77
- 78 CDFW Special Operations and Marine Enforcement Division, in-person communication, December 6, 2019.
- Asked about the number of inspections they conduct each year, CDFW officials did not have specific numbers. CDFW Special Operations and Marine Enforcement 79 Division, personal communication via telephone, June 8, 2017.
- 80 CDFW Special Operations and Marine Enforcement Division, in-person communication, December 6, 2019,
- 81 NOAA Fisheries, personal communication via telephone, March 2019.
- 82
- 83 NOAA OLE, personal communication via telephone, May 5, 2017. CDFW Special Operations and Marine Enforcement Division, personal communication via telephone, June 8, 2017. CDFW Law Enforcement Division, personal communication via telephone, May 10, 2017.
- 84 Cenci, Counter IUU Measures for Seafood Imports.
- WDFW Law Enforcement Division, in-person communication, April 8, 2019. CDFW Law Enforcement Division, in-person communication, December 6, 2019. 85
- 86 Ibid.
- 87 Ibid.
- 88 WDFW Law Enforcement Division, in-person communication, April 8, 2019.
- 89
- 90 Cenci, Counter IUU Measures for Seafood Imports.
- 91
- 92 GAO, Seafood Fraud.
- 93 National Defense Authorization Act for Fiscal Year 2020, S. 1790, 116 Cong. § 3551 (2019).
- 94 Casad, Ports 2.0.
- 95 Ibid. Cenci, Counter IUU Measures for Seafood Imports.
- 96 Cenci, Counter IUU Measures for Seafood Imports.
- 97 Ibid.
- Ibid. 98
- 99 Ibid.
- 100 Ibid.
- NOAA, Presidential Task Force. 101
- NOAA, "Final Rule to Implement U.S. Seafood Import Monitoring Program—Final Regulatory Impact Review and Final Regulatory Flexibility Analysis," 2017, 102 https://www.iuufishing.noaa.gov/Portals/33/NOAA-NMFS-FRIR%20FRFA.pdf?ver=2017-09-07-172547-083. The document states that the SIMP's primary objective is to "ensure that imported fish and fish products derived from illegal harvest of species designated to be at risk of illegal fishing or seafood fraud can be
- Environmental Justice Foundation, WWF, et. al., A Comparative Study of Key Data Elements in Import Control Schemes Aimed at Tackling Illegal, Unreported and 103 Unregulated Fishing in the Top Three Seafood Markets: The European Union, the United States and Japan, January 2020, https://wwfeu.awsassets.panda.org/ $downloads/iuuwatch_kdes for import control schemes_report_jan 2020.pdf$
- 104 Casad, Ports 2.0.
- 105 CBP, Contraband and Trade Division, personal communication via telephone, February 23, 2019. CBP Contraband and Trade Division, personal communication via telephone, March 2019.
- 106 NOAA OLE, in-person communications with two individuals, July 23, 2018. NOAA Office of International Affairs and Seafood Inspection (hereinafter IASI), inperson communication, summer 2018.
- NOAA OLE, in-person communication, June 6, 2019.
- 108 CDFW Law Enforcement Division, in-person communication, May 16, 2018. WDFW, in-person communication, April 20, 2018.
- 109 NOAA IASI, in-person communication, June 4 and August 2, 2018.
- Casad, Ports 2.0. NOAA Fisheries, "NOAA Office of Law Enforcement Overview," July 2019, http://www.seafdec.or.th/home/file-events/category/47-psm-2019presentations?download=318:noaa-office-of-law-enforcement-overview.
- NOAA Office of Science and Technology, personal communication via telephone, June 12, 2017. NOAA Office of Science and Technology, in-person communication, 111
- "Magnuson-Stevens Fishery Conservation and Management Act; Seafood Import Monitoring Program." 112
- NOAA IASI, in-person communication, June 4, 2018.

- FAO, "Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels," http://www.fao.org/global-record/background (accessed April 2019).
- Ibid. The full name of the global record is the Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels. 115
- 116 Ibid.
- NOAA, Presidential Task Force. 117
- 118 NOAA OLE, West Coast Division, personal communication, December 6, 2019.
- CDFW Law Enforcement Division, in-person communication, May 16, 2018. WDFW, in-person communication, April 20, 2018. 119
- 120 "Magnuson-Stevens Fishery Conservation and Management Act; Seafood Import Monitoring Program."
- NOAA Fisheries, "Foreign Trade, U.S. Trade in Fisheries Statistics." 121
- 122 NOAA Fisheries Office of Science and Technology, in-person communication, June 6, 2019.
- 123 Ibid.
- 124NOAA Fisheries, in-person communication, summer 2018.
- Interviewees said that having just two additional federal officials at the Seattle port complex would make a pronounced difference. Since the Ports of LA/LB handle 125 a much larger volume of seafood, it would take more than two additional NOAA special agents to make a real difference. Further analysis is needed to determine what number of additional agents would be significant enough to deter IUU imports.