COVID-19 Infects the Fishing Industry: The Rise of Illegal Fishing and the Waiver of Fishery Observer Requirements

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INTRODUCTION

In 2020, the COVID-19 pandemic upended the world as we knew it. COVID-19 impacted almost every aspect of society and the planet—even ocean ecosystems. As global economies sunk into recession, the demand for seafood persisted. Yet, fishing vessels served as perfect vectors for the novel coronavirus because their confined spaces increased transmission of the airborne pathogens.[1]

The pandemic emerged against the backdrop of an ocean ecosystem chronically suffering from the effects of overfishing. The United States and other countries have existing programs for fishery observers that oversee research and monitor fishing vessels.[2] These observers act as the only at-sea enforcement mechanism to prevent illegal fishing. However, even before the pandemic began, the U.S. observer programs were suffering from at-sea harassment, limited funding, and administrative curtailment of the statutory directives that administer such programs.

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[1] *Indoor Air and Coronavirus (COVID-19)*, EPA (Apr. 6, 2021), https://www.epa.gov/coronavirus/indoor-air-and-coronavirus-covid-19.

[2] *Fishery Observers: Overview*, NOAA FISHERIES, https://www.fisheries.noaa.gov/topic/fishery-observers (last visited July 21, 2021); *see also* 10th *International Fisheries Observer and Monitoring Conference*, IFOMC, https://www.ifomc2022.com/home (last visited July 21, 2021).

When the National Oceanic and Atmospheric Association ("NOAA")[3] issued a rule waiving the requirement that a fisheries observer be onboard a fishing vessel for certain circumstances related to the COVID-19 pandemic[4], the already inadequate observer program took yet another hit. While NOAA's action is important for the health and safety of observers, it may also allow fishermen to increasingly violate fishing laws and underreport stocks and bycatch. If the emergency action ends, (it has been extended indefinitely on a case-by-case basis), Congress should amend the Magnuson–Stevens Fishery Conservation and Management Act ("MSA") to require stricter observer presence on all commercial fishing vessels. The United States should also encourage international cooperation to set uniform observer and data collection standards. At the core of the enforcement void, though, is a lack of political will to protect our ocean resources.

This Note will begin with a background of illegal fishing, fishery observer programs in the United States, and current laws and regulations overseeing those programs. A number of judicial interpretations of NOAA's guidance regarding fishery observers will also be discussed. It will then describe the recent changes to the fishery observer requirements due to the COVID-19 pandemic.

Finally, this Note will analyze short- and long-term solutions for filling the enforcement void left by the government's temporary rule. In the short term, the nature of the pandemic creates a bind in which governments must take care to protect the health and safety of fishery observers and fishermen. In the long term, however, the pandemic has highlighted the more general need for stronger laws and regulations regarding fishery observer requirements. Potential solutions for strengthening observer oversight include implementation of electronic monitoring technologies, stronger congressional action, and international cooperation.

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3 The National Marine Fisheries Service ("NMFS") is an agency under the control of NOAA. The two agencies are referred to interchangeably in various sources, so for the purposes of this Note, it can be assumed that they are, essentially, the same administrative body.

4 Emergency Measures to Address Fishery Observer Coverage During the COVID-19 Coronavirus Pandemic, 85 Fed. Reg. 17,285, 17,285 (Mar. 27, 2020) (to be codified at 50 C.F.R. pt. 600).

I. BACKGROUND

A. Illegal, Unreported, and Unregulated Fishing Overview

Commercial fishing and seafood production supports over one million jobs in the United States and the industry generates over $200 billion in sales annually.[5] Seafood consumption has seen an upward trend over the past few years.[6] The average American consumed sixteen pounds of fish and shellfish in 2017, up 1.1 pounds from 2016.[7] This increasing demand for seafood requires an increasing supply of fish stocks, yet ninety-three percent of the world's major marine fish stocks are classified as "fully exploited, overexploited, or significantly depleted."[8] The deficit has led to government regulations and laws that limit the number of allowable fish landings.[9] Consequently, illegal fishing occurs when vessels operate under the radar to gain profits while skirting around regulatory hurdles.

Illegal, Unreported, and Unregulated ("IUU") fishing depletes fish stocks beyond levels that regulating agencies have deemed safe, contributing to the global issue of overfishing.[10] The statutorily defined term "IUU fishing" appears in agency rules, judicial opinions, and industry stakeholder procedures and documents. "Unreported" includes not reported and misreported information regarding fishing activities.[11] "Unregulated" refers to fishing activities "executed by vessels without nationality and/or conducted in areas where the flag State is not a party to international agreements or in areas where fishery management measures do not exist."[12] IUU fishing varies in type and scale. For example, small vessels may misreport catch numbers ("catch" means *all* fish caught—both

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5 Jennie Lyons, *Economic Impact of U.S. Commercial, Recreational Fishing Remains Strong*, NOAA (Dec. 13, 2018), https://www.noaa.gov/media-release/economic-impact-of-us-commercial-recreational-fishing-remains-strong.

6 Jennie Lyons, *American Seafood Industry Steadily Increases Its Footprint*, NOAA (Dec. 13, 2018), https://www.noaa.gov/media-release/american-seafood-industry-steadily-increases-its-footprint.

7 *Id.*

8 U.S. COAST GUARD, ILLEGAL, UNREPORTED, AND UNREGULATED FISHING: STRATEGIC OUTLOOK 16 (2020), https://www.uscg.mil/Portals/0/Images/iuu/IUU_Strategic_Outlook_2020_FINAL.pdf [hereinafter USCG STRATEGIC OUTLOOK].

9 Fish landings are "the catches of marine fish landed in foreign or domestics ports." *Fish Landings*, OECD, https://doi.org/10.1787/93a69a82-en (last visited Apr. 13, 2021).

10 USCG STRATEGIC OUTLOOK, *supra* note 8, at 4.

11 *Id.* at 5.

12 *Id.*

retained and discarded). Additionally, vessels may harvest fish from another country's waters. Lastly, transnational criminal organizations may coordinate large-scale illegal fishing operations.[13]

IUU fishing not only depletes fish stocks but is also a dangerous, economically damaging, and harmful practice for humans. The criminal nature of IUU fishing leads to overlap with trade routes, landing sites, and vessels that are also used for "trafficking arms, migrants, drugs, and other contraband."[14] The U.S. Coast Guard even describes IUU fishing as a national security threat.[15] IUU fishing contravenes existing laws and regulations to the detriment of marine life, vital ecosystems, legal fishing industries, and consumers.[16]

With between eleven and twenty-six million metric tons of fish caught illegally every year worldwide, IUU fishing has far-reaching impacts.[17] Directly, IUU fishing undermines the ocean economy by violating international agreements and fisheries' conservation measures.[18] Indirectly, it unfairly harms legal fishermen's business and increases geopolitical tensions. A state that fails to hold a vessel operating under its flag accountable for violations of international fishing laws undercuts the sovereign rights of other nations trying to reap the economic benefits of the ocean's bounty.[19]

Global economic losses from IUU fishing are impossible to quantify because it is difficult to police the ocean,[20] yet the U.S. Department of State estimates that the losses are in the tens of billions of dollars each year.[21] Moreover, a 2016 study estimated that roughly thirty percent of global fish stocks are unreported.[22] The impact of IUU fishing is impossible to quantify because of the ocean's unique nature, but marine biologist and fisheries expert Daniel Pauly accurately explained that: "The world is withdrawing from a joint bank account of fish without knowing what has

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13 *Id.* at 4.

14 *Illegal, Unreported, and Unregulated Fishing*, U.S. DEP'T OF STATE, https://www.state.gov/key-topics-office-of-marine-conservation/illegal-unreported-and-unregulated-fishing/ (last visited Mar. 19, 2020).

15 USCG STRATEGIC OUTLOOK, *supra* note 8, at 2.

16 *Id.* at 9–10.

17 *Id.* at 8.

18 *Id.*

19 *Id.* at 6.

20 *Id.* at 8.

21 U.S. DEP'T OF STATE, *supra* note 14.

22 David Geselbracht, *Study Finds 30 Percent of Global Fish Catch is Unreported*, UNIV. OF B.C. (Jan. 19, 2016), https://news.ubc.ca/2016/01/19/study-finds-30-percent-of-global-fish-catch-is-unreported/.

been withdrawn or the remaining balance."[23] Preventing IUU fishing will result in more accurate estimations of global catches, which will help ensure sustainable supplies of fish for future generations.

Fishing alone does not harm the ocean; rather, overfishing—catching fish at a faster pace than stocks can replenish—is a serious threat to marine species and beyond.[24] IUU fishing practices often violate standard sustainable fishing guidelines, resulting in excessive bycatch and habitat destruction.[25] Destruction of fish stocks and habitat will have long-lasting effects on the viability of ocean ecosystems and global fish supply.[26] This danger, combined with the ocean's vastness, has created a vacuum whereby accountability for legal and sustainable fishing is difficult to monitor and enforce.

The United States is party to treaties and organizations regarding international fisheries such as the Northwest Atlantic Fisheries Organization ("NAFO").[27] Domestically, the United States has enacted a complex array of legislation and regulations at the state and federal levels that govern commercial and recreational fishing in U.S. waters. The next Section will explore some of those laws, regulations, and judicial interpretations of NOAA actions.

B. The MSA & the 2006 Amendments

Embedded in the most prominent law governing the fishing economy—the MSA—is a requirement that fishing vessels employ trained fishery observers tasked with ensuring compliance with fishing laws.[28] The MSA was originally enacted in 1976 with the twin purposes of conserving fishery resources off the coasts of the United States and allowing those fisheries to survive through hands-on management techniques.[29]

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23 *Id.*

24 *What is Overfishing? Facts, Effects and Overfishing Solutions*, WORLD WILDLIFE FUND, https://www.worldwildlife.org/threats/overfishing (last visited Dec. 26, 2020).

25 U.S. COAST GUARD, s*upra* note 8, at 10.

26 *Id.*

27 "NAFO is an intergovernmental fisheries science and management body." *Overview of NAFO*, NW. ATLANTIC FISHERIES ORG., https://www.nafo.int/About-us/Overview-of-NAFO (last visited Feb. 17, 2021). There are 13 contracting parties that have signed onto NAFO, including the United States, Canada, the European Union, and Japan. *Id.* NAFO's objective is to "ensure long term conservation and sustainable use of the fishery resources" and "to safeguard the marine ecosystems in which these resources are found." *Id.*

28 Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–1891d (2007).

29 § 1801(b)(1).

Congress acknowledged that "[c]ertain stocks of fish have declined to the point where their survival is threatened, and other stocks of fish have been so substantially reduced in number that they could become similarly threatened" due to: (1) increased fishing pressure; (2) the inadequacy of fishery resource conservation and management practice; and (3) habitat loss resulting from a diminished capacity to support existing fishing levels.[30]

The Act calls upon the Secretary of Commerce to establish a complex regulatory scheme by delegating oversight to the NMFS and eight regional Fishery Management Councils that oversee fishing in U.S. ocean waters.[31] The NMFS and the councils implement fishery management plans that set catch limits, create procedures, and monitor all aspects of commercial fishing in order to achieve a sustainable yield of fish.[32] The MSA also directs the Secretary to establish an observer program for foreign and domestic fishing vessels, prescribe minimum health and safety standards for observers, assign duties and functions to observers, and outline research areas where observer data will be required.[33]

The Sustainable Fisheries Act was a 1996 amendment to the MSA that, in part, directed the Secretary to promulgate regulations for fishing vessels that carry observers.[34] According to the Amendment, the regulations must include guidelines for determining when vessels must or must not carry an observer and actions that fishing vessel operations must take to render observers' facilities safe.[35] The Secretary must also establish programs to ensure that each observer receives training sufficient to gather that data necessary to achieve the sustainable fishery purposes outlined in the MSA.[36]

Ten years later, Congress updated the MSA to implement additional protections for fisheries. The law was renamed as the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act ("MSRA") and established two additional protective measures for fisheries.[37] The first, annual catch limits, requires each regional council to specify the number of fish that may be legally caught each year, and that number may

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30 § 1801(a)(2).

31 §§ 1801(b)(5), 1852(a)(1), 1891d(d).

32 *See* §§ 1801(b), 1853.

33 §§ 1821(h), 1827, 1881b–1885.

34 § 1881b.

35 § 1881b(a).

36 § 1881b(b).

37 *The Magnuson-Stevens Act: World's Leading Fisheries Management Under Threat*, OCEANA, https://usa.oceana.org/magnuson-stevens-act-worlds-leading-fisheries-management-under-threat (last visited Mar. 19, 2021).

not be exceeded.[38] Second, each regional council must establish specific accountability measures for enforcing the annual catch limits.[39] The MSRA, as amended in 2006, is still in effect today.

C. Fishery Observers

Fishery observers are, in essence, the United States government's liaisons at sea. They are professionally trained biological scientists who gather first-hand data on what is caught and released and support compliance with fishing and safety regulations.[40] The data they collect is used to "monitor federal fisheries, assess fish populations, set fishing quotas, and inform sustainable fisheries management."[41] The National Observer Program operates in all six NOAA Fisheries management regions: Alaska, Northwest, West Coast, Pacific Islands, Greater Atlantic, and Southeast.[42] The National Observer Program began in the 1970s and currently employs about 850 observers.[43] Observers work aboard U.S. commercial fishing and processing vessels, shore-side processing plants, and receiving vessels (commonly referred to as "motherships").[44] Despite the importance of fishery observers, the National Observer Program is riddled with issues that make it impossible for observers to fulfill their function.

1. Inadequate Data Collection

Under the existing National Observer Program, bycatch monitoring does not yield accurate and thorough data. Despite the apparent prioritization of observer requirements at the federal, state, and regional levels, observers are still only required on less than one percent of fishing trips[45] because coverage is only required for a low percentage of vessels and only on vessels that catch certain species.[46] The onboard observer requirements

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38 *Id.*

39 *Id.*

40 NOAA FISHERIES, *supra* note 2.

41 *Id.*

42 *Id.*

43 *National Observer Program Fact Sheet*, NOAA FISHERIES (May 27, 2021), https://www.fisheries.noaa.gov/resource/document/national-observer-program-fact-sheet.

44 *Id.*

45 *Fishery Observers: Eyes on the Ocean*, OCEANA, https://usa.oceana.org/fishery-observers-eyes-ocean (last visited Dec. 27, 2020).

46 NAT'L MARINE FISHERIES SERV., NMFS-F/SPO-206, NATIONAL OBSERVER PROGRAM FY 2018 ANNUAL REPORT 2, 8, 21–26 (2020), https://spo.nmfs.noaa.gov/sites/default/files/TMSPO206.pdf [hereinafter NMFS ANNUAL REPORT].

are limited due to funding constraints. In 2018, Congress appropriated a combined $79.5 million to provide coverage in all fifty-four U.S. fisheries.[47] Moreover, in order to get high-quality data that accurately estimates bycatch, observers must be present on at least twenty percent of fishing trips; even higher coverage is necessary to obtain high-quality data for fisheries likely to encounter rare or endangered species.[48] In 2016, NOAA only had access to such high-quality data for four percent of its annual bycatch estimates.[49] There is a clear need for increased coverage.

NOAA cannot efficiently regulate and manage fisheries without sufficiently accurate observer data. A fishery observer boards a fishing vessel for anywhere between one day to two weeks.[50] Observers keep careful records of every single sea creature that is brought on board and taken off.[51] They record detailed metrics including catch locations, weather, and ocean conditions, which help data scientists monitor the movement of fish in response to changing environmental conditions.[52] Observers also, importantly, ensure that fishermen comply with annual catch limits in accordance with the 2006 amendments to the MSA.[53] Catch limits are determined based on scientific data that shows how quickly each species of fish is removed from the ocean.[54] If sustainable fisheries are to adhere to the mandates of the 2006 MSRA, which imposes catch limits to sustain long-term fish stocks, observers must gather accurate and complete datasets during their time at sea.

2. Social Considerations for Fishery Observers

Working as a fishery observer can be daunting and even deadly. It is considered one of the most dangerous occupations in the world.[55] Observers' tracking of catch numbers may counteract fishermen's intentions to catch as many fish as possible without regard for bycatch or endangered

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47 *Id.* at 5 (explaining that funds for observer coverage included $57.2 million in congressionally appropriated funds and $22.3 million from the fishing industry).

48 *Fishery Observers*, *supra* note 45.

49 *Id.*

50 *A Day in the Life of an Observer*, NOAA FISHERIES (Feb. 21, 2012), https://www.fisheries.noaa.gov/feature-story/day-life-observer [hereinafter *A Day in the Life of an Observer*].

51 *Id.*

52 *Id.*

53 *Id.*

54 *Id.*

55 Karen McVeigh, *Disappearances, Danger, and Death: What is Happening to Fishery Observers?*, GUARDIAN (May 22, 2020, 1:30 pm), https://www.theguardian.com/environment/2020/may/22/disappearances-danger-and-death-what-is-happening-to-fishery-observers.

species.[56] Because of this cross purpose, fishery observers commonly experience hostility—including harassment and intimidation—especially if they witness illegal activities onboard.[57] "The very reason fishery observers are needed—the difficulty of seeing what happens aboard ships in international waters—is also what makes fishery observers vulnerable."[58]

Since 2015, nine fisheries observers have died or disappeared at sea worldwide.[59] In March 2020, Eritara Aati Kaierua, an I-Kiribati observer working in the South Pacific Ocean, was found dead on a Taiwanese vessel owned by one of the biggest tuna traders in the world.[60] His death prompted Greenpeace International and the Association of Professional Observers—a non-profit organization that advocates on behalf of fishery observers—to submit a formal complaint demanding that the United Nations intervene to ensure that the investigation be handled effectively.[61] Fishery observers are at a great disadvantage due to their isolation from law enforcement on the high seas combined with the adversarial nature of their job. They are alone amongst a crew of fishermen that likely prioritize profits over accurate data and ecosystem protection.

Attacks against observers in the United States have prompted government action. For example, in 2019, NOAA issued a $30,000 fine to a first mate who made "an unsolicited sexual advance to an observer and also made multiple comments of a sexual nature on [a] near-daily basis."[62] NOAA also issued a $55,000 fine to a crew member on a different factory trawler who "entered an observer's stateroom and made an unsolicited sexual advance towards the observer."[63] However, those incidents only came to NOAA's attention because the company that owned the fishing operation and/or the captain notified NOAA's Office of Law Enforcement of the harassment that had occurred at sea.[64]

According to a 2016 NOAA survey of fishery observers' experiences, forty-six percent of respondents reported that they were harassed at least

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56 *Id.*

57 *Id.*

58 *Id.*

59 *Id.*

60 *Id.*; *UN Intervention Needed on Suspected Murder Case Linked to Global Tuna Trader*, GREENPEACE INTERNATIONAL (Jul. 13, 2020), https://www.greenpeace.org/international/press-release/44019/un-intervention-needed-on-suspected-murder-case-linked-to-global-tuna-trader/ [hereinafter *UN Intervention Needed*].

61 *UN Intervention Needed*, *supra* note 60.

62 *Keeping Fishery Observers Safe from Harassment*, NOAA FISHERIES (Dec. 11, 2019), https://www.fisheries.noaa.gov/feature-story/keeping-fishery-observers-safe-harassment.

63 *Id.*

64 *Id.*

once on the job, but only one-third of those observers reported the harassment every time it occurred.[65] Additionally, only twenty percent of observer respondents felt valued by the fishing community.[66] These data are significant because they signal that observers felt pressured or undermined by the crew members of the fishing vessels they worked on. They may be disinclined to report IUU fishing if there is a possibility that they will be assigned to the same boat again in the future. The threat of violence or harassment towards fishery observers is very real. As the only enforcement method available on commercial fishing vessels in real time, observers must work in very contentious circumstances, making the possibility for IUU fishing extremely high. Observers may, understandably, keep quiet about violations if they fear for their own safety and well-being among the vessel's crew.

3. Partial vs. Full Observer Coverage Regulations

A complex regulatory scheme has emerged in response to Congress's demands for a national observer program, which fails to hold all vessels accountable for their actions at sea. In response to the statutory requirements of the Sustainable Fisheries Act, NMFS has promulgated regulations for each fishery region off U.S. coasts (e.g., fisheries of the Northeastern United States, fisheries off West Coast states, fisheries in the Western Pacific).[67] For example, the NMFS's regulations regarding "Fisheries of the Exclusive Economic Zone off Alaska" includes an observer program that describes partial and full fishery observer coverage requirements.[68]

For "Fisheries of the Exclusive Economic Zone off Alaska" that catch groundfish and halibut,[69] vessels in the full coverage category must have at least one observer aboard the vessel when "harvesting, receiving, or processing groundfish in a federally managed or parallel groundfish fishery."[70] "Groundfish" live near the bottom of the ocean. They comprise 141 species in Alaskan waters, including Pacific cod, sablefish, and various

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65 *Observer Attitudes and Experiences: 2016 Survey Snapshot*, NOAA FISHERIES (2019), https://media.fisheries.noaa.gov/dam-migration/observer_survey_snapshot_—_final_april_2019.pdf.

66 *Id.*

67 *See* 50 C.F.R. §§ 600–697 (1996).

68 § 679.51.

69 *Commercial Groundfish Fisheries Overview*, ALASKA DEP'T OF FISH AND GAME, https://www.adfg.alaska.gov/index.cfm?adfg=CommercialByFisheryGroundfish.main (last visited Mar. 19, 2021).

70 50 C.F.R. § 679.51(a)(2).

rockfish and flatfish species.[71] Those vessels include all commercial catchers, processors, and motherships unless a vessel is granted partial observer coverage status.[72]

If a vessel operator seeks to qualify for only partial observer coverage in lieu of full coverage, it may submit a request to NOAA that is then approved or denied, subject to appeal.[73] The Agency will grant partial observer coverage status to a vessel for one fishing year if the owner or processor of the vessel: (1) has an average weekly groundfish production of between zero and 79,000 pounds; (2) does not use trawling gear;[74] and (3) is not subject to additional observer requirements outlined in a different part of the NOAA rule.[75] Thus, in Alaskan fisheries, all commercial fishing vessels that harvest halibut and groundfish automatically require full observer coverage unless they successfully apply for and are awarded partial coverage status.

Observer coverage regulations indicate how important it is to NOAA that, aside from a few narrow circumstances, there is always an observer onboard to collect data and ensure compliance with the law. Nevertheless, that is only true for certain fisheries. The observer coverage regulations only require observers to be onboard vessels that fall under NOAA's jurisdiction (i.e., only vessels that catch halibut and groundfish). Observers are not required on vessels that catch shellfish or any other marine species that do not fall under the prescribed groundfish category.[76] Put another way, since many vessels focus on other species that do not fall under NOAA's jurisdiction, most vessels are not required to have observers. That fact squares with the aforementioned statistics explaining how scant the overall coverage actually is in commercial fishing as a whole. Thus,

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71 *Groundfish Research in Alaska*, NOAA FISHERIES, https://www.fisheries.noaa.gov/alaska/science-data/groundfish-research-alaska (last visited Mar. 19, 2021).

72 50 C.F.R. § 679.51(a)(2).

73 § 679.51(a)(3).

74 "Trawling" is a fishing method that includes a few variations of towing a large net in the ocean. Midwater trawling involves "towing a large net through the water column." *Fishing Gear: Midwater Trawls*, NOAA FISHERIES, https://www.fisheries.noaa.gov/national/bycatch/fishing-gear-midwater-trawls (last visited Dec. 28, 2020). Bottom trawling is "a fishing practice that herds and captures the target species, like ground fish or crabs, by towing a net along the ocean floor." *Fishing Gear: Midwater Trawls*, NOAA FISHERIES, https://www.fisheries.noaa.gov/national/bycatch/fishing-gear-bottom-trawls (last visited Dec. 28, 2020).

75 50 C.F.R. § 679.51(a)(3)(iii).

76 *North Pacific Observer Program*, NOAA FISHERIES, https://www.fisheries.noaa.gov/alaska/fisheries-observers/north-pacific-observer-program (last visited Oct. 25, 2021).

the ability to apply for partial coverage strongly diminishes the scope of the regulation.

4. Judicial Deference to Agency Observer Rules

In judicial review of agency action interpreting the MSRA and other relevant observer laws, the overwhelming trend is that agencies are awarded a high level of deference that allows them to water down coverage requirements.[77] Two cases in particular illuminate agencies' guardrails in setting observer requirements.

In *Oceana, Inc. v. Penny Pritzker*, Oceana, a non-profit conservation organization, sued NOAA for failing to provide sufficient monitoring to ensure that commercial fishing vessels were complying with allotted catch limits.[78] Oceana claimed that NOAA violated the MSA and the Administrative Procedure Act ("APA") when it adjusted policies regarding its at-sea monitoring program because NOAA lowered the required coverage level for third-party observers on commercial fishing vessels.[79] Oceana alleged that NOAA lowered the requirement to prioritize cost over conservation, but the Agency defended its framework with data showing a lessened risk of IUU fishing.[80]

The court's decision in *Penny Pritzker* incorporated the "arbitrary and capricious" standard into cases concerning the interpretation of the APA and MSA.[81] Federal courts play a limited role in reviewing administrative decisions; their only task is to determine whether or not "the evidence in the administrative record permitted the agency to make the decision it did."[82] Therefore, under the APA, courts can only "hold unlawful and set aside agency action, findings, and conclusions" that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[83] In *Penny Pritzker*, the court undertook a complex technical analysis of the Agency's decision-making process and ultimately decided that the Agency's framework was well-reasoned and consistent with statutory directives.[84] Thus, the court held that the Agency's actions were reasonable and neither arbitrary nor capricious.[85] This case shows that even

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77 *See* Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 844 (1984).

78 Oceana, Inc. v. Penny Pritzker, 26 F. Supp. 3d 33, 37 (D.D.C. 2014).

79 *Id.* at 40.

80 *Id.* at 47–48.

81 *Id.* at 40 (citing 16 U.S.C. § 1855(f)(1); 5 U.S.C. § 706(2)(A)).

82 Pritzker, 26 F. Supp. 3d at 40 (quoting Sierra Club v. Mainella, 459 F. Supp. 2d. 76, 89–90 (D.D.C. 2006)).

83 5 U.S.C. § 706(2)(A).

84 Pritzker, 26 F. Supp. 3d at 37.

85 *Id.*

though the MSA directs NOAA to promulgate rules that ensure a sustainable fish yield and maintain observer requirements, there is a high level of deference awarded to agencies in determining what those procedures actually are. Even when an agency lowers the observer coverage requirement in one fishery from thirty percent to twenty-two percent, as it did in the *Penny Pritzker* case, a court may still uphold the agency's decision as reasonable.[86]

Another case provides the opposite extreme of an agency's ability to interpret its statutory directives. In *Oceana v. Locke*, the MSA directed the NMFS to " 'establish a standardized reporting methodology to assess the amount and type of bycatch' in each fishery in each region."[87] The NMFS then proposed Amendment 16 for its fishery management plan, which requires the Agency's regional officials to allocate enough fishery observers on each vessel type to generate statistically reliable data.[88] Yet, Amendment 16 allows the NMFS to waive observer requirements and instead determine the "most appropriate" number and allocation of observers according to the "data needs" of the NMFS, "its obligations under other statutes, and 'any other criteria' it may identify."[89] Amendment 16 claims that it can utilize this "most appropriate" number in any year "in which external operational constraints would prevent the [agency] from fully implementing the required at-sea observer coverage levels."[90] Oceana sued the NMFS alleging that the Amendment is inconsistent with the statutory directive to establish a standardized reporting methodology[91] because the Amendment does not establish a methodology; rather, it just describes optional guidelines that apply in some years, but not others.[92]

The court scrutinized the case under the same "arbitrary and capricious" standard used in *Penny Pritzker*.[93] In a rare move, the court determined that Amendment 16 "fails to survive this indulgent standard of review because it creates an exception so vague as to make the rule meaningless."[94] The court reasoned that the NMFS impermissibly gave itself "complete discretion to determine when an external operational constraint prevents [it] from fully implementing the required coverage

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86 *Id.* at 40.

87 Oceana, Inc. v. Locke, 670 F.3d 1238, 1239 (D.C. Cir. 2011) (quoting 16 U.S.C. § 1853(a)(11)).

88 *Id.* (citing 73 Fed. Reg. 4736, 4738 (Jan. 28, 2008)).

89 *Id.* at 1240 (quoting 73 Fed. Reg. 4736, 4738 (Jan. 28, 2008)).

90 *Id.*

91 16 U.S.C. § 1853(a)(11).

92 Locke, 670 F.3d at 1240–41.

93 *See* Oceana, Inc. v. Penny Pritzker, 26 F. Supp. 3d 33, 40 (D.D.C. 2014).

94 Locke, 670 F.3d at 1241 (alteration in original) (quoting 73 Fed. Reg. 4736, 4738 (Jan. 28, 2008)).

levels."[95] An agency can therefore announce a budgetary constraint any year it wants without any benchmark of consistency.[96] The NMFS granted itself "substantial discretion both to invoke and to make allocations according to a non-standardized [methodology]," and therefore the court concluded that the Agency failed to "establish a standardized methodology under the [MSA]."[97] The D.C. Circuit accordingly reversed the district court's judgment and remanded the case to the NMFS for further proceedings.[98]

The aforementioned cases provide insight into judicial constraints on NOAA and the NMFS in promulgating rules consistent with the MSA and other statutory directives. In general, as *Penny Pritzker* exemplifies, agencies have broad discretion.[99] But there are limits to that discretion when an agency interprets its directive as a broad and vague grant of discretion, as *Locke* illustrates.[100]

II. CHANGES TO OBSERVER REQUIREMENTS IN RESPONSE TO COVID-19

A. Temporary Rule Waiving Coverage Requirements

In March 2020, the world came to a halt as nations began to feel the toll of the COVID-19 pandemic. Governments scrambled to reallocate resources to save lives, companies pivoted to address supply needs, and the United States sank into a recession. The ripple effects of the pandemic were—and will be for an unknown period—catastrophic and widespread.

The chaos of 2020 bolstered concerns over illegal fishing, especially as domestic law-enforcement budgets were reallocated to provide resources to front-line workers and programs that protect people who have lost their jobs, homes, family members, and livelihoods.[101] When the pandemic began, fishing companies started using the virus as a crutch to push

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95 *Id.* (internal quotation omitted).

96 Locke, 670 F.3d at 1242.

97 *Id.* at 1243 (internal quotation omitted).

98 *Id.*

99 *See* Pritzker, 26 F. Supp. 3d at 33.

100 *See* Locke, 670 F.3d at 1238.

101 Whitley Saumweber et al., *Covid-19 at Sea: Impacts on the Blue Economy, Ocean Health, and Ocean Security*, CTR. FOR STRATEGIC AND INT'L STUDIES (Apr. 10, 2020), https://www.csis.org/analysis/covid-19-sea-impacts-blue-economy-ocean-health-and-ocean-security.

back against the need for fishery observers onboard.[102] This led to a flurry of controversy. In the United States, regulations requiring observer coverage did not expressly address the circumstances in which the NMFS may waive coverage due to a public health emergency.[103] This gap in regulatory specificity led the Agency to issue a temporary rule that could damage the fishing industry and the ocean ecosystem.

On March 27, 2020, in response to the COVID-19 pandemic, NOAA and the NMFS issued a temporary rule "to provide it with authority to waive observer coverage requirements established in regulations promulgated under the [MSA] and other statutes, consistent with applicable law and international obligations."[104] After six months, on September 3, 2020, the rule was extended until March 26, 2021.[105] According to the NMFS, it took this action "to protect public health, economic security, and food security, and to safeguard the health and safety of fishermen, observers, and other persons involved with such monitoring programs, while safeguarding the ability of fishermen to continue business operations and produce seafood for the Nation."[106]

Under the temporary rule, the NMFS may waive observer coverage if either of two scenarios occurs: (1) a government, company, or other organization that deploys observers restricts travel or otherwise issues COVID-19-related measures that are inconsistent with the requirements to place an observer on a vessel; or (2) "no qualified observers are available for placement due to health, safety, or training issues related to COVID-19."[107]

In April 2020, nineteen non-governmental organizations wrote a letter in response to NOAA's observer requirement waiver expressing concern about the temporary rule.[108] The letter claimed that "any relaxation of monitoring and surveillance of commercial fisheries would allow more [IUU] fishing."[109]

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102 McVeigh, *supra* note 55.

103 *See* 16 U.S.C. §§ 1801–1891d.

104 Emergency Measures to Address Fishery Observer Coverage During the COVID-19 Coronavirus Pandemic, 85 Fed. Reg. 17,285, 17,285 (Mar. 27, 2020) (to be codified at 50 C.F.R. pt. 600).

105 Extension of Emergency Measures to Address Fishery Observer Coverage During the Coronavirus Pandemic, 85 Fed. Reg. 59,199, 59,199 (to be codified at 50 C.F.R. pt. 600).

106 Emergency Measures to Address Fishery Observer Coverage, 85 Fed. Reg. at 17,285.

107 *Id.* at 17,286.

108 McVeigh, *supra* note 55.

109 *Id.*

B. Implications for Fishery Observers and IUU Fishing

The NMFS's temporary rule may have a variety of negative impacts on the fishing economy and ecosystem. IUU fishing may increase as a direct result of the relaxed fishery observer requirements. One report says that the "postponement of meetings where important [fisheries monitoring, control, and surveillance] measures are being developed . . . [is] expected to result in an increase in the level of IUU fishing by unscrupulous operators and weaken the efforts of members to identify and address the level of IUU fishing."[110] Additionally, seventy-nine percent of regional fisheries management organizations that conduct research "are experiencing, or expecting that the impact of COVID-19 will have negative consequences on the research on fish stocks."[111] Halting research efforts will negatively impact species stock assessment programs.[112] "Programmes such as biological sampling, electronic and conventional tagging, growth studies and basic research [were] substantially reduced or cancelled during the first [half] of 2020."[113] The absence of fishery observers on commercial fishing vessels will create an enforcement gap that allows fishermen to subvert fishing laws while at sea. The loss of potential fishery observer research during the pandemic will create gaps in datasets that may disrupt efforts to manage and sustain fish populations.

This is a global problem because oceans and fish stocks do not adhere to international borders and any domestic failures impact observer programs worldwide. Therefore, the efforts of any individual country to sustain fish stocks may only be as successful as the weakest domestic efforts. Many countries use fishery observer programs similar to the United States' program, but they have responded differently to the pandemic, causing disparate levels of observation and data collection. In the South Pacific, the Western and Central Pacific Fisheries Commission ordered fisheries observers to return to their home ports as the pandemic spread.[114]

The response to the pandemic has highlighted the inadequacies and weaknesses of the fishery observer program worldwide. Yet, this Note will propose solutions to the United States' fishery observer program's

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110 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, THE IMPACT OF COVID-19 ON FISHERIES AND AQUACULTURE: A GLOBAL ASSESSMENT FROM THE PERSPECTIVE OF REGIONAL FISHERY BODIES 5 (2020), http://www.fao.org/3/ca9279en/ca9279en.pdf.

111 *Id.* at 6.

112 *Id.*

113 *Id.*

114 Todd Woody, *COVID-19 Leaves Fisheries Observers in the Dark*, CHINA DIALOGUE OCEAN (Sept. 29, 2020), https://chinadialogueocean.net/15164-covid-19-fisheries-observers-in-the-dark/.

shortcomings. At its core, a lack of political will prevents the fishery observer program from reaching its full potential.

III. FRAMEWORK FOR ADDRESSING IUU FISHING THROUGH OBSERVER PROGRAMS

A. Short-Term Solutions to Mitigating IUU Fishing

This Section will describe the need for a potential solution to IUU fishing while the COVID-19 pandemic continues, as well as the complications that may hinder such efforts. Keeping in mind the requirement to maintain health and safety during the pandemic, there may be other solutions to subvert IUU fishing and continue research operations while the pandemic is ongoing.

1. Public Health Interest vs. Dangers of IUU

The presence of fishery observers aboard commercial fishing vessels is vital to ensuring accurate data and compliance with the law. Yet, during a global pandemic, the health and safety of the fishing crew is paramount. In crafting a solution, it is imperative to keep in mind that the NMFS's temporary rule is designed with the good intention of protecting public health and safety.

In May 2020, a factory trawler off the Washington coast left port two days after 120 of 122 crew members tested negative for COVID-19.[115] Yet, after eighteen days at sea, "the ship returned to shore after a crew member became sick and needed hospitalization."[116] Monitoring then showed that 104 of the crew members onboard had been infected with the virus.[117] A ship is the ideal environment for a virus to spread because of the confined spaces that make social distancing nearly impossible. Therefore, the federal government has had the daunting task of figuring out how to prevent IUU fishing and maintaining research processes while also protecting the health and safety of fishermen, fishery observers, associated stakeholders in the fishing industry, and the public at large.

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115 Sandi Doughton, *Seattle Fishing Boat Outbreak Suggests Antibodies Protect Against Coronavirus Infection*, SEATTLE TIMES (Aug. 18, 2020), https://www.seattletimes.com/seattle-news/health/seattle-fishing-boat-outbreak-suggests-antibodies-protect-against-coronavirus-infection/.

116 *Id.*

117 *Id.*

Commercial fishing has been allowed to continue throughout the pandemic because fishing is considered an essential business.[118] In order to comply with social distancing requirements, commercial fishing vessels were limiting the number of crew they were taking out to sea, fishing closer to shore, or reducing trip lengths.[119] Shoreside support services, including fueling and repairs, may have been closed or operating at limited capacity, causing further challenges for fishing vessels.[120] Onboard, fishing crews were required to wear masks for the duration of their time at sea unless they are eating, drinking, taking medication, or sleeping.[121] Despite the added difficulty that these precautions have brought to commercial fishing, the industry has continued to operate, meaning IUU has likely continued unregulated.

Given these safety precautions and the ongoing operations of fishing vessels, it seems unnecessary to halt the observer program. While a court may not agree, an agency's decision to waive observer requirements, despite the statutory directive under the MSA to have observers onboard, seems arbitrary and capricious.

2. Congressional Action to Address Void in Oversight

In the short term, Congress may be the most effective and efficient driver of change. If convinced, Congress may direct NOAA to supplement any scaled-back observer presence with another method of tracking stock numbers such as electronic monitoring devices, as discussed below. Alternatively, Congress could direct the Coast Guard or another law enforcement agency to create a different form of oversight. Given the public health threat of the virus, such alternative solutions may be best.

In May 2020, the Secretary of Commerce announced that $300 million of the Coronavirus Aid, Relief, and Economic Security ("CARES") Act would be allocated to "states, Tribes, and territories with coastal and marine fishery participants who have been negatively affected by COVID-

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118 Sarah Lindley Smith, et al., *Adaptation and Resilience of Commercial Fishers in the Northeast United States During the Early Stages of the COVID-19 Pandemic*, RUTGERS UNIV. DEP'T OF HUMAN ECOLOGY 2 (Dec. 17, 2020), https://doi.org/10.1371/journal.pone.0243886.

119 *Id.* at 3.

120 *Id.*

121 U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION: NOTICE AND ORDER, REQUIREMENT FOR PERSONS TO WEAR MASKS WHILE ON CONVEYANCES AND AT TRANSPORTATION HUBS 1, 4 (Feb. 1, 2021), https://divcomplatform.s3.amazonaws.com/www.nationalfisherman.com/images/ee87c40389afbc0fecd2272e1e296b65.pdf.

19."[122] NOAA was tasked with awarding the money to the regional fisheries commissions, who would then disburse the funds consistent with the CARES Act and NOAA guidance to address "direct or indirect fishery-related losses as well as subsistence, cultural, or ceremonial impacts related to COVID-19."[123] The CARES Act was a positive step toward addressing the void in the fishery industry that the pandemic created. But the widespread distribution method and the discretion of each commission to allocate the funds discordantly makes it difficult to assess the effectiveness of the aid on reducing IUU fishing and maintaining research efforts.

3. Agency Pressure to Avoid Termination of Observer Employment Contracts

The COVID-19 pandemic has had devastating effects on the U.S. economy and workforce, and the fishery observer profession is no exception. In February 2020, before the shutdowns began, the national unemployment rate was 3.5 percent.[124] By April 2020, 22.1 million jobs were lost, resulting in unemployment levels that surpassed those of the Great Recession.[125] Unemployment rates "disproportionately increased among economic sectors delivering in-person services,"[126] and fishery observers clearly fall into that category. According to the United Nations, "observers are likely to suffer from reduced work opportunities and income during the suspension of observer activities."[127] This not only harms the ocean and data collection but threatens the viability of the fishery observer program.

Fishery observer layoffs may make the profession even less credible and essential in the eyes of the commercial fishing industry. Moreover, it may be more difficult to recruit and retain observers in the long term if the job appears to lack security—both personal safety and professional job security. If commercial fishermen are still allowed to take motherships out to sea during a pandemic, where is the harm in adding one more person—

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122 *Commerce Secretary Announces Allocation of $300 Million in CARES Act Funding*, NOAA FISHERIES (May 7, 2020), https://www.fisheries.noaa.gov/feature-story/commerce-secretary-announces-allocation-300-million-cares-act-funding.

123 *Id.*

124 CONG. RSCH. SERV., UNEMPLOYMENT RATES DURING THE COVID-19 PANDEMIC 5 (Aug. 20, 2021), https://fas.org/sgp/crs/misc/R46554.pdf.

125 *Id.* at 1.

126 *Id.* at 5.

127 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, THE IMPACT OF COVID-19 ON FISHERIES AND AQUACULTURE: A GLOBAL ASSESSMENT FROM THE PERSPECTIVE OF REGIONAL FISHERY BODIES 18 (2020), http://www.fao.org/3/ca9279en/ca9279en.pdf.

an observer—whose role is crucial for furthering the interests of Congress's intent under the MSRA?

To prevent fishery observers from losing their jobs, it is essential that Congress, citizens, and other stakeholders in the fishing industry put pressure on fishery observer programs in all regions to continue employment contracts. There will be prolonged damage to ocean ecosystems and data if IUU fishing and research gaps continue. If fishery observer programs spend unnecessary time and money recruiting and training new observers that could have been retained in the first place, the delay in program operation will only continue. Observers must be able to get back to work when it's safe and the emergency action is lifted. In the long term, NOAA should issue guidance discouraging observer layoffs across all the fishery regions in times of crisis.

B. Post-Pandemic Legal Framework for Preventing IUU Fishing

When the COVID-19 pandemic ends and the temporary rule waiving fishery observer requirements has lapsed, the problem of IUU fishing will remain. At that point, when there is no longer a virus threatening the public's health and safety, new measures must be taken to address IUU fishing as a whole and to fill in the gaps in enforcement and research that worsened during the pandemic. This Section will outline possible solutions to preventing IUU fishing in the long term.

1. Judicial Recourse Will Likely Fail

One possible avenue for ensuring that the NMFS does not invoke any future waivers of the fishery observer requirement is through the courts. Citizens or organizations could bring suits against the Agency alleging that it subverted its statutory directive under the MSA to implement monitoring programs.[128] If a reviewing court ruled against the NMFS, it might create a precedent to bar the Agency from waiving those requirements again in the future. But based on the aforementioned *Penny Pritzker* and *Locke* cases, judicial recourse will likely fail because of the great deference awarded to NOAA and the NMFS.[129] Moreover, judicial recourse would probably fail because the standard of review indicates that an even higher level of deference is awarded to the agency when it comes to technical matters, which require a high level of expertise.[130] Therefore, without a

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128 *See* 16 U.S.C. §§ 1801–1891d.

129 *See* Oceana, Inc. v. Penny Pritzker, 26 F. Supp. 3d 33 (D.D.C. 2014); Oceana, Inc. v. Locke, 670 F.3d 1238 (D.C. Cir. 2011).

130 Pritzker, 26 F. Supp. 3d at 41.

strong outlook for the possibility of judicial precedent barring waiver of fishery observer requirements, other branches of government may be the only hope for maintaining fishery observer programs.

2. Harnessing Congressional Power

Ultimately, only Congress has the power to change domestic law to reduce IUU fishing and improve observer coverage. While the MSA already provides for protections against IUU fishing, more could be done to strengthen enforcement measures. At a House Natural Resources Committee hearing in 2019, legislators asked the NMFS why the United States is not fully exercising its power to do more to combat IUU fishing.[131] NOAA's Acting Director of International Affairs and Seafood Inspection, Alexa Cole, explained that Mexican fishermen have been illegally fishing for red snapper in the Exclusive Economic Zone ("EEZ") of the United States.[132]

The United States does not have jurisdiction over Mexican fishermen's illegal fishing activities, and this problem has been chronic and ongoing for decades.[133] The United States issued a negative certification to Mexico under the High Seas Driftnet Fishing Moratorium Protection Act ("Moratorium Protection Act")—explained in more detail in Section Four below.[134] Within two years of issuing a negative certification, NOAA was quick to reverse the reprimand against Mexico simply because the Mexican government produced documents showing that it began to prosecute fishermen operating illegally in the U.S. EEZ.[135] Yet, by the time the next report was issued, Mexico had again lost its positive certification because, despite documented prosecutions, Mexican fishermen were still illegally fishing in U.S. waters.[136]

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131 Elizabeth Murdock, *Congress Shows How U.S. Must Lead to End Illegal Fishing*, NRDC (Nov. 14, 2019), https://www.nrdc.org/experts/elizabeth-murdock/congress-shows-how-us-must-lead-end-illegal-fishing.

132 *Hearing on Oversight of NOAA's Report on Illegal, Unreported, and Unregulated Fishing Before the Subcomm. on Water, Oceans, and Wildlife of the H. Comm. on Nat. Res.*, 116th Cong. 3–4 (2019) (written testimony by Alexa Cole, Acting Dir. of Off. Int'l Aff. and Seafood Inspection), https://naturalresources.house.gov/imo/media/doc/Cole%20NOAA%20Testimony%20WOW%20Ov%20Hrg%2011.14.19.pdf.

133 *Id.*

134 *Id.*

135 *Id.*

136 *Id.*

Subcommittee Chairman Jared Huffman expressed concern that NOAA acted hastily when it issued a positive certification so quickly.[137] He said that Mexican fishermen illegally operating in the U.S. EEZ is analogous to them "taking our lunch money" by limiting access and economic opportunities for U.S. fishermen.[138] Congressman Huffman asked Director Cole what the United States could do to build greater enforcement capacity given that the Moratorium Protection Act by itself did not preclude foreign fishermen from practicing IUU fishing in the U.S. EEZ.[139] She noted that there is no single solution, and no individual law or action will solve this problem.[140] The "revolving door" of certification, abuses, and recertification is not working.[141]

Ian Urbina, an investigative reporter at The New York Times, also testified at the hearing.[142] He said of IUU fishing that "the biggest problem is not a lack of law, but rather a lack of enforcement . . . [and the] prerequisite for true enforcement is almost always monitoring."[143] Urbina provided a lengthy list of monitoring tools that already exist and concluded that what is needed now is political will.[144] Congress has the power to enact laws that include strong enforcement mechanisms and appropriations bills that fund such enforcement. But the monitoring and certification tools currently available to agencies are not enough to stop IUU fishing in domestic waters.

Congress should also amend fisheries laws, most importantly the MSA, to strengthen the observer program in three ways. First, there should be more fisheries that require observers onboard. More specifically,

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137 House Nat. Res. Comm. Democrats, *WOW Oversight Hearing EventID=110213*, YOUTUBE (Nov. 14, 2019), https://www.youtube.com/watch?v=uI4YSjzVQHU.

138 *Id.*

139 *Id.*

140 *Id.*

141 *Id.*

142 *Hearing on Oversight of NOAA's Report at Illegal, Unreported, and Unregulated Fishing Before the Subcomm. on Water, Oceans, and Wildlife of the H. Comm. on Nat. Res.*, 116th Cong. 3 (2019) (written testimony by Ian Urbina, Investigative Rep., N.Y. Times), https://naturalresources.house.gov/imo/media/doc/Urbina%20Testimony%20Written%20WOW%20Ov%20Hrg%2011.14.19.pdf.

143 *Id.* at 2.

144 *Id.* at 2–3 (including existing monitoring mechanisms such as "mandatory crew manifests, independent vessel identification numbers, VMS/AIS or other vessel tracking, port state inspection regimes, supply chain auditing, bar-code fish tracking, on board cameras, chain of custody rules, public and centralized comprehensive blacklists of scofflaw vessels, government-funded satellite monitoring, rules on reporting violence at sea, public access to crime data, [and] consumer driven certification").

commercial fishing practices should encompass a larger number of species, the catching of which would trigger the need to have an observer onboard.

Second, there should be greater coordination with state fisheries. Federal and state jurisdiction over fisheries varies based on location and species, although all observers in the United States are under NOAA's jurisdiction. There is already coordination with the states through the regional fishery management councils, which allows for collaboration in collecting data, conserving fish habitat, and implementing management programs.[145] The jurisdictional boundaries are too complex to cover in this Note, but data collection at state agencies, such as the Alaska Department of Fish and Game, would likely benefit from coordination with NOAA.

Finally, there is a need for increased support for the observers. Increased training and enforcement capabilities would improve the ability of observers to issue citations for violations at sea. Additional measures that improve the health, safety, and well-being of observers might include a requirement that more than just one observer be onboard on all trips. An anonymous reporting mechanism for abuses and harassment would also be useful. Also, an anti-retaliation provision in observer employment contracts could increase the likelihood that mistreatment gets reported to the authorities. More practical accommodations onboard motherships might improve job safety for observers, including private, locked cabins. NOAA should take all necessary precautions to ensure that fishery observers are able to successfully carry out their duties without worrying about safety or enforcement capabilities.

Additionally, Congress should amend the MSA to include language that more clearly outlines when, why, and how exceptions can be made to fishery observer requirements. While it makes sense that the health and safety of observers and crew are most important during a pandemic, there should still be a fallback provision that accounts for the gap in enforcement and research during an event like the COVID-19 pandemic.

3. Modernization of Fishing Industry Through Electronic Monitoring

One possible solution to the IUU fishing problem is through modernization of the industry via electronic monitoring, a blanket term for technologies that capture fishery data, including video cameras and sensors

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145 *Our Partners*, NOAA FISHERIES, https://www.fisheries.noaa.gov/insight/our-partners#regional_fishery_management_councils (last visited March 19, 2021).

that track fish locations, catch, and discards.[146] The main benefits of electronic monitoring are: "(a) cost-efficiency; (b) the potential to provide more representative coverage of the fleet than any observer [program]; and (c) the enhanced registration of fishing activity and location."[147] In our technologically advanced world, it is often advantageous to eliminate the possibility of human error in data collection in order to have a more accurate and complete picture of the ocean's bounty.

At the same time, electronic monitoring as a replacement for fishery observers would be consequential. It would mean fewer or zero jobs for fishery observers who are trained rigorously in biology and the fieldwork procedures necessary to carry out their current duties. Yet, maybe the increased electronic monitoring would create more jobs for engineers and other scientists who would build, operate, or analyze the potential data. Furthermore, electronic monitoring could solve the research and data collection problems but might not catch IUU fishing activity. Even with cameras onboard, fishermen may figure out ways to subvert detection. Yet, those problems may be just as pervasive with one observer aboard a vessel with many fishermen.

The United States has begun implementing electronic monitoring procedures in a few fisheries, including the Atlantic pelagic longline fishery, where onboard cameras are used to track bycatch of bluefin tuna.[148] Since 2015, each of the United States' twenty-nine fishery regions has published an Electronic Monitoring and Reporting Implementation Plan ("Implementation Plan").[149] NOAA has provided "over $42 million since 2015 to develop and implement electronic technologies in more than 30 electronic reporting and monitoring pilot projects."[150] However, the Agency is still struggling to overcome challenges related to software and hardware development, data confidentiality and management, and implementing modern data processing tools such as computer vision and artificial intelligence.[151]

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146 *Electronic Monitoring Explained*, NOAA FISHERIES, https://www.fisheries.noaa.gov/insight/electronic-monitoring-explained (last visited Aug. 17, 2021).

147 Aloysius T.M. van Helmond et al., *Electronic Monitoring in Fisheries: Lessons from Global Experiences and Future Opportunities*, 21 FISH AND FISHERIES 162, 162 (2019), https://onlinelibrary.wiley.com/doi/pdf/10.1111/faf.12425.

148 *Id.* at 163.

149 *Id.* (citing *Resources: Publications*, NOAA FISHERIES, https://www.fisheries.noaa.gov/resources/documents (search in search bar for "electronic monitoring and reporting" to see implementation plan from each regional fishery) (last visited March 19, 2021)).

150 *Electronic Monitoring*, NOAA FISHERIES, https://www.fisheries.noaa.gov/national/fisheries-observers/electronic-monitoring-0 (last visited Aug. 17, 2021).

151 *Id.*

These Implementation Plans go beyond onboard camera usage to include other data collection technologies. For example, the Greater Atlantic Regional Fisheries' Implementation Plan includes development of an Observer Electronic Reporting System.[152] This system intends to create a more comprehensive and high-quality database to improve the flexibility and accuracy of observer data collection.[153] Observers currently use electronic data systems that "only collect a subset of the data to meet immediate needs and are not comprehensive."[154] Processing data as-is is time consuming and "prone to data entry and transcription errors."[155]

The Greater Atlantic Regional Fisheries Office's Implementation Plan noted that there is considerable hesitation towards electronic monitoring, even amongst industry stakeholders.[156] Many in the industry view electronic monitoring positively, "as an alternative to carrying and bearing the costs of carrying traditional observers or at-sea monitors."[157] Others, though, are skeptical that electronic monitoring actually reduces costs, and consider cameras onboard to be an intrusion.[158]

Electronic monitoring is an important step in protecting ecosystems from overfishing if fisheries are willing and able to implement their plans. Potential obstacles include pushback from fishermen, a lack of funds, and electronic malfunction. More importantly, monitoring will not reduce IUU fishing without the political will to create enforcement mechanisms that respond to the discoveries of electronic monitoring efforts.

4. International Participation

Improving the domestic observer program is essential, but there also needs to be an improved international system for observers to work together. To bolster the work that fishery observers carry out, the United States must cooperate with other nations to enter into and uphold international treaties and agreements that enforce fishery protections. One solution might include strengthening international cooperation that aims to prevent IUU fishing in the first place, instead of imposing sanctions on nations who engage in the practice or lack observer oversight. Stronger

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152 *Electronic Technology Implementation Plan*, GREATER ATL. REG'L FISHERIES OFFICE AND NE. FISHERIES SCI. CTR. 7, (Jan. 30, 2015), https://media.fisheries.noaa.gov/dam-migration/garfo_nefsc_et_regional_implementation_plan_2015-01.pdf.

153 *Id.*

154 *Id.*

155 *Id.*

156 *Id.* at 12.

157 *Id.*

158 *Id.* at 12–13.

international cooperation might take the form of an international multilateral treaty that creates a body, such as a commission, to set standards, collect reports, hear disputes, and create representative membership standards. The treaty would ideally set uniform standards that require fishery observers who all meet a set of requirements to follow the same guidelines. To create accurate datasets, observers could conduct research in a uniform fashion that allows data to be analyzed at a global scale.

Additionally, there are secondary considerations for international participation that go beyond observer coordination. Critics point out that the United States already has laws that pressure other countries to end IUU fishing, such as the Moratorium Protection Act, but that the United States does not often penalize nations that violate the law.[159] The Moratorium Protection Act directs the United States to identify nations that are engaging in IUU fishing.[160] Once identified, the United States engages in a certification process whereby a positive certification is issued "if the nation has provided evidence of actions that address the activities for which it was identified," and "[a] negative certification may result in denial of U.S. port access for fishing vessels of that nation and potential import restrictions on fish or fish products."[161] Such enforcement mechanisms have the potential to be influential because of the United States' sizable demand for seafood. Yet, despite the strength of the Moratorium Protection Act, "[the] NMFS has demonstrated a pattern of repeatedly identifying nations for IUU fishing in consecutive *Reports to Congress*, then issuing a positive certification and claiming that the reasons for listing have been corrected . . . only to list the nation again in the next cycle of identifications for similar, unresolved IUU fishing problems."[162]

Congress could pass a similar law directing the NMFS to create a certification process for foreign nations' observer programs. The Agency could favor port access for nations' vessels that meet a certain standard of observer coverage and quality. Of course, such a law would only work if the NMFS actually enforced it; given that the Moratorium Protection Act has seen limited success, there would need to be more pressure and support for a similar observer-related law.

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159 Murdock, *supra* note 131 (citing 16 U.S.C. §§ 1821 et seq.).

160 *Id.*

161 *Identification of IUU Fishing Activities*, NOAA FISHERIES (June 23, 2020), https://www.fisheries.noaa.gov/foreign/international-affairs/identification-iuu-fishing-activities.

162 Murdock, *supra* note 131 (emphasis omitted).

CONCLUSION

Something fishy is going on in the administration of U.S. fishery observer programs. IUU fishing is a domestic and a global problem and fishery observers are a crucial part of ensuring compliance with domestic and international fishing laws. They function as the at-sea enforcement mechanism by monitoring bycatch, legal violations, and tracking data in order to sustain fishery populations. But NOAA's temporary rule waiving their required presence at sea could set a dangerous precedent that might result in new ways to waive the observer requirement.

The solution to this problem lies with the political will of Congress—specifically the House Natural Resources Committee—to amend the MSA and require NOAA and the NMFS to increase the number of observers and data required to monitor marine species. Once Congress directs NOAA to act, courts will likely uphold agency decisions that protect observers given the high level of deference given to agencies under the APA's arbitrary and capricious standard.

There is also a need for international cooperation because foreign fishermen continue to illegally fish in U.S. waters. Congress should press the agencies to use their ability to enforce the laws of foreign nations that bring fish to sell in the United States. In the long term, there needs to be a more robust effort to roll out electronic monitoring systems that nullify the need for onboard observers.

Finally, it is important to note that the implications of the COVID-19 pandemic for ocean ecosystems are not limited to illegal fishing or fisheries. There are many more issues that could be considered, including effects on coral reefs, offshore drilling, tourism, plastics and pollution, emissions, and climate change. The fight to protect our valuable and limited ocean resources will continue beyond observers and the pandemic.