NOTES

FISHING FOR ANSWERS: ILLEGAL FISHING, DEPLETED STOCKS, AND THE NEED FOR WTO FISHING DISCIPLINES

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ABSTRACT

There are no longer plenty of fish in the sea. One-third of global fish stocks are overfished beyond biologically sustainable levels, and fishing subsidies are the primary culprit. Such subsidies incentivize overfishing, foster illegal, unreported, and unregulated (IUU) fishing, and dangerously reduce global stocks. Moreover, diminished fishing stocks heighten food insecurity for vulnerable populations, engender economic instability, and increase the potential for interstate conflict. Indeed, fishing subsidies spawn challenges far larger than trade alone. They present an international problem, and only a multilateral solution will suffice.

Several international agreements have sought to address IUU fishing, and these efforts have helped to crystallize norms. But many are voluntary, nonbinding agreements, and they lack the comprehensive scope and enforcement mechanisms an effective solution requires. The World Trade Organization (WTO) provides the ideal forum to address the root cause of IUU fishing head on, and member states reinvigorated negotiations to establish disciplines on fishing subsidies in 2015. Although negotiators failed to reach an agreement before a 2020 deadline and face significant hurdles, they reconvened in Geneva this February. The Chair of the WTO Negotiating Group released a new draft consolidated text in May, and observers remain cautiously optimistic about meetings the WTO Director convened in July. An agreement represents the best opportunity for the international community to reduce IUU fishing and restore global fish stocks. To prove effective, it must meet three criteria: 1) narrowly limit the application of special and differential treatment (SDT) for

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* Georgetown University Law Center, J.D./LL.M. in National Security Law, 2022. Many thanks to the *Georgetown Journal of International Law* staff for their editorial support. I am especially indebted to Professor Timothy Brightbill for guidance on early drafts of this Note, the faculty advisors and fellows of the 2021 Salzburg Cutler Fellows Program for their insightful feedback, and Georgetown's Institute of International Economic Law for selecting this Note for publication. Above all, I am grateful for the encouragement of my wife, Erin, and her unsinkable appreciation for fishy puns. The views expressed in this Note are the author's own and do not reflect the views of the Department of Defense, the U.S. Navy, or any other private or public entity.

developing states; 2) establish objective mechanisms for stock assessments and IUU fishing designations; and 3) set a narrow scope for dispute panels to review decisions. Ultimately, if WTO member states fail to reach consensus, subsidies will continue to deplete global fish stocks, diminish confidence in the multilateral system, and increase the potential for maritime conflict.

I. Introduction

No longer are there plenty of fish in the sea. The Food and Agriculture Organization (FAO) of the United Nations has found that one third of global fish stocks are overfished and not within biologically sustainable levels.[1] Global tuna and mackerel populations declined by sixty percent between 1954 and 2006.[2] In the South China Sea, coastal fisheries have lost seventy to ninety-five percent of their stocks since the mid-twentieth century.[3] On the high seas, indiscriminate bottom trawling destroys 95% of sea mount coral with each pass.[4] Fishing subsidies are the primary culprit behind these trends. To secure food supplies and protect a culturally significant industry, governments lavish large subsidies upon domestic fishing fleets. Such subsidies not only distort international trade but incentivize overfishing, foster illegal, unreported, and unregulated fishing (IUU) in distant seas, and dangerously reduce stocks. These policies compel local fishermen to fish further from shore at great personal risk, engender food insecurity, and create economic instability and the potential for conflict.[5] Fishing subsidies pose a challenge far larger than trade alone.

Producing social, economic, and environmental effects across borders and in disparate regions, fishing subsidies present an international problem, and only a multilateral solution will suffice. This Note considers how the international community can craft an effective agreement to eliminate harmful fishing subsidies, reduce IUU fishing, and hold violators accountable. In Part II, this Note will provide a general background on fishing subsidies and identify the myriad ways they distort

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1. *The State of World Fisheries and Aquaculture: Sustainability in Action*, Food and Agriculture Organization of the United Nations 47 (2020), http://www.fao.org/documents/card/en/c/ca9229en.

2. Maria Jose Juan-Jorda, Iago Mosqueira, Andrew B. Cooper, Juan Freire & Nicholas K. Dulvy , *Global Population Trajectories of Tunas and Their Relatives*, 108 Proceedings of the National Academy of Sciences of the United States of America 20650, 20650 (2011), https://www.pnas.org/content/108/51/20650.short.

3. *Trawling for Trouble: Why Do Chinese Fishermen Keep Getting Arrested?*, The Economist (Apr. 14, 2016), https://www.economist.com/asia/2016/04/14/trawling-for-trouble (noting that coastal fisheries in the South China Sea have lost 70-95% of their stocks since the 1950s).

4. Charles R. Taylor, *Fishing with A Bulldozer: Options for Unilateral Action by the United States Under Domestic and International Law to Halt Destructive Bottom Trawling Practices on the High Seas*, 34 Environs Env't. L. & Pol'y J. 121, 167 (2010).

5. *See, e.g.*, Tristan Irschlinger, Int'l Inst. for Sustainable Dev., Deep Dive Into Fisheries Subsidies, Part 1: Senegal and the Suffering Sardinella (2019), https://www.iisd.org/articles/deep-dive-fisheries-subsidies-part-1-senegal ("A Senegalese fisher once said to me: 'I risk my life for fewer and fewer fish every day.'"); *Felonius Fishing: The Outlaw Sea*, The Economist, Oct. 24, 2020, at 58–60.

trade, harm the environment, and generate instability. Part III will then discuss the growing global concern about fishing subsidies and attempts to address their effects through international fora. While such efforts help to crystallize norms, the Note finds that they typically lack the appropriate scope or enforcement capability to provide a comprehensive solution.

The World Trade Organization (WTO) represents the best chance for a truly global solution to this problem. Part IV of this Note considers domestic regulatory efforts to address the effects of unsustainable, IUU fishing and argues that the existing WTO framework limits the efficacy of such piecemeal efforts. The Note therefore provides an overview of the WTO's current negotiations to craft new disciplines for fishing subsidies and concludes that any effective agreement on fishing disciplines must narrowly limit the application of special and differential treatment (SDT), establish effective mechanisms for stock assessments and IUU fishing designations, and set a narrow scope for dispute panels to review such decisions. If WTO member states fail to reach consensus or establish an ineffectual agreement, continued subsidies will further deplete global fish stocks, diminish confidence in the multilateral system, and contribute to a less secure world order.

II. The Wide Wake of Fishing Subsidies

In capitals around the world, policymakers and politicians view fishing subsidies as a means to protect culturally significant industries, provide jobs for coastal communities, and, most critically, secure food for their population. Indeed, in 2013, President Xi Jinping exhorted Chinese fishermen to "build bigger ships and venture even farther into the oceans and catch bigger fish."[6] Beijing supports such rhetoric with massive subsidies, and the size of China's wild catch dwarfs that of other states.[7] But China is not alone in this regard. Economists estimate that global fisheries subsidies exceeded $35.4 billion in 2018, and China, the United States, South Korea, Japan, and the European Union comprised fifty-eight percent of such expenditures.[8]

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6. *Trawling for Trouble: Why Do Chinese Fishermen Keep Getting Arrested?*, *supra* note 3.

7. *Id.* (comparing China's 2012 catch, at 13.9 million tons, with the U.S. and Japanese catch of 5.1 million and 3.6 million tons, respectively).

8. U. Rashid Sumaila, Daniel Skerritt, Anna Schuhbauer, Naazia Ebrahim, Yang Li, Hong Sik Kim, Tabitha Grace Mallory, Vicky W.L. Lam & Daniel Pauly , *Updated Estimates and Analysis of Global Fisheries Subsidies*, 109 Marine Policy 1, 2 (2019), https://doi.org/10.1016/j.marpol.2019.103695; *see also* U. Rashid Sumaila, Ahmed S. Khan, Andrew J. Dyck, Reg Watson, Gordon Munro, Peter Tydemers & Daniel Pauly, *A Bottom-Up Re-Estimation of Global Fisheries Subsidies*, J.

At the outset, it is important to distinguish the various types of fisheries subsidies and identify those most likely to facilitate IUU fishing and create harmful social, economic, and environmental effects.[9] The Organization for Economic Cooperation and Development (OECD) identifies three distinct categories of fisheries subsidies: support for capital expenditures, such as the construction of new vessels; support that reduces fixed and variable fishing costs, such as fuel subsidies or free facilities to land fish; and support for fisheries management.[10] Others have sought to distinguish "good" subsidies from "bad" subsidies by distinguishing their effect on fisheries and the environment.[11] Similarly, in a recent paper, Marco Fugazza, an economist with the U.N. Conference on Trade and Development (UNCTAD), classified subsidies according to their impact on the fishing sector. He distinguished "beneficial subsidies dedicated to management, research, and other types of sustainability-oriented activities" from capital-enhancing subsidies and more "ambiguous" subsidies, such as vessel buy-back programs and coastal community development.[12] Fugazza noted that while "beneficial" subsidies can enhance environmental sustainability, capital-enhancing subsidies frequently facilitate stock depletion by increasing capacity.[13] Other studies have reinforced these findings.[14]

Fuel subsidies amount to twenty-two percent of global fishing support and exemplify the harm that capital-enhancing subsidies can cause.[15] Scholars have established that reduced fuel prices distort

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BIOECONOMICS, http://dx.doi.org/10.1007/s10818-010-9091-8 (highlighting the proportion of fuel and capital-enhancing subsidies to total global fishing subsidies).

9. An array of studies has shown that the effect of fishing subsidies depends on its function or type. See Yutaro Sakai, Nobuyuki Yagi & U. Rashid Sumaila, *Fishery Subsidies: The Interaction Between Science and Policy*, 85 FISHERIES SCIENCE 439, 444 (2019), for an overview of such studies.

10. Basak Bayramoglu, Brian Copeland, Marco Fugazza & Jean-François Jacques, *Trade and Negotiations on Fisheries Subsidies*, VOXEU CEPR, Oct. 21, 2019, https://voxeu.org/article/trade-and-negotiations-fisheries-subsidies.

11. *See, e.g.*, U. Rashid Sumaila, Vicky Lamb, Frédéric Le Manachb, Wilf Swartzc, Daniel Pauly, *Global Fisheries Subsidies: An Updated Estimate*, 69 MARINE POLICY 189 (2015) (identifying boat construction, port renovation, fuel subsidies, and foreign access agreements as examples of "bad" subsidies that adversely impact the sustainability of fisheries), *quoted in* Bayramoglu, *supra* note 10.

12. Marco Fugazza & Tansug Ok, *Fish and Fisheries Products: from Subsidies to Non-Tariff Measures*, UNCTAD 4 (2019), https://unctad.org/system/files/official-document/ser-rp-2019d6_en.pdf.

13. *Id.*

14. *See, e.g.*,Yutaro Sakai, Nobuyuki Yagi & U. Rashid Sumaila, *Fishery Subsidies: The Interaction between Science and Policy*, 85 FISHERIES SCIENCE 439 (2019) (demonstrating that subsidies which reduce fixed costs, such as fuel subsidies, directly contribute to the depletion of fish stocks).

15. James Bacchus & Inu Manak, *The Fate of the WTO and Global Trade Hangs on Fish*, FOREIGN POLICY, May 5, 2020, https://foreignpolicy.com/2020/05/05/wto-global-trade-fisheries-fishing-subsidies/.

market incentives, create overcapacity, and directly contribute to depleted stocks and IUU fishing.[16] Fuel subsidies also enable vessels to travel far beyond their own state's Exclusive Economic Zone (EEZ). Indeed, one study indicated that fifty-three percent of the high-seas catch would be unprofitable without the combination of fuel subsidies and lower-than-market crew wages.[17] For example, even after accounting for subsidies, Chinese fishing operations in the southwest Atlantic suffered an estimated net loss of $98 million per year.[18] To complicate matters, many states obfuscate the exact amount of fuel subsidies they provide (a lack of transparency that will impede the WTO efforts discussed in Part III).[19] Such analyses clearly demonstrate the gross distortions that capital-enhancing subsidies catalyze. While governments support their fishing fleets with myriad policies, any successful effort to mitigate IUU fishing and its harmful effects must specifically address capital-enhancing subsidies and fully apply to China, Japan, Korea, the European Union, and the United States.[20]

Such efforts are urgent. Like all subsidies, government support to fisheries distorts trade, increases consumer costs, and harms the industries of other WTO members. But subsidies for the fishing industry also pose unique threats and generate three especially acute effects: irrevocable environmental damage, increased instability for coastal communities, and an elevated risk of interstate conflict. First, fisheries subsidies incentivize highly destructive methods that cause acute environmental harm. When a Chinese fishing fleet commenced operations just

16. Tom Morenhout, *Support to Fuel Consumption for Fisheries*, INT'L INST. FOR SUSTAINABLE DEV. 1 (2019), https://www.iisd.org/publications/support-fuel-consumption-fisheries; *see also* Sakai et al., *supra* note 14, at 445–46.

17. Enric Sala, Juan Mayorga, Christopher Costello, David Kroodsma, Maria L. D. Palomares, Daniel Pauly, U. Rashid Sumaila & Dirk Zeller, *The Economics of Fishing the High Seas*, 4 SCIENCE ADVANCES (June 6, 2018), http://dx.doi.org/10.1126/sciadv.aat2504 (leveraging satellite data and advanced analytics to assess fishing on the high seas and cast doubt on its profitability sans subsidies).

18. Morenhout, *supra* note 16.

19. *Id.* (noting that WTO member notifications suggest $2.59 billion in annual fuel subsidies, a number far below what one would expect based on other data sources and suggesting an acute lack of transparency).

20. *But cf.* Matteo Milazzo, *Subsidies in World Fisheries: A Re-Examination*, WORLD BANK TECHNICAL PAPER NO. 406: FISHERIES SERIES 12 (Apr. 1998) (distinguishing beneficial environmental subsidies that may positively affect the health of fisheries from harmful capacity-enhancing subsidies), https://documents1.worldbank.org/curated/en/133031468776403491/pdf/multi-page.pdf; Sarika Cullis-Suzuki & Daniel Pauly, *Marine Protected Area Costs as "Beneficial" Fisheries Subsidies: A Global Evaluation*, 38 COASTAL MANAGEMENT (2010) (arguing that Marine Protected Areas, assessed at $870 million globally, constitute a beneficial form of subsidies), *discussed in* Sakai, *supra* note 14, at 3.

outside of Peru's EEZ in summer 2020, the U.S. Embassy in Peru opined that such "overfishing can cause enormous ecological and economic damage."[21] For instance, deep-sea bottom trawling is notorious for its indiscriminate, enduring impact on the marine ecosystem.[22] Although research indicates that sixty-four percent of high-seas bottom-trawling operations are unprofitable without subsidies, such destructive methods proliferate due to government support.[23] As fisheries cross maritime boundaries and may encompass the EEZs of multiple states, the destructive results of even a single fleet can be substantial.

Second, the overfishing incentivized by subsidies threatens entire marine ecosystems and the communities they sustain. Multiple studies have linked the impact of subsidies with the depletion of fishing stocks,[24] and some estimates indicate that sixty percent of all global fishing subsidies "directly encourages unsustainable, destructive, and . . . illegal fishing practices."[25] Such excess leads to "fishing down" the marine food web, a well-documented phenomenon in which diminished stocks force fishermen to target short-lived, planktivorous fish.[26] In the short-term, this yields an increased catch and sustains profits; however, these efforts ultimately destroy the food supply required for the large fish population to regenerate and destabilize the entire marine biome. Indeed, the World Bank has estimated that reduced subsidies would facilitate a hiatus for maritime biomass to regenerate and could eventually yield eighty-three billion dollars in benefits for the industry.[27]

Overfishing in West Africa provides a telling example. For generations, thiof—a species of grouper native to the region's coastal waters—

21. Susanne Rust, *Tensions Rise in Ecuador and Peru as Chinese Fishing Fleet Moves South from Galapagos*, L.A. TIMES, Sept. 23, 2020, https://www.latimes.com/environment/story/2020-09-23/tensions-rise-in-ecuador-and-peru-as-chinese-fishing-fleet-moves-south-from-galapagos.

22. *See generally* Taylor, *supra* note 4, at 167 ("Each trawling pass destroys ninety-five to ninety-eight percent of all coral life on seamounts. . . .").

23. Sala, *supra* note 17, at 5 (finding that thirty-two percent of bottom trawling remains unprofitable even with subsidies); Taylor, *supra* note 4, at 132 (noting that few countries can engage in bottom-trawling practices due to the prohibitive costs of expensive gear and fuel).

24. Sakai, *supra* note 14, at 445.

25. *The Future of Our Ocean: Next Steps and Priorities,* GLOBAL OCEAN COMMISSION 7 (2016), https://www.some.ox.ac.uk/wp-content/uploads/2016/03/GOC_2016_Report_FINAL_7_3.low_1.pdf.

26. *See, e.g.*, Daniel Pauly, Lilly Christensen, Johanne Dalsgaard, Rainer Froese & Francisco Torres Jr., *Fishing Down Marine Food Webs*, 279 SCIENCE 860 (1998) (discussing this phenomenon and finding that present exploitation patterns are unsustainable).

27. *Press Release, Giving Oceans a Break Could Generate US$83 Billion in Additional Benefits for Fisheries*, THE WORLD BANK, Feb. 14, 2017, https://www.worldbank.org/en/news/press-release/2017/02/14/giving-oceans-a-break-could-generate-83-billion-in-additional-benefits-for-fisheries.

served as a dietary staple and the primary ingredient for the region's most traditional dishes. Unfortunately, overfishing reduced the thiof stock to such an extent that ordinary Senegalese could rarely afford it.[28] As thiof stocks declined, the sardinella population grew. Fishermen increasingly targeted these smaller fish, and sardinella have now replaced thiof as an affordable protein source. But sardinella exist near the bottom of the maritime food web. If overfishing destroys sardinella stocks, thiof stocks cannot regenerate and there will be nothing further down the food chain to fish.[29] Scholars have documented the "fishing down" phenomenon around the world, and the process threatens the food security and economic livelihood for entire regions. Indeed, global per capita fish consumption has doubled since the 1960s, and seafood provides a critical dietary source for more than three billion people.[30] In West Africa, studies indicate that between twenty-three and sixty-four percent of people depend on the region's small-scale fisheries for an affordable source of protein.[31] When heavily subsidized, foreign fleets unsustainably fish, their actions jeopardize a critical protein source for vulnerable populations.[32]

Furthermore, the overfishing of industrial fleets deprives small-scale, artisanal fishermen of economic opportunity and attacks the foundation of coastal economies. It is estimated that large-scale fishing receives ninety percent of government subsidies, and "the developmental, economic, and social consequences of this inequity … impair the economic viability of the already vulnerable small-scale fishing sector."[33]

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28. *Giant 'Noble' Thiof Gives Senegalese Fish-Lovers Crumbs of Comfort*, REUTERS (May 22, 2020), https://www.reuters.com/article/us-health-coronavirus-senegal-fish/giant-noble-thiof-gives-senegalese-fish-lovers-crumbs-of-comfort-idUSKBN22Y1DG ("High demand from Europe and over-fishing by foreign trawlers made it too expensive for many local families who had to cook . . . with cheaper alternatives.").

29. Irschlinger, *supra* note 5.

30. Bacchus & Manak, *supra* note 15.

31. Dyhia Belhabib, U. Rashid Sumaila & Daniel Pauly, *Feeding the Poor: Contribution of West African Fisheries to Employment and Food Security*, 111 OCEAN AND COASTAL MGMT 72, 73 (July 2015) (observing that nearly seven million people in West Africa depend on the region's fisheries for food security and jobs in related industries).

32. *See Stop Funding Overfishing*, GENEVA TRADE PLATFORM (Sept. 30, 2020, 10:30 AM), https://vimeo.com/462834417 (discussing the effects of overfishing and subsidies on people, coastal communities, and biodiversity). One panelist, Wakao Hanaoka, Seafood Legacy CEO, noted that the average age of Japanese fishermen is 65 years old and that they would not be able to operate without subsidies. Japanese fishing law seeks to address IUU fishing, fishing stock assessments with subsidies in January 2019.

33. Anna Schuhbauer, Ratana Chuenpagdee, William W.L. Cheung, Krista Greer & U. Rashid Sumaila, *How Subsidies Affect the Economic Viability of Small-Scale Fisheries*, 82 MARINE POL' Y 114, 114 (Aug. 2017).

Human rights organizations and academics have noted the "displacement and marginalization of the world's small-scale 'fisherfolk' and the resulting loss of access."[34] In West Africa, small-scale sardinella fishing employs an estimated 200,000 people, but overfishing has engendered tense competition between these artisanal fishers and foreign fleets.[35] Nor are developed nations immune from these ecological and economic effects. For example, overfishing so severely depleted stocks in the Baltic Sea that the European Commission recently passed legislation paying fishermen to leave the industry.[36]

Third, subsidies for the fishing industry also implicate broader geopolitical interests and heighten the risk of interstate conflict.[37] As discussed, heavily subsidized, foreign fishing fleets cause environmental damage at sea and generate instability ashore; however, their activities often challenge the littoral state's sovereignty as well. The mix of economic instability, political grievance, and nationalism creates a potent cocktail, and disputes easily escalate. Perhaps the greatest risk for IUU fishing to spark conflict lies in the South China Sea. China uses its fishing fleets to support sweeping EEZ claims that encompass most of the sea and overlap with the Bruneian, Malaysian, Filipino, Vietnamese, and Indonesian claims. In the past decade, the People's Liberation Army-Navy (PLA-N) and Chinese Coast Guard have increased patrols near contested features in the South China Sea and stand ready to support Chinese-flagged vessels fishing in disputed waters.[38] Unsurprisingly, where territorial disputes, geopolitical rivalries, and

34. CONSERVATION FOR THE ANTHROPOCENE: INTERDISCIPLINARY SCIENCE IN SUPPORT OF NATURE AND PEOPLE 74 (Philip Levin & Melissa R. Poe eds., 1st ed. 2017).

35. Across the continent as a whole, an estimated 35 million people are employed by the fishing industry. Dyhia Belhabib, U. Rashid Sumaila & Philippe Le Billion, *The Fisheries of Africa: Exploitation, Policy, and Maritime Security Trends*, 101 MARINE POLICY 80 (2019).

36. European Commission Press Release, Fisheries: EU Reaches Provisional Agreement on Reducing Fishing Fleet in the Baltic with Support from EU Funds (Sept. 23, 2020), https://ec.europa.eu/newsroom/mare/items/687505.

37. This phenomenon also implicates intrastate security. For instance, in the western and central Pacific Ocean, a "modern-day gold rush by international fishing fleets" has exploited the weak enforcement capabilities of Pacific Island nations and could cause the tuna fishery to collapse. *See* Andrew Norris, *The Fight for Fish*, 136 PROCEEDINGS 8, 34 (Aug. 2010) (discussing how such a collapse could increase poverty, destabilize governments, and create a maritime environment well suited to trafficking and lawlessness).

38. *Signaling Sovereignty: Chinese Patrols at Contested Reefs, Asia Maritime Transparency Initiative* (Sept. 26, 2019), https://amti.csis.org/signaling-sovereignty-chinese-patrols-at-contested-reefs/. *See generally Global Conflict Tracker: Territorial Disputes in the South China Sea*, COUNCIL ON FOREIGN RELATIONS, https://www.cfr.org/global-conflict-tracker/conflict/territorial-disputes-south-china-sea (discussing China's increased military presence near contested reefs and islands in the South China Sea).

historic animosities intermingle, conflict often arises. Indeed, in 2016, the Chinese Coast Guard rammed an Indonesian patrol boat that had interdicted a Chinese-flagged fishing vessel.[39] Similar standoffs are increasingly common within the Vietnamese EEZ.[40] While fishing subsidies did not create the South China Sea's volatile environment, they could provide the spark to a highly combustible situation.

The presence of China's distant waters fleet (DWF) outside the EEZ of South American states also demonstrates the nexus of subsidized fishing and interstate conflict.[41] In summer 2020, a large fishing Chinese fishing fleet trawled the South Pacific near the Galapagos Marine Reserve, an Ecuadorean national park. Leveraging satellite imagery and the ships' auto-reported geolocational data, analysts revealed that Chinese fishing vessels repeatedly turned off their mandatory automated identification system (AIS) during hours of darkness and transited into the Ecuadorian EEZ around the Galapagos Islands.[42] Such conduct not only threatened protected marine life but undermined Ecuadorian sovereignty and risked violent at-sea encounters. Indeed, when a Chinese fishing fleet violated the Argentine EEZ in 2019, Argentine sailors fired on the Chinese fishing boats.[43]

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39. Joe Cochrane, *China's Coast Guard Rams Fishing Boat to Free it from Indonesian Authorities*, N.Y. TIMES (Mar. 21, 2016), https://www.nytimes.com/2016/03/22/world/asia/indonesia-south-china-sea-fishing-boat.html.

40. *See* Shashank Bengali & Vo Kieu Bao Uyen, *Sunken Boats. Stolen Gear. Fishermen are Prey as China Conquers a Strategic Sea*, L.A. TIMES (Nov. 12, 2020), (quoting the Chairman of a Vietnamese fishing union who claimed that "the Vietnam government sees fishermen as a living monument to assert sovereignty" in the South China Sea), https://www.latimes.com/world-nation/story/2020-11-12/china-attacks-fishing-boats-in-conquest-of-south-china-sea.

41. For more on China's Distant-Water Fleet, see Daniel Pauly, Dyhia Belhabib, Roland Blomeyer, William W W L Cheung, Andrés M Cisneros-Montemayor, Duncan Copeland, Sarah Harper, Vicky W Y Lam, Yining Mai, Frédéric Le Manach, Henrik Österblom, Ka Man Mok, Liesbeth van der Meer, Antonio Sanz, Soohyun Shon, U Rashid Sumaila, Wilf Swartz, Reg Watson, Yunlei Zhai & Dirk Zeller, *China's Distant-Water Fisheries in the 21st Century*, 15 FISH & FISHERIES 474, 477 (2014).

42. *Oceana Finds 300 Chinese Vessels Pillaging the Galapagos for Squid*, OCEANA (Sept. 2020), https://zenodo.org/record/4118526#.YN4wQGZuc-Q.

43. Christopher Woody, *The U.S. Military is Warning that China's Fishing Boats are Bullies and Could Start a War on the High Seas*, BUSINESS INSIDER (Jan. 4, 2019, 3:32 PM), https://www.businessinsider.com/us-warns-chinas-aggressive-fishing-boats-could-start-a-war-2019-1; Juan Delgado, *Argentina Requests International Arrest Warrant for Chinese Vessel*, DIALOGO (Apr. 12, 2019), https://dialogo-americas.com/articles/argentina-requests-international-arrest-warrant-for-chinese-vessel/ (describing Argentine Coast Guard efforts to interdict Chinese vessel illegally fishing in its exclusive economic zone, the dangerous maneuvers conducted by the fishing vessel in response, the firing of warning shots, and subsequent issuance of international arrest warrant); Eduardo Szklarz, *Argentine Navy Captures Chinese Vessel Fishing Illegally*, DIALOGO (May 19, 2020), https://

Moreover, China's DWF employs similar tactics, techniques, and procedures when operating in other regions. For instance, Greenpeace observed that eighty percent of Chinese fishing vessels off the coast of West Africa had turned off their AIS. Among the eighteen vessels with AIS activated, ten of them incorrectly reported their Maritime Mobile Service Identity number or position.[44] A similar investigation indicated that the China National Fisheries Corporation "grossly falsified" the gross tonnage of their fishing vessels when requesting access to West African EEZs.[45] Such tactics highlight the challenges posed by IUU fishing. Senegal, Guinea-Bissau, Ghana, and Guinea require fishing vessels to declare their tonnage, report their catch, and activate monitoring devices.[46] International agreements mandate that vessels greater than 300 gross tons operate AIS and accurately identify themselves, and it is common for states to implement more stringent standards for fishing vessels as well.[47] International and domestic laws regulate these issues, but such activities continue unabated. As the next two parts will discuss, the international community does not require more agreements that address the tactics of unsustainable IUU fishing. Rather, it needs an agreement to attack the root cause: capital-enhancing fishing subsidies.

For reasons of ecology, economics, and security, it is imperative that the global community craft an agreement to reduce fishing subsidies. Such policies do more than distort trade. They incentivize IUU fishing and dangerous practices that degrade the environment, threaten critical food supplies, and foster domestic and international instability. Fortunately, a global discourse about these issues has emerged in recent years. The following part will consider such calls to action,

dialogo-americas.com/articles/argentine-navy-captures-chinese-vessel-fishing-illegally/; Ian Urbina, *Unmasking China's invisible fleet in North Korean waters*, CANADIAN BROADCASTING CORPORATION (July 23, 2020), https://newsinteractives.cbc.ca/longform/china-at-sea; Ian Urbina, *How China's Expanding Fishing Fleet Is Depleting the World's Ocean*, YALE ENV'T 360 (Aug. 17, 2020), https://e360.yale.edu/features/how-chinas-expanding-fishing-fleet-is-depleting-worlds-oceans.

44. GREENPEACE, AFRICA'S FISHERIES' PARADISE AT A CROSSROADS: INVESTIGATING CHINESE COMPANIES' ILLEGAL FISHING PRACTICES IN WEST AFRICA, 20, 35–38 (2015), https://issuu.com/gpchina/docs/africa___s_fisheries____paradise_at..

45. *Id.* at 22.

46. *Id.* at 21, 24–27.

47. *AIS Transponders: Regulations for Carriage of AIS*, INT'L MAR. ORG., https://www.imo.org/en/OurWork/Safety/Pages/AIS.aspx; *see, e.g.*, Council Directive 2002/59/EC, art. 6a, 2002 (EC) (requiring any fishing vessel with an overall length greater than fifteen meters to install AIS and operate it at all times).

evaluate previous efforts, and assess whether international fora and regional agreements can effect the necessary change.

III. Slippery Fish: International Fora & the Global Discourse on Fishing Subsidies

In 2015, the UN General Assembly promulgated seventeen sustainable development goals (SDG). SDG 14, entitled "Life Below Water," called on all member states to adopt policies to "conserve and sustainably use the oceans, seas and marine resources" and set 2020 as a target date. SDG 14.4 established a goal to end "destructive" IUU fishing practices and return global fish stocks to biologically sustainable levels,[48] while SDG 14.6 called upon states to "prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to [IUU] fishing and refrain from introducing new such subsidies . . . ."[49] Although such declarations are not binding, SDG 14 has imbued global discourse with a sense of urgency and focused attention directly on capital-enhancing fishing subsidies. For instance, the Inter-Agency and Expert Group on Development Goal Indicators explicitly established the "dollar value of negative fishery subsidies against [the] 2015 baseline" as the metric for measuring progress towards SDG 14.6.[50] Moreover, many observers credit SDG 14.6 with the WTO's renewed attention on fishing subsidies, and the working group established 2019 as the deadline for a draft agreement to comply with the SDG target.[51]

SDG 14 represents only one effort to address fishing subsidies and IUU fishing, and the last decade has witnessed other movement toward this goal. To be sure, many of these agreements are non-binding and reflect aspirational rather than substantive steps. However, such commitments raise awareness and generate consensus on which future efforts can build. For instance, the FAO International Plan of Action to Prevent, Deter, and Eliminate IUU Fishing (IPOA-IUU) set forth comprehensive best practices for states to manage fisheries in accordance

48. *Sustainable Development Goal 14.4: Harvesting and Overfishing*, United Nations Conf. on Trade and Dev. (2016), https://stats.unctad.org/Dgff2016/planet/goal14/target_14_4.html.

49. *Sustainable Development Goal 14.6: Sustainable Fishing*, United Nations Conf. on Trade and Dev. (2016), https://stats.unctad.org/Dgff2016/planet/goal14/target_14_6.html [hereinafter SDG 14.6].

50. *Id.*

51. *See* World Trade Organization, Fisheries Subsidies Ministerial Statement of 13 December 2017, WTO Doc. WT/MIN (17)/64/WT/L/1-31 (2017), https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/MIN17/64.pdf&Open=True.

with international law.[52] Although the IPOA-IUU is a voluntary agreement with no mechanism to incentivize or enforce compliance, it has helped to crystallize norms. For instance, the WTO's draft consolidated text on fishing subsidies incorporates the IPOA definition of IUU fishing.[53] Similarly, ninety-seven states signed the FAO's Agreement on Port State Measures to Prevent, Deter, and Eliminate IUU Fishing (PSMA), and it entered into force in June 2016. The PSMA constitutes the world's first binding international agreement on IUU fishing, and the International Institute for Sustainable Development (IISD), a Canadian think tank, believes that the PSMA will "inform the WTO [fisheries] negotiation process."[54] In fact, the draft consolidated text has leveraged PSMA definitions for vessels, fishing, and fishing-related activities.[55] These agreements, however, are far from the first international effort to address IUU fishing and its adverse effects. Before considering where SDG 14, PSMA, and the IPOA-IUU can lead, it is necessary to assess the foundations of international maritime law and its efficacy in this area.

The 1982 UN Convention on the Law of the Sea (UNCLOS or Convention) is the most comprehensive binding agreement to address states' rights and responsibilities for using the maritime environment.[56] The Convention represents a landmark in international law, and many of its provisions have obtained the status of customary international law.[57] Nevertheless, despite its seminal status, the Convention is not well suited to mitigate the effects of fishing subsidies. First, the Convention's scope is too narrow. To be sure, the Convention empowers coastal states to determine the total allowable catch in their EEZs,

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52. *See* FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL PLAN OF ACTION TO PREVENT, DETER AND ELIMINATE ILLEGAL, UNREGULATED AND UNREPORTED FISHING (2001), http://www.fao.org/3/y1224e/Y1224E.pdf.

53. *See* ALICE TIPPING AND TRISTAN IRSCHLINGER, INT'L INST. FOR SUSTAINABLE DEV., WTO NEGOTIATIONS ON FISHERIES SUBSIDIES: WHAT'S THE STATE OF PLAY? 6 (2020), https://www.iisd.org/sites/default/files/2020-07/wto-negotiations-fisheries-state-play.pdf?q=sites/default/files/publications/wto-negotiations-fisheries-state-play.pdf.

54. MARCIO CASTRO DE SOUZA, INT'L INST. FOR SUSTAINABLE DEV., THE CHALLENGES OF SUSTAINABILITY: FISHERIES SUBSIDIES—BRIEFING FOR NEW DELEGATES (2020), https://www.iisd.org/gsi/sites/default/files/FAO%20PPT.pdf.

55. *See* INT'L INST. FOR SUSTAINABLE DEV., WTO MEMBERS AGREE ON 2020 WORK PROGRAMME TO ADVANCE FISHERIES SUBSIDIES NEGOTIATIONS (2020), https://sdg.iisd.org/news/wto-members-agree-on-2020-work-programme-to-advance-fisheries-subsidies-negotiations/.

56. *See* U.N. Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

57. Kyle Elliott, *Trouble in the Caribbean: Responses to A Potential Chinese-Bahamian Bilateral Fishing Agreement*, 28 DUKE ENVT'L. L. & POL'Y F. 305, 308 (2018).

designate the species that may be caught, and limit the licenses granted to certain nationals for a specified period.[58] These are substantial rights.[59] Unfortunately, technological advancements since 1982 have rendered them inadequate. Between 1950 and 2005, global fisheries rapidly expanded from coastal waters of the North Atlantic and West Pacific to all productive zones on the high seas.[60] The problem is no longer confined to the EEZ, but UNCLOS contains only three short articles—fewer than eighty words—that address high-seas fishing.[61] Thus, under the Convention, coastal states have few opportunities to address problems originating on the high seas.[62] Although the international community has attempted to address this gap with agreements and resolutions, there is little incentive for states to restrict their own fleets when others will inevitably continue. This tragedy of the commons reveals the limitations of such aspirational documents.[63]

Second, the articles that address EEZ fishing increasingly seem more aspirational than practical. As discussed above in Part II, industrial fishing fleets increasingly flaunt UNCLOS regulations, conduct unauthorized intrusions into coastal states' EEZs, and then return to

58. *See* UNCLOS, *supra* note 56, arts. 62(3), 62(4)(b).

59. *But see* Elliott, *supra* note 57, at 305 (arguing that UNCLOS' emphasis on maximum sustainable yield (MSY) "prioritize[ed] the market value of a fisher's resources over its recreational value" and undermine efforts to balance multiple uses of the maritime environment).

60. *See* Will Swartz, Enric Sala, Sean Tracey, Reg Watson & Daniel Pauley, *The Spatial Expansion and Ecological Footprint of Fisheries (1950 to Present)*, 5 PLOS ONE no. 12, Dec. 2, 2010 at 1 (finding that the 1980s to mid-1990s constituted the period of greatest expansion and that such growth primarily occurred on the high seas), https://doi.org/10.1371/journal.pone.0015143.

61. *See* Taylor, *supra* note 4, at 149–50.

62. The 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas directly addressed managing fish stock, and the UN General Assembly called for a global moratorium on Large Scale Pelagic Driftnet Fishing in international waters thirty years ago. Similarly, in 2004, the UN General Assembly passed Resolution 61/105 calling on states to implement measures that would mitigate the harm of bottom trawling to vulnerable marine ecosystems. Although such international agreements establish best practices for fisheries management in areas beyond national jurisdiction, they are non-binding and have little impact on their own. *See generally* ALEX D. ROGERS & MATTHEW GIANNI, INTERNATIONAL PROGRAM ON THE STATE OF THE OCEAN, THE IMPLEMENTATION OF UNGA RESOLUTIONS 61/105 AND 64/72 IN THE MANAGEMENT OF DEEP-SEA FISHERIES ON THE HIGH SEAS (2010), http://www.savethehighseas.org/publicdocs/61105-Implemention-finalreport.pdf, for a discussion on the difficulties in implementing these UNGA resolutions. See also Taylor, *supra* note 4, at 136, for a discussion on how these resolutions and agreements are inherently reactive and only address problems once they have risen to the level of crisis. Nevertheless, as will be shown in Part III, the WTO Appellate Body and negotiators have relied on these definitions in numerous instances.

63. *See* Taylor, *supra* note 4, at 142.

international waters to avoid detection. Such practices highlight coastal states' inability to regulate the EEZ and exacerbate the effects of unsustainable fishing. But such shortcomings do not constitute a failure of the Convention. Rather, they reflect the Convention's intended focus on maritime roles and responsibilities. While unsustainable IUU fishing directly implicates the maritime environment, the cause of such destructive practices originates in parliaments and boardrooms ashore. Fishing subsidies are the root problem, and trade-related issues lie beyond the Convention's scope.[64]

The Chile-European Community (EC) swordfish dispute exemplifies the challenges of resolving IUU fishing disputes under UNCLOS: economic and geo-political realities often trump environmental aspirations; a bilateral approach fails to incorporate all violators; and many states lack the resources to monitor their EEZs effectively. In 1990, industrial fishing fleets from Europe and Japan rapidly increased their swordfish catch in the South Pacific. Although the fleets operated on the high seas, their increased take directly reduced the annual catch within Chile's EEZ.[65] In response, the Chilean government promulgated a 1991 Fisheries Law that strictly limited the swordfish catch, restricted foreign vessels from landing their catch at Chilean ports, and required vessels to comply with intrusive inspections and mandatory reporting.[66] When a decade-long negotiation between the EU and Chile broke down, the EU challenged Chile's law as a violation of the Global Agreement on Tariffs and Trade (GATT),[67] and Chile petitioned the International Tribunal for the Law of the Sea (ITLOS), claiming that the EU had failed to ensure the conservation of a highly migratory species pursuant to UNCLOS Article 64.[68] One scholar has argued that Chile leveraged the Convention's focus on conservation to garner "international credibility" for its fisheries law and mobilize conservation groups within the EU.[69] However, if the parties had not

64. See Elliott, *supra* note 57, at 307, 323-24, for a discussion about the shortcomings of the Convention's fisheries conservation measures in the contemporary environment.

65. Lee C. Rarrick, *Biodiversity Impacts of Investment and Free Trade Agreements*, 37 PACE ENV'T. L. REV. 67, 72 (2019).

66. *See* C. Leah Granger, *The Role of International Tribunals in Natural Resource Disputes in Latin America*, 34 ECOLOGY L.Q. 1297, 1320 (2007).

67. Marcos Orellana, *The EU and Chile Suspend the Swordfish Case Proceedings at the WTO and the International Tribunal of the Law of the Sea*, 6 AM. SOC'Y OF INT'L L.: INSIGHTS no. 1, Feb. 6, 2001, https://www.asil.org/insights/volume/6/issue/1/eu-and-chile-suspend-swordfish-case-proceedings-wto-and-international.

68. Granger, *supra* note 66, at 1320.

69. Granger, *supra* note 66, 1323.

settled the dispute, it is doubtful that Chile would have achieved its goals through ITLOS.

First, even if ITLOS had ruled in favor of its approach, the practical realities of economics, trade, and geopolitics would ultimately carry the day. Throughout the dispute, Chile negotiated from a substantially weaker position, as Santiago and Brussels were simultaneously negotiating a Free Trade Agreement. [70] A state in such a position cannot afford to risk broader foreign policy goals or invite sanctions for the sake of one discrete issue. Trade invariably trumps more marginal interests. For this reason, a trade agreement would provide a more holistic, integrated framework to address unsustainable IUU fishing. Second, fishing disputes brought under ITLOS will rarely involve all possible offenders. For instance, even if the EU abided by the agreement, other states' vessels could simply have filled the fishing vacuum. The ocean represents a truly global commons, and bilateral dispute resolution processes can rarely provide effective solutions for the high seas. Multilateralism provides the only comprehensive solution to safeguard a state's maritime resources.

Finally, as discussed in the preceding part, the high seas are inherently difficult to police and monitor. The EU-Chile negotiated settlement required fishing vessels to install tamper-proof vessel monitoring systems (VMS) and scientific observers; however, there is no guarantee that states will abide by such rules. [71] To be fair, states with well-established domestic lobbies for conservation and environmental protection would hesitate to ignore such an agreement or trample the Convention's provisions.[72] But for many states, subsidies, coupled with the lack of a vocal conservation lobby, incentivize behavior that ignores and violates such rules and regulations. Ultimately, ITLOS and the Convention can only address the behavior illegal subsidies incentivize; they are not designed to address the root cause of such disputes.

Despite the Convention's overwhelming success, it does not constitute an effective framework to deter unsustainable IUU fishing: the high seas remain unregulated; weak coastal states gain rights they can rarely enforce; and disputes are handled on a bilateral basis.[73] Nevertheless, the Convention crystallized norms of fishing regulations,

70. See *Chile-European Union: Background and Negotiations*, ORG. OF AM. STS.: FOREIGN TRADE INFO. SYS., http://www.sice.oas.org/TPD/CHL_EU/CHL_EU_e.asp for a timeline of EU-Chile free trade negotiations.

71. *See* Orellana, *supra* note 67.

72. Granger, *supra* note 66, at 1323.

73. For a discussion on the "debilitating defects" of both UNCLOS, the Straddling Fish Stocks Agreement, and other international conventions, see generally Zachary Tyler, *Saving Fisheries on*

established the rights and duties of coastal states, and provided the analytical framework on which more recent efforts have built. For example, UNCLOS requires coastal states to use the "best scientific evidence available" when determining maximum sustainable yield (MSY),[74] to consider "the economic needs of coastal fishing communities,"[75] and "to minimize economic dislocation in States whose nationals have habitually fished in the zone . . . ."[76] Any attempt to act on the SDG 14 mandate, deter IUU fishing, and mitigate its destructive effects must build upon these lessons. The world requires a multilateral approach that reduces fishing subsidies, changes the incentive structure that leads to unsustainable practices, and incorporates the needs of vulnerable coastal communities. The WTO presents the best hope.

IV. Chasing the White Whale: Domestic Regulations under the WTO Framework

In some states, increased public awareness about the harms of unsustainable fishing has catalyzed efforts to regulate the practices of fish exporters. Though laudable, domestic attempts to regulate unsustainable fishing provide only a piecemeal solution. As Ragnar Arnason argued in his influential World Bank study, only a "bio-economic model" that envisions the oceans as one large, global fishery will suffice.[77] Through this lens, any attempt to reduce fishing subsidies, stop overfishing, and deter IUU activity requires an integrated, global approach that national regulations inherently lack. Furthermore, the WTO Appellate Body has narrowly construed member states' ability to implement such regulations under the Global Agreement on Tariffs and Trade (GATT). This part examines WTO Appellate Body decisions in disputes about municipal fishing regulations, identifies the limited parameters acceptable under WTO jurisprudence, and considers the logistic impediments in enforcing such efforts.

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the High Seas: The Use of Trade Sanctions to Force Compliance with Multilateral Fisheries Agreements, 20 Tul. Env't. L.J. 43, 46 (2006).

74. UNCLOS, *supra* note 56, Art. 61(2).

75. UNCLOS, *supra* note 56, Art. 61(3).

76. UNCLOS, *supra* note 56, Article 62(3) ("In giving access to other States to its [EEZ], the coastal state shall take into account all relevant factors, including . . . the significance of the living resources of the zone . . . to the economy of the coastal state concerned and its other national interests.).

77. Ragnar Arnason, The World Bank, The Sunken Billions Revisited 25-34 (2009), https://openknowledge.worldbank.org/bitstream/handle/10986/24056/9781464809194.pdf?sequence=8&isAllowed=y.

A. *WTO Constraints on Domestic Efforts to Regulate IUU Fishing*

Designed to facilitate trade, the WTO Appellate Body has often favored the free flow of goods over member states' domestic efforts to regulate environmental concerns.[78] During the past three decades, the Appellate Body and pre-WTO GATT panels issued decisions that restricted member states' ability to effectively address transnational environmental issues through domestic regulations. Although such cases do not constitute binding precedent, they evince a persistent skepticism towards environmental regulations that may conflict with the GATT's guiding principles. With regard to sustainable fishing, key decisions have held that states cannot regulate the process or production methods (PPM) of foreign commercial fishing,[79] set a high bar for members to apply environmental schemes extraterritorially,[80] and found that state parties can only avail themselves of GATT Article XX exceptions in narrow circumstances.[81] Furthermore, the Appellate Body has demonstrated a willingness to classify a broad array of policies as technical regulations and thereby subject them to the more stringent requirements of the Technical Barriers to Trade (TBT) Agreement.[82] Nevertheless, even when the Appellate Body has found regulations in violation of the GATT, its decisions have indicated discrete ways for members to craft policies that address narrow, fishing-related concerns while adhering to the GATT expectations of equal treatment and fair play. This part explores the most salient case law, identifies avenues for future efforts, and considers whether such narrow policies can reduce the harms outlined in Part II.

78. *See* Thomas G. Kelch, *The WTO Tuna Labeling Decision and Animal Law*, 8 J. ANIMAL & NAT. RES. L. 121, 121 (2012) ("If one were looking for a likely culprit causing legal consternation for those interested in changing animal law for the benefit of animals, one would probably not begin by excoriating the WTO and GATT Treaty. But that would be ignoring history.").

79. *See* Panel Report, *United States–Restrictions on Imports of Tuna*, ¶ 5.9, DS21/R-39S/155 (Sept. 3, 1991) (GATT) [hereinafter *Tuna-Dolphin I Panel Report*].

80. *See* Appellate Body Report, *United States–Import Prohibition of Certain Shrimp and Shrimp Products*, ¶¶ 121, 133, WTO Doc. WT/DS58/AB/R (adopted Nov. 21, 2001) [hereinafter *U.S.–Shrimp Appellate Body Report*].

81. *See id.* ¶ 133.

82. *See* Appellate Body Report, *United States–Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ¶¶ 195-96, WTO Doc. WT/DS381/AB/R (adopted Jun. 13, 2012) [hereinafter *U.S.–Tuna II Appellate Body Report*].

1. *Tuna-Dolphin I:* Process, Production Method, and the Narrow Meaning of Necessity

The GATT panel decision in *Tuna-Dolphin I*[83] represents the nadir for domestic efforts to regulate fisheries within the global trade framework.[84] The 1991 decision preceded the establishment of the Appellate Body, and GATT members never formally adopted the decision; however, the panel's reasoning foreclosed several options for addressing environmental concerns and informed subsequent WTO Appellate Body decisions. It therefore merits our attention. The case involved the U.S. embargo on Mexican tuna from the Eastern Tropical Pacific (ETP).[85] In order to reduce the killing of dolphins as tuna bycatch, the U.S. Marine Mammal Protection Act (MMPA) prohibited the setting of purse-seine nets on dolphins by the U.S. tuna fishing industry and banned the "importation of commercial fish . . . caught with commercial fishing technology which results in the incidental kill . . . of ocean mammals in excess of [U.S.] standards."[86] As Mexico continued to use purse-seine nets and caused dolphin mortality rates in excess of the legislative threshold, the United States imposed an embargo, and Mexico's tuna industry lost access to the U.S. market.[87]

In 1991, Mexico claimed that the embargo violated the GATT and requested the formation of a panel. The United States argued that GATT Article III:4 justified the MMPA policy because it applied "treatment no less favourable than that accorded to like products of national origin";[88] however, the GATT panel found that the Article III only applied to laws affecting "products" and did not empower members to

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83. *Tuna-Dolphin I Panel Report*, *supra* note 79.

84. *See* Brett Grosko & Andrew Long, *The World Trade Organization's Tuna Dolphin Decision*, 44 TRENDS 29, 34 (2012) ("The [*Tuna-Dolphin I*] GATT panel decision sparked an intense debate in the relationship between trade, development, and environmental protection.").

85. *Tuna-Dolphin I Panel Report*, *supra* note 79, ¶ 2.7.

86. 16 U.S.C. §§ 1371(a)(2)(B) & 1411 *et seq.* Since Tuna swim in the water column directly beneath dolphins, fishermen would track the dolphins and then trap dolphins and tuna alike in large nets. The practice became widespread in the 1960s and 1970s, and it is estimated that the technique killed 400,000 dolphins in 1972 alone. Bowers v. Evans, 257 F.3d 1058, 1060–61 (9th Cir. 2001) (discussing the environmental context that led to the Congress passing the MMPA). Other estimates indicate that six to eight million dolphins in tuna purse sein nets between 1959 and 1999. Carol J. Miller & Jennifer L. Croston, *WTO Scrutiny v. Environment Objectives: Assessment of the International Dolphin Conservation Program Act*, 37 AM. BUS. L.J. 73, 74–75 (1999).

87. *See* Earth Island Inst. v. Mosbacher, 929 F.2d 1449, 1451-53 (9th Cir. 1991) (upholding district court injunction ordering the Department of Treasury to ban the import of yellowfin tuna from Mexico).

88. *Tuna-Dolphin I Panel Report*, *supra* note 79, ¶ 5.9 (quoting GATT 1949 Article III:4).

regulate the "PPM" of imported goods.[89] By prohibiting members from regulating foreign PPM, *Tuna-Dolphin I* foreclosed an effective mechanism for states to deter unsustainable fishing practices, and the Appellate Body has continued to observe this product-PPM distinction to the present day.[90]

Furthermore, the panel denied the U.S. attempts to defend the MMPA restrictions as "necessary to protect . . . animal life" under GATT Article XX(b)[91] and "relating to the conservation of exhaustible resources" under GATT Article XX(g).[92] The panel found that Article XX exceptions did not cover the U.S. restrictions for three reasons. First, the panel found that Article XX generally provides a "limited and conditioned exception from [GATT] obligations" and reasoned that it must be interpreted narrowly to protect the integrity of the broader system.[93] Second, the panel expressed concern about the extraterritorial application of members' environmental regulations and opined that "if a broad interpretation of Article XX . . . were accepted . . . [t]he General Agreement would . . . no longer constitute a multilateral framework for trade among all contracting parties but would provide legal security [for trade only] . . . between [those states] with identical internal regulations."[94] Third, the panel interpreted the word "necessary" in Article XX(b) as requiring parties to adopt the "least restrictive" method and exhaust all "reasonably available" remedies.[95] Noting that the United States could have addressed the issue through a cooperative agreement with Mexico and other stakeholders, the panel concluded that the Article XX exceptions could not justify the restrictions.[96] Fortunately for the cause of environmental regulations, subsequent decisions of the WTO Appellate Body exhibited a slightly more flexible approach toward Article XX.

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89. *Id.*

90. *See* THOMAS G. KELCH, GLOBALIZATION AND ANIMAL LAW 253 (Ross Buckley & Andreas Ziegler eds., 2011) ("This product/PPM distinction is perhaps the most important and potentially damaging interpretation of the GATT that has occurred in regard to animal welfare issues.").

91. *Tuna-Dolphin I Panel Report*, *supra* note 79, ¶¶ 5.23–5.29.

92. *Id.* ¶¶ 5.30–34.

93. *Id.* ¶¶ 5.22, 5.26–5.27.

94. *Id.* ¶¶ 5.26–5.27.

95. *Id.* ¶¶ 4.29, 5.28.

96. *See id.* ¶¶ 5.28–5.29; *cf.* Panel Report, *United States–Restrictions on Imports of Tuna*, DS29/R ¶¶ 5.34-39 (Jun. 16, 1994) (GATT) (finding that U.S. restrictions on the import of tuna products from intermediary nations constituted quantitative restrictions in violation of GATT Article III, that member states could not regulate PPM of other parties, and that the measures were not "necessary" under Article XX(b)) [hereinafter *Tuna-Dolphin II Panel Report*].

2. The *U.S.-Shrimp* Dispute: Trapped Turtles and Article XX Shell Games

After the creation of the WTO, the newly formed Appellate Body continued to view environmental regulations through a narrow lens. Nevertheless, some decisions adopted a slightly more flexible approach than *Tuna-Dolphin I* and indicated a willingness to entertain carefully prescribed environmental protection efforts. *United States – Import Prohibition of Certain Shrimp and Shrimp Products* (*U.S.-Shrimp*) exemplifies this tentative shift.[97] Indeed, some have called *U.S.-Shrimp* "the most important development in WTO policy regarding trade restrictions for fisheries violations."[98] In *U.S.-Shrimp,* Malaysia, Thailand, Pakistan, and India requested that the WTO Dispute Settlement Body create a panel to consider whether section 609 of U.S. Public Law 101-162 violated the GATT.[99] Section 609 prohibited the importation of shrimp caught with nets lacking a turtle exclusion device (TED), a mechanism through which turtles can safely escape shrimp nets.[100] As the claimants did not require their commercial shrimp fleets to employ TEDs, the United States prohibited the importation of their shrimp products and defended the action under Article XX(g) (and, in the alternate, Article XX(b)).[101]

In *U.S.-Shrimp,* the Appellate Body ultimately rejected the U.S. attempt to invoke Article XX exceptions and found that the shrimp prohibition violated GATT 1994. However, the Appellate Body's reasoning presented a two-tiered Article XX analysis and embodied a more nuanced approach to the exceptions than the *Tuna-Dolphin I* panel employed. The Appellate Body found that "the fundamental structure and logic of Article XX" requires that the court first evaluate

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97. *See* Appellate Body Report, *United States–Import Prohibition of Certain Shrimp and Shrimp Products (U.S.–Shrimp II)*, WTO Doc. WT/DS58/AB/R (adopted Nov. 6, 1998) [hereinafter U.S.–Shrimp II]; *see generally* Panel Report, *United States–Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Doc. WT/DS58/R (adopted May 15, 1998) [hereinafter *U.S.–Shrimp Panel Report*].

98. Taylor, *supra* note 4, at 156; *see also* Robert Howse, *The Appellate Body Rulings in the Shrimp-Turtle Case: A New Legal Baseline for the Trade and Environmental Debate*, 27 COLUM. J. ENV'T. L. 491, 494–95 (2002) (rejecting characterizations of the Appellate Body's *Shrimp-Turtle* decision as "judicial activism" because it relied on previous GATT rulings and foundational principles of customary international law).

99. *U.S.–Shrimp Panel Report*, *supra* note 97, ¶ 1.1.

100. Pub. L. No. 101-162, § 609, 103 Stat. 1037 (1989) (codified at 16 U.S.C. § 1537); Revised Guidelines for the Implementation of Section 609 of Public Law 101-162 Relating to the Protection of Sea Turtles in Shrimp Trawl Fishing Operations, 64 Fed. Reg. 130, 36946 (Jul. 8, 1999).

101. *See U.S.–Shrimp Panel Report*, *supra* note 97, ¶ 3.146.

each claimed exception and only then consider the measure in light of the Article XX chapeau.[102] To justify the exception, both steps must be met.[103]

Although the United States ultimately lost the appeal, the Appellate Body's Article XX(g) analysis broke with some aspects of *Tuna-Dolphin I* and suggested a path member states could pursue in the future. First, the Appellate Body held that Article XX(g)'s reference to "natural resources" included living creatures[104] and specifically noted that exhaustible and renewable natural resources are not mutually exclusive.[105] Indeed, with Cassandra-like prescience for our current fish-stock crisis, the Appellate Body observed that "living species, though in principle . . . 'renewable,' are in certain circumstances . . . susceptible of depletion, exhaustion and extinction, frequently because of human activities."[106] Second, the Appellate Body found that the sea turtles targeted by section 609 met the threshold for "exhaustible," as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) designated all sea turtle species as "threatened with extinction . . . [and] affected by trade."[107] Third, the Appellate Body recognized that contracting parties might enact extra-territorial regulations where a "sufficient nexus" exists between the targeted species and its territory[108] and that a "reasonable means and ends

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102. *U.S.–Shrimp II*, *supra* note 97, ¶¶ 117–19 (quoting Appellate Body Report, United States–Standards for Reformulated and Conventional Gasoline, WTO Doc. WT/DS2/AB/R (adopted May 20, 1996) ("The analysis is . . . two-tiered: first, provisional justification by reason of characterization of the measure under XX(g); second, further appraisal of the same measure under the introductory clauses of Article XX.").

103. *Id.*

104. *Id.* ¶¶ 127–28.

105. *Id.* ¶¶ 128–30 (comparing the GATT language with UNCLOS Article 56 use of "living resources").

106. *Id.* ("Living resources are just as 'finite' as petroleum, iron ore and other non-living resources.").

107. *Id.* ¶ 132; *see generally* Tyler, supra note 73, at 90 ("The Appellate Body emphasized the importance of a multilateral approach to solving environmental problems, and specifically chose to rely on certain MEAs for support in making its ultimate conclusion.").

108. *U.S.–Shrimp II*, *supra* note 97, ¶¶ 121, 133 ("It is not necessary to assume that requiring from exporting countries compliance with . . . certain policies . . . renders a measure *a priori* incapable of justification under Article XX. Such an interpretation renders . . . the specific exceptions under Article XX inutile . . . ."); *see also* Appellate Body Report, *European Communities–Conditions for the Granting of Tariff Preferences to Developing Countries*, ¶ 95, WTO Doc. WT/DS246/AB/R (adopted Apr. 20, 2004) ("Thus, by authorizing in Article XX(g) measures for environmental conservation, an important objective referred to in the Preamble to the WTO Agreement, Members implicitly recognized that the implementation of such measures would not be discouraged simply because Article XX(g) constitutes a defence to otherwise WTO-inconsistent measures."); Tyler, *supra* note 73, at 46 ("The Appellate Body decisions in the

relationship" connects the measure and the species' protection.[109] Since section 609 targeted turtles that migrated through the U.S. EEZ, the Appellate Body found a "sufficient nexus for the purposes of Article XX (g)."[110] This reasoning marked a break with the GATT panel decision in *Tuna-Dolphin I* and provided "a clear framework to guide nations . . . in utilizing Article XX's environmental exceptions while simultaneously complying with GATT's policy against unilateral trade restrictions."[111]

Proceeding to the second step of its Article XX analysis, the Appellate Body considered whether section 609 conformed with the Article XX chapeau. The opening sentence of Article XX prohibits measures that effect "arbitrary or unjustifiable discrimination between countries,"[112] and the Appellate Body found this "limited and conditional" language determines the "ultimate availability of [an Article XX] exception."[113] According to the Appellate Body, the chapeau requires contracting parties to balance the right to use the exceptions with the duty to respect other members' rights[114]—a "delicate" task of "locating and marking a line of equilibrium."[115] The United States claimed "unjustifiable discrimination" could not exist where a distinction is "based on a rationale legitimately connected with the policy of an Article XX exception."[116] However, the Appellate Body held that the U.S. measures were applied in an unfair and discriminatory manner that violated Article XX for two primary reasons.[117] First, the Appellate Body found that the U.S. measures effectively required other WTO members to adopt regulations "essentially the same" as the U.S. system.[118] This "rigid and unbending standard" failed to incorporate the unique circumstances of other member states or consider alternate measures other than TEDs that could achieve the

Shrimp-Turtle dispute firmly established that article XX exceptions for environmentally based trade measures are acceptable within the WTO jurisprudential framework.").

109. *U.S.–Shrimp II*, *supra* note 97, ¶¶ 141–42 ("The means and ends relationship between Section 609 and the legitimate policy of conserving an exhaustible, and in fact, endangered species, is observably a close and real one . . . .").

110. *Id.* ¶ 133.

111. Taylor, *supra* note 4, at 160; Tyler, *supra* note 73, at 86 ("With this ruling, the Appellate Body validated the use of unilateral trade measures for environmental purposes under the WTO.").

112. GATT 1947, art. XX.

113. *U.S.–Shrimp II*, *supra* note 97, ¶ 157.

114. *Id.* ¶ 156.

115. *Id.* ¶ 159.

116. *Id.* ¶ 148.

117. *See id.* ¶¶ 161-70.

118. *Id.* ¶¶ 161–65.

same purpose.[119] Second, echoing the reasoning of *Tuna-Dolphin I*, the Appellate Body found it significant that the United States failed to seek a negotiated solution for the protection of sea turtles before enacting section 609.[120] For these reasons, the Appellate Body concluded that section 609 was not truly "necessary" and therefore "arbitrary and unjustifiable discriminatory" in violation of the Article XX chapeau.[121]

Thus, although the *U.S.-Shrimp* decision stepped back from *Tuna-Dolphin I*'s strict Article XX(g) interpretation, the Appellate Body emphatically stated that the Article XX "chapeau makes clear that each of the exceptions from paragraphs (a) to (j) . . . is a limited and conditional exception from the substantive obligations contained in other provisions of the GATT 1994."[122] Thus, the decision maintained a high bar for environmental regulations seeking extraterritorial effect, a threshold which limits the circumstances where Article XX(b) and (g) exceptions can cover measures targeting unsustainable fishing practices.

3. The Ten-Year *Tuna-Labelling* Dispute and Its Final Resolution: Fluke or Flip?

A long-running case that only recently concluded presents a similarly mixed record: *U.S.-Tuna II (Mexico)*.[123] In 2008, Mexico requested

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119. *Id.* ¶¶ 163–66 ("[D]iscrimination results . . . when the application of the measure . . . does not allow for any inquiry into the appropriateness of the regulatory program for the conditions prevailing in those exporting countries."); *cf.* Appellate Body Report, *European Communities–Measures Prohibiting the Importation and Marketing of Seal Products*, WTO Doc. WT/DS401/AB/R (adopted June 16, 2014) (finding that the European Community's inconsistent and discriminatory application of measures violated the balancing test required by the chapeau of Article XX).

120. *See U.S.–Shrimp II*, *supra* note 97, ¶ 166.

121. *Id.* ¶ 170. More precisely, the United States negotiated agreements with Caribbean and Western-Atlantic states prior to enacting the ban, but not with claimants. Claimants had only four months to adopt new procedures, while the former group had a three-year period of adjustment. *See also* Appellate Body Report, *Korea–Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WTO Doc. WT/DS169/AB/R ¶ 162 (adopted Jan. 10, 2001) (determining that "the more vital or important [the] interest" a measure seeks to protect, the more likely that its necessity outweighs the presence of unexplored "WTO-consistent alternative measures"). *But see* Appellate Body Report, *European Communities–Measures Affecting Asbestos and Asbestos-Containing Products*, ¶ 170–72, WTO Doc. WT/DS135/AB/R (adopted Apr. 5, 2001) ("[A] contracting party cannot justify a measure inconsistent with another GATT provision as necessary in terms of Article XX(d) if an alternative measure which it could reasonably be expected to employ . . . is available to it.").

122. *U.S.–Shrimp II*, *supra* note 97, ¶ 157 (reasoning that the text of the chapeau and the history of the treaty's negotiations mandate "limited and conditional" exceptions).

123. Appellate Body Report, *United States–Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WTO Doc. WT/DS381/AB/R (adopted Jun. 13, 2012) [hereinafter *U.S.–Tuna II (Mexico)*].

consultations regarding the U.S. regime for labelling certain tuna-products as "dolphin-safe." The dispute centered on the U.S. Dolphin Protection Consumer Information Act of 1990 (DPCIA), which established a scheme to classify tuna products as "dolphin-safe" based on fishing method, catch location, and vessel type.[124] Congress intended the labeling scheme to facilitate informed consumer decisions and thereby protect dolphins from purse seine fishing.[125] Of note, both Mexico and the United States accepted that ETP dolphins were an "exhaustible natural resource" under Article XX(g) and Appellate Body jurisprudence.[126] Mexico claimed, however, that the DPCIA labeling scheme constituted a technical regulation and violated Article 2 of the 1995 Technical Barriers to Trade (TBT) Agreement.[127]The Appellate Body agreed.[128]

As a preliminary question, the Appellate Body first considered whether the DCPIA labelling system was a technical regulation or a non-binding standard, as the stringent requirements of TBT Article 2 would only apply to the former. The TBT defines a technical regulation as a "document which lays down . . . production methods . . . with which compliance is *mandatory*."[129] Observing that the DCPIA labeling system set forth a legally binding set of requirements, the Appellate Body reasoned that any exporting state that wished to make "any claim" relating to tuna, dolphins, and fishing methods would have to comply.[130] Although Mexican tuna could still be sold without the dolphin-safe label under the DCPIA system, the Appellate Body found that the labelling system constituted a mandatory requirement since it was the only option available for those seeking to make dolphin-related claims on a

124. Dolphin Protection Consumer Information Act, 16 U.S.C. § 1385 (2021). Mexico's claims also involved the U.S. Court of Appeals for the Ninth Circuit's decision in *Earth Island Institute v. Hogarth*, 494 F.3d 757 (9th Cir. 2007). *U.S.–Tuna II (Mexico)*, *supra* note 123, at ¶ 1.

125. *See id.* § 1385(b)(3) ("[C]onsumers would like to know if the tuna they purchase is falsely labeled as to the effect of the harvesting of the tuna on dolphins.").

126. Panel Report, *United States–Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ¶ 7.521, WTO Doc. WT/DS381/RW (Article 21.5) (adopted Apr. 14, 2015).

127. *See* Panel Report, *United States–Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ¶¶ 4.53-4.70, WTO Doc. WT/DS381/R (adopted Sep. 15, 2011) [hereinafter *U.S.–Tuna II Panel Report*]. The TBT seeks to ensure that technical regulations and standards do not "constitute a means of arbitrary or unjustifiable discrimination. . . or a disguised restriction on international trade." Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 120 [hereinafter TBT].

128. *See U.S.–Tuna II Appellate Body Report*, *supra* note 82, ¶¶ 407.

129. *Id.* at Annex 1.1 (emphasis added).

130. *See U.S.–Tuna II Appellate Body Report*, *supra* note 82, ¶¶ 193–94.

label.[131] Of note, a dissenting member of the original panel emphasized that market access should be the only relevant criterion when determining if a measure constitutes a mandatory technical requirement.[132] As Mexican exporters could still market their products in the United States without the "dolphin-safe" label, the dissenting member found that a labelling system was not a mandatory requirement under TBT Article 1.1 and lamented that the majority decision "leave[s] no space for voluntary labeling schemes" in pursuing environmental goals.[133] As such, the *U.S.-Tuna II (Mexico)* decision closed yet another avenue for member states to influence unsustainable fishing practices within the WTO framework.

Having established that the DCPIA labelling system was a technical regulation, the Appellate Body then considered whether the measure violated the TBT Article 2 provisions. In its decision, the Appellate Body found it significant that the United States did not "calibrate . . . the likelihood of . . . [harm] . . . to dolphins" located in other areas or caught by other methods.[134] Indeed, the decision noted that the labelling scheme focused exclusively on purse seine nets and the ETP region. Therefore, the Appellate Body concluded that the measures provided "less favourable treatment" to Mexican tuna products and violated Article 2.1 of the TBT Agreement.[135]

Nevertheless, as in *U.S.-Shrimp*, the decision also indicated a possible roadmap for states to craft compliant measures. First, the Appellate Body overturned the original panel's decision with respect to Article 2.2 of the TBT and found the U.S. "dolphin protection objective" to be a "legitimate objective."[136] This meant that the Appellate Body would approve of a labelling system so long as it complied with the Article 2.1 "favourable treatment" requirement. Indeed, the United States ultimately amended the DCPIA to apply labeling rules irrespective of a vessel's flag or fishing location, and a WTO compliance panel found that the labelling system no longer violated the TBT Agreement in 2019.[137]

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131. *See id.* ¶ 199 ("[T]he U.S. measure prescribes in a broad and exhaustive manner the conditions that apply for making any assertion on a tuna product as to its "dolphin-safety," regardless of the manner in which that statement is made.").

132. *See U.S.–Tuna II Panel Report*, *supra* note 127, ¶ 7.151.

133. *Id.*; *see also* Petros C. Mavroidis, *Last Mile for Tuna (to a Safe Harbour): What is the TBT Agreement All About?*, 30 EUR. J. INT'L L. 279, 284–85 (2019).

134. *U.S.–Tuna II Appellate Body Report*, *supra* note 82, A 3(b).

135. *Id.* ¶ 299.

136. *Id.* ¶ 341.

137. *See* Appellate Body Report, ¶ 7.11, *United States–Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products (Second Recourse to Article 21.5 of the DSU by Mexico)*, WTO Doc. WT/DS381/AB/RW2 (adopted Dec. 14, 2018).

B. *Impact and Efficacy: Can Member States Deter IUU Fishing and Unsustainable Practices through WTO-Compliant Regulations?*

As the preceding parts demonstrated, WTO efforts to address fishing-related regulations present a complicated history. Some decisions suggest a narrow tolerance for regulations targeting fish-exporting nations. For instance, *U.S.-Shrimp* acknowledged sea life as an "exhaustible natural resource" that fell under the Article XX(g) exception, and *U.S.-Tuna II* eventually accepted labelling systems that broadly addressed unsustainable fishing practices. However, these decisions still embody a trade-centric approach that prioritizes the free flow of goods. Members cannot promulgate regulations that address the PPM of imported catches. Nor can a state party enact measures that compel exporting states to adopt more sustainable practices. Furthermore, before a state can even contemplate such regulations, it must exhaust all other options to include lengthy multilateral negotiations that would invariably dilute the desired effect. As one observer noted, the "cumulative effect of this WTO and GATT jurisprudence . . . chill[s] the efforts of countries to enact and enforce laws aimed at protecting animals."[138]

Such an approach accords with the purpose of the GATT,[139] but it does not provide a meaningful avenue to address IUU fishing and unsustainable PPM. The measures WTO jurisprudence does allow are ineffective and merely touch the edge of a deeper, systemic problem. For instance, the MMPA and DCPIA require exporting countries to embark observers on fishing vessels and maintain accurate records. Effective bureaucracy and honest oversight are a tall order even when measures target one species in a discrete part of the ocean. To scale such efforts so that they cover unsustainable, depleted stocks around the world beggars the imagination.

Similarly, the successful implementation of such schemes would require a degree of maritime surveillance that even the most well-

138. Kelch, supra note 78, at 121–22.

139. *See* GATT 1947 at 1 (seeking to reduce tariffs and trade barriers in order to raise standards of living, ensure full employment, increase income, develop the full resources of the world, and expand production). *But see* Barbara Cooreman, *Addressing Global Environmental Concerns Through Trade: Extraterritoriality under WTO Law from a Comparative Perspective* (June 14, 2016), https://openaccess.leidenuniv.nl/handle/1887/40164 (unpublished thesis, Leiden University) (on file with Meijers Research Institute and Graduate School of the Leiden Law School of Leiden University) (arguing that the GATT text affords greater flexibility for pursuing environmental goals or target PPM than the Appellate Body has granted due to Article XX's reference to other 'important values').

funded militaries would struggle to implement. For example, in January 2019, an Argentine Navy P-3 Orion aircraft observed more than 350 foreign vessels fishing along the edge of its EEZ.[140] It is impossible for one maritime reconnaissance aircraft to investigate and document such a vast number of contacts, and fishing vessels can easily retreat to international waters long before surface combatants arrive on the scene. In the Gulf of Mexico, Mexican fishermen use lanchas—fast-moving, thirty-foot craft—to illegally fish in the U.S. EEZ.[141] In a six-month period in 2018, the U.S. Coast Guard identified forty-three lanchas in the U.S. waters. In March 2019, the Coast Guard detained thirteen fishermen whose illegal catch contained 3,500 pounds of red snapper and 1,100 pounds of shark.[142] Such successes deserve praise; however, with speeds in excess of thirty mph, how many lanchas go undetected?[143] The sheer size of IUU activity, coupled with the vastness of the open ocean, precludes effective enforcement.

The United States and like-minded WTO members should not shy away from implementing and enforcing transnational fisheries regulations. Any attempt to call attention to unsustainable fishing, strengthen international standards, and inform consumers should be encouraged; however, current WTO jurisprudence and practical limitations mean such efforts will never solve the underlying issue. The WTO remains best positioned to provide a multilateral, global solution for this crisis. But new disciplines are required. If members seek to reduce unsustainable IUU fishing and effect enduring change, they must address the root cause: fishing subsidies.

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140. Delgado, *supra* note 43.

141. *Coast Guard Interdicts Lancha Crews Illegally Fishing U.S. Waters*, SEA POWER (Mar. 1, 2019), https://seapowermagazine.org/lancha-crews-illegally-fishing/.

142. *Id.*

143. Moreover, the Coast Guard has responsibility for a wide array of missions. In 2017, only eleven percent of its budget supported fisheries enforcement. *See* John Grady, *Illegal Fishing Should be Major National Security Issue*, U.S. NAVAL INST., (Nov. 16, 2017, 4:17 PM), https://news.usni.org/2017/11/16/report-illegal-fishing-major-national-security-issue. The Fiscal Year 2021 budget only allocates two percent of its $12 billion dollar budget to support foreign fisheries enforcement. Based on budget allocations, IUU fishing enforcement receives the second lowest funds of the Coast Guard's eleven statutory missions. Craig Hooper, *U.S. Coast Guard Needs Money and White House Attention to Tackle Depredatory Chinese Fishing*, FORBES (May 24, 2021), https://www.forbes.com/sites/craighooper/2021/05/24/underfunded-us-coast-guard-fishing-enforcement-needs-bidens-help/?sh=416f061e7eff.

V. Casting into the Wind: Current WTO Negotiations & Recommendations

As discussed in Part II, the U.N. Sustainable Development Goal on "Life below Water" (SDG 14) called on member states "to prohibit certain forms of fishing subsidies which contribute to overcapacity and overfishing . . . [and] eliminate subsidies that contribute to IUU fishing" by 2020.[144] In 2015, during its eleventh Ministerial Conference, the WTO responded to this urgent call. Accepting its "central role" in reducing fisheries subsidies that cause overfishing and overcapacity, the WTO promised "to reinvigorate work . . . aimed at achieving ambitious and effective disciplines on fisheries subsidies."[145] But tangible outcomes proved more elusive than bold rhetoric. Meetings occurred throughout 2017, and the negotiating chair distributed draft working documents that compiled member states' proposals on IUU fishing and overfished stocks;[146] however, no consensus emerged before the initial deadline passed. At the December 2017 Ministerial Conference, WTO members merely affirmed their commitment to adopt a comprehensive agreement by 2019.[147] When the 2019 deadline passed as well, members committed to negotiating an agreement by December 2020.

On December 14, 2020, Ambassador Santiago Wills, Chairman of the WTO Negotiating Group on Rules for Fisheries and Subsidies Negotiations, announced that the group had failed to meet the SDG's 2020 deadline.[148] But some progress has occurred. Despite a global pandemic and the inability to conduct in-person negotiations, the negotiating group promulgated a draft consolidated text in June 2020,[149] solicited input from members during the summer and fall, and

144. SDG 14.6, *supra* note 49.

145. World Trade Organization, *WTO 10th Ministerial Conference: Fishing Subsidies Ministerial Statement* (Dec. 2015), https://www.wto.org/english/thewto_e/minist_e/mc10_e/fishsubsippmc10_e.pdf.

146. *See* WTO Negotiating Group on Rules: Communication from the Chair, *Fisheries Subsidies: Working Documents on Prohibited Subsidies Relating to IUU Fishing and Overfished Stock*, TN/RL/W/274, (Nov. 20, 2017); WTO Negotiating Group on Rules: Communication from the Chair, *Fisheries Subsidies: Compilation Matrix of Textual Proposals Received to Date*, TN/RL/W/273, (Aug. 2, 2017).

147. *See* World Trade Organization, *Fisheries Subsidies: Ministerial Decision of 13 December 2017*, WTO Doc. WT/MIN(17)/64 (2017), https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/MIN17/64.pdf&Open=True.

148. Emma Farge, *WTO Fails to Agree to Rules to Stop Over-Fishing, But Will Try Again*, Reuters (Dec. 14, 2020, 6:58 AM), https://www.reuters.com/article/trade-wto-fish-int-idUSKBN28O1DO.

149. *See* World Trade Organization, *Fisheries Subsidies Negotiations Chair Introduces Draft Consolidated Text to WTO Members*, (June 25, 2020), https://www.wto.org/english/news_e/news20_e/fish_25jun20_e.htm; *Rules Chair Issues Draft Consolidated Text on Fisheries Subsidies*, Third

released a revised version in November 2020.[150] Neither document was released publicly; however, reporting suggests that consensus coalesced on several issues. In February 2021, the negotiators reconvened in Geneva,[151] and Ambassador Wills released a new draft consolidated text in May 2021.[152] The new WTO Director-General, Ngozi Okonjo-Iweala, has emphasized the importance of these negotiations. Director-General Okonjo-Iweala convened new talks on July 15th, 2021 and applauded negotiators as they commenced line-by-line discussions of the draft text.[153] Hopes remain high that the negotiators can deliver an agreement, but significant disagreements remain.

A. *Areas of Consensus*

Three areas of agreement are especially encouraging. First, negotiators appear to have settled on a common definition for IUU fishing, as the 2018 Working Document incorporated the definition established by the FAO IPOA-IUU.[154] Rather than a rigid, one-size-fits-all definition, the IPOA proscribes fishing that violates national laws, the regulations of relevant Regional Fisheries Management Organizations (RFMOs), or other rules of international law.[155] By incorporating a flexible definition that reinforces members' municipal law, the draft agreement reaffirms sovereign rights and leverages the persuasive norms of

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WORLD NETWORK (Jun. 29, 2020) (providing detailed summary of Ambassador Wills' public comments), https://twn.my/title2/wto.info/2020/ti200624.htm.

150. *See* INT'L INST. FOR SUSTAINABLE DEV., WTO MEMBERS DELAY AGREEMENT ON FISHERIES SUBSIDIES TO 2021, (2020), http://sdg.iisd.org/news/wto-members-delay-agreement-on-fisheries-subsidies-to-2021/.

151. *See* INT'L INST. FOR SUSTAINABLE DEV., *WTO NEGOTIATIONS ON FISHERIES: "FUNDAMENTAL DIFFERENCES" REMAIN* (2021), https://sdg.iisd.org/news/wto-negotiations-on-fisheries-fundamental-differences-remain/ [hereinafter *Fundamental Differences*].

152. WTO Negotiating Group on Rules: Communication from the Chair, *Fisheries Subsidies: Draft Consolidated Chair Text*, TN/RL/W/276 (May 11, 2021). The revised draft text was published as this Note went to press. A detailed analysis of the new document is therefore beyond the scope of this Note.

153. *See id.*; *Fundamental Differences*, *supra* note 151; *Okonjo-Iweala Hails 'Successful' Fish Ministerial, Previews "Line-by-Line" Talks*, WORLD TRADE ONLINE (Jul. 15, 2021), https://insidetrade.com/daily-news/okonjo-iweala-hails-%E2%80%98successful%E2%80%99-fish-ministerial-previews-line-line-talks.

154. *See* ISABELLE VAN DAMME, INT'L INST. FOR SUSTAINABLE DEV., REFLECTIONS ON THE WTO NEGOTIATIONS ON PROHIBITING IUU FISHING SUBSIDIES 4 (2020), https://www.iisd.org/system/files/publications/wto-negotiations-prohibiting-fishing-subsidies.pdf.

155. *See* Food and Agriculture Organization of the United Nations, International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing, art. 3.1, adopted by the Committee on Fisheries on its Twenty-Fourth Session (Mar. 2, 2001).

non-binding international agreements.[156] To be sure, any final agreement will need to clarify whether the IPOA definition becomes static at ratification or evolves with changes to the underlying national and international law. Nevertheless, to settle on a common definition constitutes an integral first step for any agreement.[157] Of note, an accepted definition for IUU fishing only addresses half of the problem, as the text does not reference a common definition for overfished or unsustainable stocks. As such, this remains an area of contention for future negotiations and will be discussed below.

Second, the draft agreement also demonstrates some consensus on the targeted subsidies. In keeping with SDG 14 goals, the text broadly envisions disciplines for three discrete groups of subsidies: subsidies that contribute to IUU fishing; subsidies that support unsustainable fishing of overfished stocks; and subsidies that contribute to overfishing and overcapacity.[158] More specifically, the June 2020 draft text includes language that covers non-specific fuel subsidies, one of the key capital-enhancing enablers of unsustainable fishing practices discussed in Part II.[159] Member states have proposed various exclusions, such as fuel detaxation schemes, subsidies to artisanal, small-scale fishing operations, and subsidies to fishing within the member's territorial sea.[160] The current draft has not addressed these specific caveats and carve-outs; however, even if an agreement ultimately includes such concessions, the reduction in fuel subsidies to large-scale, industrial fishing could yield an immediate improvement for global fishing stocks.

Third, the draft text acknowledges the importance of effective information-gathering on IUU fishing violations. For IUU designations, negotiators reportedly favor empowering RFMOs to supplement state efforts to collect data on vessel license numbers, registered ports, and operator information.[161] Such an approach is optimal, as coastal states often lack the capacity to effectively monitor IUU activity, subsidizing states may choose to overlook violations, and port states may hesitate to rely on information provided by external actors. RFMOs also provide a

156. *See Van Damme*, *supra* note 154, at 4. ("This devolved approach seems to be inevitable in formulating any type of common definition of IUU fishing for the purposes of a WTO agreement and does not appear to undermine the overall advantage of using a common definition.")

157. *See id.* at 5.

158. *See Tipping & Irschlinger*, *supra* note 53, at 3.

159. *See id.*

160. *See id.*

161. *See* THERESA REDDING & GRAEME MACFAYDEN, INT'L INST. FOR SUSTAINABLE DEV., POTENTIAL IMPLEMENTATION STEPS OF A WTO AGREEMENT ON FISHERIES SUBSIDIES 8 (2020), https://www.iisd.org/system/files/publications/steps-wto-agreement-fisheries-subsidies.pdf.

ready framework through which coast guards, navies, and intelligence services can collaborate, share data, and ensure the most egregious IUU violators do not escape notice.

Despite this progress, numerous points remain unsettled, and it is unclear whether member states will be able to forge a final agreement. The following parts will identify critical areas of contention and propose solutions that reflect the challenges outlined in Parts II, III, and IV. Four outstanding issues will prove critical to the success of any agreement: the authority to make IUU fishing designations, the procedure for assessing fishing stocks, the basis of review for dispute settlement, and the approach towards SDT for developing and least developed countries.

B. *The Authority and Scope of IUU Fishing Designations*

First, a final agreement must determine who is authorized to make IUU designations. The draft text includes language that empowers flag states and coastal states to make such designations.[162] Yet both suggestions would prove inadequate. To be sure, coastal states have every incentive to enforce compliance in their territorial sea and EEZ. Under UNCLOS, it is their undisputed right to regulate such activity, and unsustainable IUU fishing directly harms their environment, economy, and security. Unfortunately, in regions where IUU fishing is most acute, coastal states are often least developed countries (LDCs) or developing countries. In many instances, these states may rely on the most egregious subsidizers of IUU fishing for economic support, military protection, or trade benefits. Thus, even if a coastal state had the capacity and desire to designate IUU fishing violations, strategic interests may demand inaction. Moreover, some of the worst violations occur on the high seas beyond the regulatory reach of coastal states. In theory, the text's inclusion of flag states could address IUU activity on the high seas. However, if a vessel is associated with a state merely through a flag of convenience, the flag-state government may be unwilling or unable to make the IUU designation.

For this reason, some parties have proposed including the subsidizing state in the designation process.[163] In some instances, the subsidizing states may be the only connection to a vessel fishing on the high seas. Proponents argue this "could be a way [for subsidizing states] to

162. *See Tipping & Irschlinger, supra* note 53, at 5.

163. *See id.*

enforce domestic policy coherence";[164] however, to paraphrase an adage, the proposal is like asking an orca to guard a seal pod. As discussed in Part II, states subsidize fishing fleets to secure food sources and protect an industry of cultural and political significance. Therefore, the worst offenders have little incentive to police IUU fishing and ensure compliance with international standards. A non-obligatory, self-enforcing mechanism for IUU designations may appeal to many WTO members. But if the final agreement relies on such procedures, it will provide little support to global fisheries.

Other states have proposed that RFMOs present a sensible option, as they already possess the requisite expertise and represent the littoral stakeholders.[165] But China, the United States, and others may find the idea of a supranational regional organization empowered to adjudicate their fishermen unpalatable. Additionally, some conservationists claim that RFMOs can be captured by special interests and may not provide reliable regulatory support.[166] In many scenarios, port states may be best positioned to make factual investigations and action requests from other states. Indeed, the PSMA already authorizes port states to make such designations, and local authorities often inspect vessels landing a catch.[167] Nonetheless, a port state may not always have the capacity or willingness to undertake such obligations.

Ultimately, the agreement should adopt an all-of-the-above option, authorizing RFMOs, subsidizing states, flag states, littoral states, and port states to designate IUU fishing violators. Some members have argued for such an inclusive list, fearing that the exclusion of any option could "undermine the object and purpose of the prohibition on IUU fishing subsidies."[168] So long as subsidizing states have a venue in which to challenge IUU designations, this catch-all approach would strike a balance that protects the sovereign rights of member states while maximizing the opportunities to enforce violations.

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164. *Id.*

165. *See Van Damme*, *supra* note 156, at 9 (arguing that RFMOs would facilitate "coherence between the trade and fisheries policies of WTO Members that also belong to that type of organization and that subsidize IUU fishing."); Tipping & Irschlinger, *supra* note 53, at 5.

166. *See Piscine Plunder: Ecuador, a Victim of Illegal Fishing, is also a Culprit*, THE ECONOMIST (Nov. 21, 2020), (quoting observers who allege that the Inter-American Tropical Tuna Commission is "a weak organization, aligned with fishing companies," and hinders regulatory goals), https://www.economist.com/the-americas/2020/11/21/ecuador-a-victim-of-illegal-fishing-is-also-a-culprit?frsc=dg%7Ce.

167. *See Tipping & Irschlinger*, *supra* note 53, at 5; Van Damme, *supra* note 156, at 7.

168. Van Damme, *supra* note 156, at 7–8.

C. *Stock Assessments and Overfished Designations*

In general, negotiators envision a prohibition on subsidies to vessels targeting unsustainably fished, vulnerable stocks. Unfortunately, no consensus has emerged regarding the procedures for conducting stock assessments and determining when a species is unsustainably overfished. Without a decision on this preliminary point, the potential agreement is doomed. The 2018 draft text identifies two broad options for assessing stocks: an objective, scientific approach or a subjective approach with unfixed criteria.[169] Many states already employ an objective, scientific approach for assessing stocks. Indeed, UNCLOS requires members to use the "best scientific evidence available to [them]" when regulating their fisheries.[170] But myriad variations exist within this objective approach.[171] For instance, while most states employ MSY as the reference point for stock assessments, the concept of maximum economic yield (MEY) has gained traction in recent years.[172] Some have argued that a fishing subsidies agreement should adopt multiple objective models, as this would provide flexibility for states in data-poor environments and "help the discipline be applied in many different fisheries management contexts."[173]

Other members, however, have argued against the use of objective criteria and proposed that national authorities (or RFMOs) should have the independence to assess stocks as they see fit.[174] Or, if agreement does adopt an objective approach, they propose adding a caveat that states use the "best scientific evidence available *to the member*."[175] Such subjectivity raises the same concern discussed with IUU fishing designations. States subsidize fishing fleets for multiple reasons. Scientific and economic models may demonstrate the long-term harm of unsustainable fishing, but many governments will prioritize immediate food security and short-term economic benefits over long-term projections. As such, governments may be incentivized to avoid or delay

169. *See* TIPPING & IRSCHLINGER, *supra* note 53, at 9.

170. UNCLOS, *supra* note 56, art. 61(2).

171. *See generally* MAREN HEADLEY, DETERMINING THE STATUS OF FISH STOCKS IN DATA-POOR ENVIRONMENTS AND MULTISPECIES FISHERIES (INT'L INST. OF SUSTAINABLE DEV., 2020), https://www.iisd.org/system/files/publications/fish-stocks-multispecies-fisheries.pdf.

172. *See id.* at 3–4.

173. *Id.*

174. *See* TIPPING & IRSCHLINGER, *supra* note 53, at 9.

175. *Id.* at 9.

negative stock assessments.[176] Thus, if a WTO agreement on fishing subsidies is to have any effect, it must rely on an objective scientific standard that incorporates multiple reference points.

D. *Standards of Evidence, Dispute Settlement, and the Basis for Review*

Whatever form the IUU fishing designation and stock assessment process ultimately takes, any successful agreement will require a transparent and efficient dispute settlement process to assuage member concerns, engender credibility, and ensure swift resolution. During the 2020 negotiations, members' positions still varied widely on these issues.[177] One such issue involves the appropriate standard a dispute panel should employ when reviewing an IUU fishing designation or stock assessment determination. Most members agree that the WTO is not a fisheries organization, and panels are not well-positioned to conduct a de novo review.[178] But distinct opinions remain. Some have argued for a more limited procedural review to determine if findings were "objective, unbiased, and based on facts," and Article 17.6 of the Anti-Dumping Agreement provides a model for this approach.[179] Others, seeking an even more limited authority for review, contend that panels should only review the scientific basis of the RFMO or member state's assessment.[180]Several members have proposed a middle ground that distinguishes between distinct subject matters and employs different levels of review for each. Under this formulation, the designation of IUU fishing is a non-scientific determination, and panels are better positioned to conduct procedural review to ensure due process, the consideration of all evidence, and a bias-free decision. Stock assessments, however, involve highly technical models, biological analyses, and ecological investigations. In such instances, the agreement could limit panels to a review of the scientific basis and perhaps solicit assessments from international bodies like the FAO. This would husband limited dispute resolution resources and facilitate an expedited process for these urgent issues.

176. *See id.* at 10 ("The more control the Members has (sic) over the evidence it is obliged to take into account, the more scope there is for Members to ignore evidence that a stock appears to be overfished").

177. *See Fisheries Subsidies Negotiations Chair Introduces Revised Draft Consolidated Text*, WORLD TRADE ORGANIZATION (Nov. 2, 2020), https://www.wto.org/english/news_e/news20_e/fish_02nov20_e.htm.

178. *See* TIPPING & IRSCHLINGER, *supra* note 53, at 20.

179. *See id.* at 20–21.

180. *See id.*

E. *Special and Differential Treatment*

Finally, the agreement's approach to SDT will almost certainly prove the most challenging issue to negotiate, but the ultimate success of any effort depends on a nuanced approach to such politically sensitive issues. Since the 2001 Doha Round, WTO Members have recognized that disciplines on fishing subsidies would require "appropriate and effective [SDT] for developing and least-developed Members" and must reflect the "importance of this sector to development priorities, poverty reduction, and livelihood and food security concerns."[181] In 2015, SDG 14.6 explicitly called upon members to recognize "appropriate and effective" SDT for LDCs and developing countries and declared that they must be an "integral part" of new fishing disciplines.[182]

In Part II, this Note discussed the harm that small-scale, artisanal fishermen suffer when heavily subsidized, industrial fleets encroach on local waters, and it highlighted the destabilizing second-order effects of such competition. Countries like Senegal, Gambia, and Guinea rely on small-scale fishing for a critical source of protein, and the industry employs thousands. A successful agreement must account for artisanal fishing, vulnerable communities, and LDC needs, and the draft text currently exempts LDCs from prohibitions on subsidies that contribute to overfishing.[183] However, members must adopt a more tailored approach when crafting exceptions for developing countries. Permanent, blanket exceptions will render any deal ineffective.[184]

First, although China has reaped SDT benefits in other agreements, any new fishing disciplines must apply to China from the start. To exclude the largest provider of fishing subsidies—and port of origin for some of the most notorious IUU fishing violators—would render any

181. *See Van Damme*, *supra* note 154, at 2 (quoting WTO, 2005, Annex D, para. 9).

182. SDG 14.6, *supra* note 49.; *cf.* David Vivas Eugui, *How to Craft a Strong WTO Deal on Fishing Subsidies*, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (Nov. 19, 2020) ("[SDT] must be devised as a tool for enabling sustainable fisheries development, with incremental incorporation of developing countries, least developed countries . . . and small island development states into the disciplines."), https://unctad.org/news/how-craft-strong-wto-deal-fishing-subsidies.

183. *See* TIPPING & IRSCHLINGER, *supra* note 53, at 15.

184. As of July 2021, reports indicate that the issue of blanket exceptions for all developing countries remains one of the key sticking points between U.S. and Indian negotiators. *See Tai Criticizes WTO Draft Fisheries Text as DG Looks for Renewed Mandate*, WORLD TRADE ONLINE (Jul. 15, 2021), https://insidetrade.com/daily-news/tai-criticizes-wto-draft-fisheries-text-dg-looks-renewed-mandate; *see also Pew: WTO Must Seal More Ambitious Deal on Fisheries, and Soon*, WORLD TRADE ONLINE (Jul. 16, 2021), https://insidetrade.com/trade/pew-wto-must-seal-more-ambitious-deal-fisheries-and-soon.

agreement ineffective. Second, other developing states cannot receive blanket exceptions for fishing subsidies. Rather, all carve-outs must be tailored to ensure they protect legitimate, small-scale fishing, and the WTO should review these exceptions on a periodic basis. For the division between developed and developing, exploiter and victim, sounds clearer in rhetoric than reality. For instance, although Chinese-flagged fishing fleets have illegally crossed into Ecuador's EEZ and plundered a UNESCO-protected habitat, Quito is not wholly innocent when it comes to unsustainable and IUU fishing.

Over the past two years, 136 Ecuadorean fishing vessels entered the protected Galapagos Reserve. Others illegally fish in protected Colombian and Costa Rican waters, and fishermen employ indiscriminate purse seine nets, long lines, and fish aggregating devices that yield high levels of by-catch.[185] Ecuador's fishing industry consists of 115 large industrial ships and 400 semi-industrial vessels, and the country has the largest tuna fleet in the Eastern Pacific.[186] While fuel subsidies indirectly support this activity, a 2009 study revealed that the government only apportioned a small portion of direct fishing subsidies to the industrial fleet.[187] The overwhelming majority of direct subsidies supported small-scale, artisanal fishermen.[188] But in the aggregate, these small-scale fishermen and the subsidies they receive contribute to unsustainable IUU fishing.[189] Indeed, in 2019, one NGO filmed Ecuadorians aboard a small fishing vessel beheading a shark and preparing to illegally harvest its fins. The same organization ultimately provided information to local authorities that led to the seizure of illegal 18,673 shark fins.[190] In recent years, the United States, European Union, and international organizations have called on Ecuador to crack down on IUU fishing. Quito is attempting to do so, but the case demonstrates how easy value judgments can often belie more complex

185. *Piscine Plunder: Ecuador, a Victim of Illegal Fishing, is also a Culprit*, *supra* note 166.

186. *Id.*

187. *See* IVAN PRIETO BOWEN, THE IMPACT OF FISHERIES SUBSIDIES ON TUNA SUSTAINABILITY AND TRADE IN ECUADOR (UNEP, 2009), https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.186&rep=rep1&type=pdf (finding only $2 million in support to the industrial fleet, but $62 million in fuel subsidies and infrastructure development expressly for artisanal fisheries).

188. *Id.*

189. *See* REDDING & MACFAYDEN, *supra* note 161, at 5 ("While large vessels receiving subsidies may individually have a greater negative impact on fish stocks, large numbers of small-scale vessels could also have detrimental impacts,") (citing Schubauer et al., *supra* note 33).

190. *Sea Shepherd Galapagos Sting Results in Seizure of Over 18,000 Shark Fins*, SEA SHEPHERD NEWS, https://www.seashepherd.org.uk/news-and-commentary/news/sea-shepherd-galapagos-sting-results-in-seizure-of-over-18-000-shark-fins.html.

realities. Thus, while a WTO agreement must provide protection for LDC fishing subsidies, it needs to adopt a more nuanced, case-specific approach for developing countries that can be periodically reviewed. Proposals that call on total exemptions for developing states whose fleets account for less than 2% of global capture or do not engage in distant-water fishing would fail to address the harms identified in *Tuna-Dolphin*, *U.S.-Shrimp*, and *U.S.-Tuna II*.[191] The application of SDT to developing countries requires greater granularity.

These four issues do not constitute an exhaustive list of outstanding disagreements among member states. Thorny negotiations remain on a variety of complicated topics. For instance, in November 2020, the Philippines introduced a proposal regarding the dispute settlement process and unrecognized maritime claims. As the South China Sea contains multiple competing claims, such issues are inextricably linked to fisheries management and dispute resolution. Similarly, members have introduced myriad proposals for quantitative restrictions or caps on subsidies. Negotiators must navigate these suggestions, and their incorporation may engender a more enduring, effective agreement. However, such proposals lie beyond the scope of this Note. This discussion has focused on the process for assessing fish stocks, the authority to make IUU fishing designations, the review standard for dispute resolution, and the SDT approach because they constitute the *sine qua non* of a successful agreement.

VI. Conclusion

Over the past thirty years, global concern over IUU and unsustainable fishing has steadily risen. International organizations have crafted agreements that crystallize norms and establish best practices, and some states have enacted environmental regulations to address unsustainable fishing practices on the high seas. Such efforts should be applauded and must continue. But they are insufficient. Only a comprehensive effort to reduce fishing subsidies can effectively mitigate the harms of IUU and unsustainable fishing. The WTO is best positioned to achieve this goal, and negotiators have achieved incremental progress. However, a successful agreement must be able to identify gross violations, objectively assess unsustainable stocks, include the largest subsidizing states, and narrowly cabin the dispute resolution process. Compromise is an integral part of negotiation, but if the final agreement fails to address these critical issues, it will be dead in the water.

191. For a discussion of proposed exemptions based on percent of global capture, see *Tipping & Irschlinger*, *supra* note 53, at 16. Recent research suggests that a deal with too many SDT exceptions would only restore 1.59% of marine biomass by 2050. *Pew*, *supra* note 184.