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Stuck in the Net: Promoting Global Shark and Ray Populations Through National Sustainability Import Laws

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STUCK IN THE NET: PROMOTING GLOBAL SHARK AND RAY POPULATIONS THROUGH NATIONAL SUSTAINABILITY IMPORT LAWS

KELSEY PEDEN*

ABSTRACT

Shark and ray populations are crucial to a healthy oceanic ecosystem, but regulation of harm is difficult to manage for these highly migratory species. The massive decline of shark and ray populations has triggered an international response, including collaborative protections against the overharvest and sale of endangered groups. However, recent studies show that protections must extend past direct harvest because an estimated thirty to fifty percent of population kills occur through “accidental by-catch” in the fishing process. The United States has attempted to fill some of the missing protections for sharks in national waters, as well as to implement bans against the import of endangered shark and ray species. While U.S. national trade laws put pressure on foreign nations to end the over harvest of shark and ray species, they do not solve the issues of by-catch or traceability that haunt the supply chain. This Article examines international regulations protecting shark populations as well as U.S. import laws on highly migratory animals, ultimately theorizing that trade regulations promoting sustainably harvested sea food are the most promising path to protect shark and ray species.

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INTRODUCTION

In January 2021, the scientific world sounded the alarm after a series of studies reported a global decline in shark and ray populations, leading to predicted extinction.¹ The study found “the global abundance of oceanic sharks and rays has declined by 71% owing to an 18-fold increase in relative fishing pressures,” tracked over fifty years through Aichi Biodiversity Targets and the Sustainable Development Goals.² Ultimately, it called for “strict prohibitions and precautionary science-based catch limits” to avoid the extinction of shark and ray populations worldwide.³

Concern about the global shark and ray populations is not new—for years, scientists have called for reform to environmental laws and fishing regulations to better protect these necessary oceanic predators.⁴ Shark and ray populations are critical to oceanic ecosystem survival.⁵ As top-level predators, these animals maintain a balance among species and encourage ocean health.⁶ Sharks, rays, and skates (a smaller relative of rays and sharks), make up a group of cartilaginous fish referred to by the scientific community as “elasmobranchs.”⁷ This population offers one of

¹ See Nathan Pacoureau et al., *Half a Century of Global Decline in Oceanic Sharks and Rays*, 589 NATURE 567, 567 (2021).

² *Id.*

³ *Id.*

⁴ See, e.g., *Sharks and Rays*, PROJECTAWARE, <https://www.padi.com/aware/sharks> [<https://perma.cc/33AD-MEJA>] (last visited Mar. 11, 2022) (aiming to inform the general public about the ecological need for sharks and rays to maintain a healthy ecosystem).

⁵ *Id.*

⁶ Elizabeth Murdock, *More Vulnerable Than Vicious, Sharks Need CITES Protection*, NAT'L RES. DEF. COUNCIL (Aug. 9, 2019), <https://www.nrdc.org/experts/elizabeth-murdock/more-vulnerable-vicious-sharks-need-cites-protection> [<https://perma.cc/L73A-86QL>].

⁷ Paolo Momigliano et al., *Predators in Danger: Shark Conservation and Management in*

the “most diverse vertebrate groups on the planet,” including “over 1,000 species of sharks, rays, and chimaeras.”⁸ However, due to their long reproduction timeline and low rate of offspring, sharks and rays are especially vulnerable to harm from over fishing, human exploitation, and environmental degradation.⁹ The demand for sharks and rays as “economically valuable resources” has continued to grow over the decades, creating a conflict between market forces and the drive for environmental preservation.¹⁰ More recently, movements to protect sharks and rays have hit the mainstream media, as individual campaigns to end shark finning, “shark fin soup”, ray dishes, and shark hunting festivals have spread.¹¹

Overfishing and the harm to these populations as an accidental by-catch of fishing are two of the main causes of population decline.¹² As a 2021 Nature study found, while:

Sharks and rays can be affected by many factors such as climate crisis, oil and gas drilling, and ship strikes . . . the main cause of decline has been by far overfishing. Proof of this is the twofold increase in fishing with longlines and seine nets, the gears used to catch oceanic sharks, during the past half-century, and the rapidly rising catch rates.¹³

Part of this is intentional catch; demand for sharks and rays have increased over the previous decades as values for their “meet, fins, teeth,

Australia, New Zealand and Their Neighbours, in AUSTRAL ARK: THE STATE OF WILDLIFE IN AUSTRALIA AND NEW ZEALAND 467, 474 fig.3 (Adam Stow et al. eds., 2015).

⁸ Murdock, *supra* note 6.

⁹ *Id.*

¹⁰ See Lindsay Davidson et al., *Why Have Global Shark and Ray Landings Declined: Improved Management or Overfishing?*, 17 FISH & FISHERIES 438, 438 (2016).

¹¹ Rebecca Tatum, *The Ecology and Controversy of Shark-Fin Soup*, 43 MCGEORGE L. REV. 667, 667 (2012); see also Marian Liu, *Toxic Delicacy of Shark Fin Causes Ecosystem Chaos, and Consumers Are Pushing Back*, CNN (Feb. 4, 2019, 9:55 PM), <https://www.cnn.com/2019/02/04/health/shark-fin-chinese-new-year-hong-kong-intl/index.html> [<https://perma.cc/S57J-LRD6>]; Alan Yu & Paige Pflieger, *Shark Fin Trade Faces Troubled Waters as Global Pressure Mounts*, THE SALT (Nov. 7, 2017, 5:15 PM), <https://www.npr.org/sections/thesalt/2017/11/07/561900736/shark-fin-trade-faces-troubled-waters-as-global-pressure-mounts> [<https://perma.cc/T9J3-SV6D>].

¹² *Shark Threats*, SEETHEWILD (Jan. 27, 2017), <https://seethewild.org/shark-threats/> [<https://perma.cc/V96G-MVFT>].

¹³ Fermin Koop, *Overfishing Is Causing Shark and Ray Populations to Plummet*, ZME SCIENCE (Jan. 29, 2021), <https://www.zmescience.com/science/overfishing-shark-ray-decline-29012021/#:~:text=Overfishing%20is%20causing%20shark%20and%20ray%20populations%20to,Environment%2C%20News%2C%20Science%20Reading%20Time%3A%204%20mins%20read> [<https://perma.cc/6Z26-4K33>].

oil, and skin” increase.¹⁴ For sharks specifically, studies show an increased demand for shark fin has led to between 6.4% and 7.9% “of sharks of all species . . . killed annually, with little chance to replenish the population.”¹⁵ As demand increases, “the tragedy of the commons”¹⁶ comes into play. Without regulation, the drive to fill demand and to collect resources before another country does, is depleting the shark and ray populations despite environmentalists’ efforts to prevent this change.¹⁷

Part of shark and ray populations decline is attributable to accidental by-catch.¹⁸ By-catch is defined as “the unwanted fish and other marine creatures caught during commercial fishing for a different species.”¹⁹ Use of outdated or non-sustainable fishing gear, such as gillnets, trawlers, or long lines, often inadvertently catch sharks and rays who die because they are unable to escape the nets.²⁰ Each year, fishers catch an estimated fifty million sharks on lines set for different fish, unintentionally killing a critical population without any economic gain.²¹ A study commissioned by the Food and Agriculture Organization of the United Nations (“FAO”) in the 1990s estimated “nearly a third of all reported shark catches were landings from bycatch fisheries,”²² and a recent study put it higher,

¹⁴ Murdock, *supra* note 6.

¹⁵ Koop, *supra* note 13.

¹⁶ This concept highlights the conflict between individual and collective rational use of natural resources. The idea, simplified, is resources left in the community pot will be mass consumed out of fear of another individual using said resource before them, even at the sake of community good. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243, 1244 (1968).

¹⁷ Andrew Nowell Porter, *Unraveling the Ocean from the Apex Down: The Role of the United States in Overcoming Obstacles to an International Shark Finning Moratorium*, 35 U.C. DAVIS ENV'T L. & POL'Y J. 231, 231 (2012).

¹⁸ See Shelby Oliver et al., *Global Patterns in the Bycatch of Sharks and Rays*, 54 MARINE POL'Y 86, 86 (2015); Malcom Francis et al., *Pelagic Shark Bycatch in New Zealand Tuna Longline Fishery*, 52 MARINE & FRESHWATER RSCH. 165, 165, 173 (2001); Lawrence R. Beerkircher et al., *Characteristics of Shark Bycatch Observed on Pelagic Longlines Off the Southeastern United States, 1992–2000*, 64 MARINE FISHERIES R. 40, 40 (2002); Derek Dapp et al., *Impact of Costa Rican Longline Fishery on Its Bycatch of Sharks, Stingrays, Bony Fish and Olive Ridley Turtles (*Lepidochelys olivacea*)*, 448 J. EXPERIMENTAL MARINE BIOLOGY & ECOLOGY 228, 228–29 (2013).

¹⁹ SHARON DEEM ET AL., INTRODUCTION TO ONE HEALTH: AN INTERDISCIPLINARY APPROACH TO PLANETARY HEALTH 258 (2018).

²⁰ See Oliver et al., *supra* note 18; Jonathon A. Gurish, *Pressures to Reduce Bycatch on the High Seas: An Emerging International Norm*, 5 TUL. ENV'T L.J. 473, 475–78 (1992).

²¹ Julie Cappiello, *The Fishing Industry Is Literally Killing Millions of Sharks. This is How . . .*, MERCY FOR ANIMALS (Apr. 19, 2017), <https://mercyforanimals.org/blog/if-you-eat-meat-youre-killing-sharks-heres/> [<https://perma.cc/KZ2S-LYPR>].

²² AURELIE COSANDEY-GODIN & ALEXIA MOORGAN, THE PEW ENVIRONMENT GROUP, FISHERIES BYCATCH OF SHARKS: OPTIONS FOR MITIGATION 3 (2011).

at nearly fifty percent.²³ Simply put, elasmobranch populations are on the decline because of targeted *and* accidental catch, both of which are allowed to occur because of a lack of proper regulation.

International resistance to conservation has prohibited more conservation-friendly markets, such as the United States, from fully enacting desired protections on migratory species. Profit incentives make international co-operation incredibly difficult to achieve.²⁴ Instead, the United States has introduced national trade laws, limiting the importation of non-sustainable seafood.²⁵ Yet, gaps still remain, in both international and national laws, which do not ban sales, regulate by-catch, or promote transparency in the supply chain.²⁶ This Article analyzes the current protections for elasmobranchs under international law and national trade laws, ultimately theorizing that stronger national import protections are likely the most effective means of reducing shark and ray overfishing and by-catch.

I. INTERNATIONAL AGREEMENTS AND CO-OPERATION PROTECTING SHARKS AND RAYS

While elasmobranch populations have declined over the previous fifty years, international co-operation resulted in widely enacted protections for highly migratory species, such as sharks and rays.²⁷ Nations have always been interested in controlling their territorial waters.²⁸ As knowledge of ecosystem dependence and ocean resource drain grew; however, international bodies were formed to protect not only coastal waters, but also to share an expanded interest in protecting the high seas.²⁹ The

²³ *Id.*; RAMÓN BONFIL, FOOD & AGRIC. ORG. OF THE U.N., OVERVIEW OF WORLD ELASMOBRANCH FISHERIES 4 (1994); Stevens et al., *The Effects of Fishing on Sharks, Rays, and Chimaeras (Chondrichthyans), and the Implications for Marine Ecosystems*, 57 ICES J. MARINE SCI. 476, 490 (2000).

²⁴ See generally Leo R. Douglas & Kelvin Alie, *High-Value Natural Resources: Linking Wildlife Conservation to International Conflict, Insecurity, and Development Concerns*, 171 BIOLOGICAL CONSERVATION 270, 272, 275 (2014); GRETCHEN DAILY & KATHERINE ELLISON, THE NEW ECONOMY OF NATURE: THE QUEST TO MAKE CONSERVATION PROFITABLE 25 (2002).

²⁵ See generally Jordan K. Snyder, *Shark-NATO: A Comparative Analysis of International Shark Conservation to Nationalized Shark Conservation*, 47 TEX. ENV'T L.J. 217 (2017).

²⁶ See *infra* Sections I.A–C.

²⁷ See Pacoureaux et al., *supra* note 1.

²⁸ *Ocean Governance: Who Owns the Ocean?*, THE GREEN POL. FOUND. (June 2, 2017), <https://www.boell.de/en/2017/05/30/ocean-governance-who-owns-ocean> [<https://perma.cc/F3KD-JVZP>].

²⁹ U.N. Convention on the Law of the Sea, arts. 77–78, 87–89, *opened for signature* Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

United Nations Convention on the Law of the Sea (“UNCLOS”) provides a broad framework for ocean conservation.³⁰ Enacted in 1994, UNCLOS attempts to fill the gaps in oceanic protections not regulated through the International Maritime Organization in the FAO.³¹ This, in turn, promoted the establishment of the United Nations Fish Stocks Agreement, Global Regional Fishery Management Organizations (“RMFO”), and sectoral bodies to regulate harvest.³² Trade regulation falls to the United Nations Convention on International Trade in Endangered Species of Wild Fauna and Flora (“CITES”) which entered into force in the 1970s.³³ Together, these conventions form a body of international conservation laws which, in theory, should protect species like rays and sharks from human created population decline.³⁴ In practice, however, the vague nature of these conventions, and their lack of enforcement mechanisms, have left the seas vulnerable to over exploitation.

This section examines some of these international conventions, the protections offered to shark and ray populations, and the gaps in international coverage that continue to allow overharvest and by-catch. These agreements highlight the difficulties in international conservation efforts for highly migratory species, indicating a progressive use of national laws may be the best way forward.

A. *Establishing a Framework: The United Nations Convention on the Law of the Sea*

When UNCLOS was ratified in 1994, it was the most encompassing law of the sea treaty to have been enacted.³⁵ Currently, UNCLOS is signed

³⁰ Stephen C. Nemeth et al., *Ruling the Sea: Managing Maritime Conflicts through UNCLOS and Exclusive Economic Zones*, 40 INT’L INTERACTIONS 711, 736 (2014); see generally N. Hassan Wirajuda, *UNCLOS 35 Years Later: We Are Still at Sea*, in THE MARINE ENVIRONMENT AND UNITED NATIONS SUSTAINABLE DEVELOPMENT (Myron H. Nordquist, John Norton Moore, Ronán Long eds., 2019) (discussing the history of UNCLOS, its formation, and its varied successes).

³¹ See generally UNCLOS, *supra* note 29.

³² *Id.* art. 61(2) (stating “[a]s appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall co-operate to this end”); see also *id.* art. 61(5); G.A. RES.48/194, Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks (Dec. 21, 1993) [hereinafter Fish Stocks].

³³ U.N. Convention on International Trade in Endangered Species of Wild Fauna and Flora, *opened for signature* Mar. 3, 1973, 993 U.N.T.S. 243.

³⁴ Nancy K. Daves & Marta F. Nammack, *US and International Mechanisms for Protecting and Managing Shark Resources*, 39 FISHERIES RES. 223, 227–28 (1998); Erika J. Techera & Natalie Klein, *Fragmented Governance: Reconciling Legal Strategies for Shark Conservation and Management*, 35 MARINE POL’Y 73, 75 (2011).

³⁵ UNCLOS, *supra* note 29.

by 167 nations and the European Union.³⁶ While the United States helped create and define the majority of the principals codified in UNCLOS, it is not a signatory.³⁷ UNCLOS's goals are to create an international standard for ocean use, including guidelines for conservation, businesses, and consumption of natural resources.³⁸ This is done, in part, by establishing uniform "exclusive economic zones" ("EEZ") which give nations sole exploitation rights within 230 miles from their "baseline" land.³⁹ Conservation within EEZs are managed under Article 62, which requires coastal states "ensure through proper conservation and management measures that the maintenance of the living resources in the EEZ is not endangered by over-exploitation" while also promoting "the objective of optimum utilization."⁴⁰ This gives coastal states the power to set catch limits and to regulate the use of EEZ resources.⁴¹ For resources that fall outside these zones in the "high seas," or fall into multiple EEZs, UNCLOS highlights the importance of international conservation and co-operation.⁴² This is outlined in Articles 63(2) through 67, requiring coastal states to agree on measures, and coordinate, to ensure conservation and development of highly migratory species that cross EEZs, and promote "the objective of optimum utilization."⁴³

In additional to UNCLOS's language directed to conservation for highly migratory species, the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December, 1982, relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks ("Fish Stocks Agreement") also protects elasmobranchs.⁴⁴ The Fish Stocks Agreement was formed after UNCLOS member states found that the "provisions of . . . UNCLOS [], especially those relating to high seas fishing, owing to their general character, are not sufficient to provide a solution to this situation."⁴⁵ The objective of this subset agreement is "to ensure the long-term

³⁶ *See id.*

³⁷ *See generally* Leland Holbrook Smith, *To Accede or Not to Accede: An Analysis of the Current US Position Related to the United Nations Law of the Sea*, 83 MARINE POL'Y 184, 184 (2017) (discussing U.S. history of UNCLOS and why it is not a signatory).

³⁸ UNCLOS, *supra* note 29; Lakshman Guruswamy, *The Promise of the United Nations Convention on the Law of the Sea (UNCLOS): Justice in Trade and Environment Disputes*, 25 ECOLOGY L.Q. 189, 209 (1998).

³⁹ UNCLOS, *supra* note 29, at arts. 56, 76.

⁴⁰ *Id.* arts. 61–62.

⁴¹ *Id.* art. 62.

⁴² *Id.* arts. 63, 87–89.

⁴³ *Id.* arts. 63–67.

⁴⁴ *See* Fish Stocks, *supra* note 32, at art. 1.

⁴⁵ *Id.* at Introduction.

conservation and sustainable use of straddling fish stocks and highly migratory fish stocks.”⁴⁶ This is done through a precautionary approach, encouraging nations not only to share data on populations, but also to monitor and control overfishing in order to guarantee the continued existence of resources.⁴⁷

UNCLOS and the Fish Stocks Agreement set out international standards for conservation, including specific language for highly migratory species that cover many species of sharks and rays.⁴⁸ However, while UNCLOS has achieved some noticeable wins such as reducing coastal zone boarder conflicts, its call for international co-operation for species protections seem to go unheard.⁴⁹ This may be a flaw of the international convention itself; the language is broad, encouraging “conservation and sustainable use” without clear terms or goals.⁵⁰ Moreover, conservation pacts, like UNCLOS, rely on voluntary compliance and have minimal enforcement mechanisms, which monitor, regulate, and penalize non-compliant behavior.⁵¹ Even as nations have signed onto UNCLOS and the Fish Stocks Agreement, overfishing, unsustainable practices, and use of unsafe fishing gear—all of which are responsible for by-catch—continue.⁵²

B. *Divesting Control: Global RMFO's and Sectoral Agreements*

After UNCLOS, the international community attempted to promote targeted conservation efforts through the creation of RMFOs and Sectoral Agreements.⁵³ These are promoted in Article 8 of the Fish Stocks Agreement, which requires that states cooperate “either directly or through appropriate subregional or regional fisheries management organizations

⁴⁶ *Id.* at 2.

⁴⁷ *Id.* art. 5.

⁴⁸ *Id.*; see generally UNCLOS, *supra* note 29, at art. 64, Annex 1; Howard S. Schiffman, *UNCLOS and Marine Wildlife Disputes: Big Splash or Barely a Ripple*, 4 J. INT'L WILDLIFE L. & POL'Y 257, 271 (2001) (stating “noteworthy features including the prescription of provisional measures and the application of the precautionary approach”).

⁴⁹ UNCLOS, *supra* note 29, at art. 59.

⁵⁰ Miguel De Serpa Soares, *Achieving SDG 14: The Role of the United Nations Convention on the Law of the Sea*, U.N. CHRON., <https://www.un.org/en/chronicle/article/achieving-sdg-14-role-united-nations-convention-law-sea> [<https://perma.cc/FR9P-A8VK>] (last visited Mar. 11, 2022).

⁵¹ UNCLOS, *supra* note 29, at arts. 117–18; Wirajuda, *supra* note 30, at 11.

⁵² Pacoureau et al., *supra* note 1, at 571.

⁵³ UNCLOS, *supra* note 29, at art. 118; see Stijn van Osch, *Save Our Sharks: Using International Fisheries Law within Regional Fisheries Management Organizations to Improve Shark Conservation*, 33 MICH. J. INT'L L. 383, 404 (2012).

or arrangements.”⁵⁴ RMFOs rely on intergovernmental co-operation on a localized level to collect data, implement regulations, and monitor ocean resource changes.⁵⁵ Collectively, RMFO members have “agreed to cooperate—through their respective agreements—on precautionary, science-based fisheries management within their Convention Areas to ensure fish stock sustainability and ecosystem health.”⁵⁶ RMFOs currently exist in the North Atlantic Ocean, the Southeast Atlantic Ocean, the Southern Ocean, the South Pacific Ocean, the Southern Indian Ocean, and in the Mediterranean and Black Seas.⁵⁷ They do not currently exist in the Arctic, Central Atlantic, or Southwest Atlantic regions.⁵⁸

While RMFOs localize governance and allow regions to focus on issues and populations specifically effecting their region, they run into the same issues of global governance seen in UNCLOS; nations with a vested interest in maximizing profits and fishing can prevent conservation for the entire region.⁵⁹ The blue fin tuna,⁶⁰ for example, is a highly migratory species comparable both biologically and economically to elasmobranchs. RMFOs have actively tried to protect the blue fin tuna over the previous decade.⁶¹ The International Commission for the Conservation of Atlantic Tunas (“ICCAT”),⁶² the Inter-American Tropical Tuna Commission

⁵⁴ See *Fish Stocks*, *supra* note 32, at arts. 7–8.

⁵⁵ *Id.*; see generally Ellen Hey, *The Interplay Between Multilateral Environmental and Fisheries Law: A Struggle to Sustainably Regulate Economic Activity—Including a Case Study of the North Sea*, 54 JAPANESE Y.B. INT’L L. 190 (2011).

⁵⁶ *Issue Brief: International Fisheries Manager’s Response to Performance Reviews Insufficient*, PEW (May 1, 2019), <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/05/international-fisheries-managers-response-to-performance-reviews-insufficient> [https://perma.cc/T69C-PTNU].

⁵⁷ *Regional Fisheries Management Organizations and Deep-Sea Fisheries*, FOOD & AGRIC. ORG. U.N., <http://www.fao.org/fishery/topic/166304/en> [https://perma.cc/U22E-UDQM] (last visited Mar. 11, 2022).

⁵⁸ *Id.*

⁵⁹ See Porter, *supra* note 17, at 248–49; SAMUEL BARKIN & ELIZABETH DESOMBRE, CENTER FOR GOVERNANCE & SUSTAINABILITY, UNIV. MASS. BOS., BRIEF 8: INTERNATIONAL FISHERIES GOVERNANCE THAT WORKS: THE CASE FOR A GLOBAL FISHERIES ORGANIZATION 2 (2013).

⁶⁰ The Bluefin Tuna will come up often throughout this Article, in part because its story—as well as the United States’ reaction to tuna production and by-catch—highlight the best path forward for elasmobranch protection.

⁶¹ Dale S. Kolody et al., *Modelling Growth in Tuna RFMO Stock Assessments: Current Approaches and Challenges*, 180 FISHERIES RSCH. 177, 177–78 (2016).

⁶² Members include Albania, Algeria, Angola, Barbados, Belize, Brazil, Canada, Cape Verde, China, Côte d’Ivoire, Croatia, Egypt, Equatorial Guinea, European Community, France (St. Pierre & Miquelon), Gabon, Ghana, Guatemala, Guinea, Honduras, Iceland, Japan, South Korea, Libya, Mauritania, Mexico, Morocco, Namibia, Nicaragua, Nigeria, Norway, Panama,

("IATTC"),⁶³ and the Western and Central Pacific Fisheries Commission ("WCPFC")⁶⁴ were all formed specifically to regulate tuna catch and to guarantee sustainable fishing of the species.⁶⁵ Yet, the profitability of tuna is one reason RMFOs have failed to protect its population numbers.⁶⁶ While these bodies have set catch limits, those limits do not encourage population growth.⁶⁷ They still allow for overfishing, giving nations larger tuna catch numbers than feasible, and allowing overfishing in the name of profit.⁶⁸ Moreover, protective measures including by-catch regulations, traceability of supply chain, and enforceability mechanisms have not been a priority.⁶⁹

Philippines, Russia, Senegal, Sierra Leone, South Africa, St. Tome and Principe, St. Vincent and the Grenadines, Syria, Trinidad and Tobago, Tunisia, Turkey, United Kingdom (Overseas Territories), United States, Uruguay, Vanuatu, and Venezuela. *See International Commission for the Conservation of Atlantic Tunas*, INT'L WATERS GOVERNANCE, <http://www.internationalwatersgovernance.com/international-commission-for-the-conservation-of-atlantic-tunas-iccat.html> [<https://perma.cc/YM7A-2L78>] (last visited Mar. 11, 2022).

⁶³ "Under this provision Panama adhered in 1953, Ecuador in 1961, Mexico in 1964, Canada in 1968, Japan in 1970, France and Nicaragua in 1973, Vanuatu in 1990, Venezuela in 1992, El Salvador in 1997, and Guatemala in 2000. Canada withdrew from the Commission in 1984." William Bayliff, INTER-AMERICAN TROPICAL TUNA COMMISSION, SPECIAL REPORT 13: ORGANIZATIONS, FUNCTIONS AND ACHIEVEMENTS OF THE INTER-AMERICAN TROPICAL TUNA COMMISSION, 1 (2001).

⁶⁴ Parties are Australia, China, Canada, the Cook Islands, the European Community, the Federated States of Micronesia, Fiji, France, Indonesia, Japan, Kiribati, South Korea, the Republic of the Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, the Solomon Islands, Chinese Taipei (as a fishing entity), Tonga, Tuvalu, the United States, and Vanuatu. In addition, American Samoa, the Commonwealth of the Northern Mariana Islands, French Polynesia, Guam, New Caledonia, Tokelau, and Wallis and Fatuna are Participating Territories. Belize, Indonesia, Senegal, Mexico, El Salvador, Ecuador, and Vietnam are Cooperating Non-Members. *About WCPFC*, W. & CENT. PAC. FISHERIES COMM'N (Feb. 4, 2022), <https://www.wcpfc.int/about-wcpfc> [<https://perma.cc/Q6FJ-DDFL>].

⁶⁵ *International and Regional Fisheries Management Organizations*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Aug. 8, 2021), <https://www.fisheries.noaa.gov/international-affairs/international-and-regional-fisheries-management-organizations> [<https://perma.cc/U32A-LT9G>].

⁶⁶ Grantly Galland, *To Slow Decline of Western Atlantic Bluefin Tuna, Fishery Managers Must Lower Quota*, PEW (Oct. 29, 2020), <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/10/29/to-slow-decline-of-western-atlantic-bluefin-tuna-fishery-managers-must-lower-quota> [<https://perma.cc/6973-PWSK>]; Chris Chase, *NGOs Critical of ICCAT Rollover of Western Atlantic Bluefin Quota*, SEAFOOD SOURCE (Jan. 28, 2020), <https://www.seafoodsource.com/news/environment-sustainability/iccat-roll-over-of-western-atlantic-bluefin-quota-has-ngos-crying-foul> [<https://perma.cc/26BU-HD26>].

⁶⁷ *See* Galland, *supra* note 66.

⁶⁸ Howard S. Schiffman, *The Southern Bluefin Tuna case: ITLOS Hears Its First Fishery Dispute*, 2 J. INT'L WILDLIFE L. & POL'Y 318, 319 (1999).

⁶⁹ *See* van Osch, *supra* note 53, at 388–90.

This type of diplomatic divide that prevents conservation is also seen in the relatively successful International Convention for the Regulation of Whaling (“ICW”).⁷⁰ The ICW, formed after World War II, attempts to reduce whale hunting and restore endangered populations by setting catch quotas and gear limits, and “adopt[ing] regulations with respect to the conservation and utilization of whale resources.”⁷¹ In 1982, the ICW passed an amendment which outlined that “the catch limits for the killing for commercial purposes of whales from all stocks . . . shall be zero.”⁷² However, in the name of international diplomacy and co-operation, nations can object to this amendment upon entering the convention, effectively allowing nations to avoid the ban either by objection or scientific exception.⁷³ While the successes and failures of the ICW are beyond the scope of this Article, the conflict between anti-whaling nations and pro-whaling nations highlights how national interest can prevent widespread international conservation efforts.⁷⁴ Even with the complete ban, a reported 1,128 whales were killed by ten member nations in 2019,⁷⁵ with some researchers estimating an unreported higher count throughout history.⁷⁶

⁷⁰ International Convention for the Regulation of Whaling, Dec. 2, 1946, 62 Stat. 1716, 161 U.N.T.S. 72 [hereinafter ICW].

⁷¹ *Id.* art. V(1).

⁷² Schedule to the ICW, As Amended by the Commission at the 67th Meeting, Sept. 2018, at 10(d); *see also* INTERNATIONAL WHALING COMMISSION, ANNUAL REPORT OF THE INTERNATIONAL WHALING COMMISSION 5 (2006); Michael Bowman, *Normalizing the International Convention for the Regulation of Whaling*, 29 MICH. J. INT’L L. 293, 294 (2008).

⁷³ *See* Australia v. Japan: New Zealand Intervening, International Court of Justice (Order of Feb. 6, 2013).

⁷⁴ Tara Jordan, *Revising the International Convention on the Regulation of Whaling: A Proposal to End the Stalemate Within the International Whaling Commission*, 29 WIS. INT’L L.J. 833, 836 (2012); *see also* Monder Khoury, *Whaling in Circles: The Makahs, the International Whaling Commission, and Aboriginal Subsistence Whaling*, 67 HASTINGS L.J. 293, 295 (2015) (for an approach to whaling regulations for indigenous peoples).

⁷⁵ *See* The International Whaling Commission, Total Catches: Data Set (Rows-2019), <https://iwc.int/total-catches> [<https://perma.cc/G3PA-SRZH>] (last visited Mar. 11, 2022).

⁷⁶ *See* Hope M. Babcock, *Why Changing Norms is a More Just Solution to the Failed International Regulatory Regime to Protect Whales than a Trading Program in Whale Shares*, 32 STAN. ENV’T L.J. 3, 14 (2013) (stating, for example that in the years of the Soviet Union, numbers were drastically underreported: “The Soviet Union was the most egregious violator: their whaling fleets between 1948 and 1973 ‘killed a vast number of the world’s ‘ostensibly protected whale populations’” and then under-reported to the IWC the number of whales killed. . . . ‘[T]he USSR officially reported killing only 2,710 humpback whales to the IWC rather than the 48,477 its industry actually killed’ . . . ‘[T]he USSR’s false reporting was so drastic and pervasive that some experts believe it accounts for the persistent inaccuracy of the IWC Scientific Committee’s forecasts of whale populations, on which the catch limits were based.’”) (internal citations omitted).

RMFOs and sectoral agreements, like UNCLOS, establish international norms and processes, but do not offer a meaningful path for conservation prioritizing nations. Elasmobranchs are specifically protected under RMFOs, but no international species-specific convention—like the whaling convention—exists.⁷⁷ Even if one was created, the role of international co-operation and national prioritization of profits leaves gaps allowing for overfishing, by-catch, and lack of regulation or enforcement.⁷⁸ Instead, shark and ray populations are largely protected under international trade law.⁷⁹ The next section examines the international trade protections for endangered species, which aim to strengthen conservation by minimizing profit potential.

C. *Using Trade Laws: The United Nations Convention on International Trade in Endangered Flora and Fauna*

The international community has used, with limited success, trade regulations to promote sustainability. These regulations, which limit market interests and profits instead of attempting to balance those interests with conservation, are the most promising way forward. The source of this regulatory scheme is CITES.⁸⁰ CITES is a global compact which regulates international and domestic trade of endangered species of wild animals and plants.⁸¹ The bulk of the convention was created by eighty participating nations during the Washington Conference in 1973.⁸² CITES opened for signature in 1974, and since then 183 parties, including the regional economic block of the European Union,⁸³ have signed onto the convention, making it not only one of the oldest international conventions, but one of the most popular.⁸⁴

The goal of the CITES convention is to end the exploitation of oceanic species.⁸⁵ This is to be done through a standard process, where

⁷⁷ See van Osch, *supra* note 53, at 404–05.

⁷⁸ *Id.* at 388–90.

⁷⁹ *Id.* at 402–05.

⁸⁰ Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 993 U.N.T.S. 243 [hereinafter U.N. CITES].

⁸¹ *Id.*

⁸² *Id.* at 393.

⁸³ Amendment to the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora, Apr. 30, 1983, Senate Treaty Doc. No. 98-10.

⁸⁴ *List of Parties to the Convention*, CITES, <https://cites.org/eng/disc/parties/index.php> [<https://perma.cc/DSZ8-XE4W>] (last visited Mar. 11, 2022).

⁸⁵ U.N. CITES, *supra* note 80.

all international import, export, and reimportation of species covered through CITES are subject to licensing and trade provisions⁸⁶ that also apply to non-member states.⁸⁷ Over 35,000 species of plants and animals are protected under CITES.⁸⁸ CITES protection includes forty-six species of rays and sharks, yet, as discussed below, these are relatively recent additions to the convention.⁸⁹

CITES works through three main processes: the classification of species into appendix groups; the adaptation of the convention into national laws; and, finally, enforcement.⁹⁰ Species are broken into one of three Appendices.⁹¹ The Appendices define the terms for which trade countries must abide, which apply to “the whole, live or dead” species listed.⁹² Appendix I prohibits international commercial trade of listed species, unless there are exceptional circumstances.⁹³ Species on this list are “threatened with extinction,” and considered “the most endangered among CITES-listed animals and plants.”⁹⁴ This list notably includes gorillas, sea turtles, giant pandas, lady slipper orchids, and, recently, giant manta rays.⁹⁵ Exceptions are granted for instances where the “purpose of the import is not commercial in nature,” usually allowing for scientific research.⁹⁶ Parties to this convention must require import, export, and reimport permits to trade any of these species, approved by the “management authority and scientific authority” of the party.⁹⁷

⁸⁶ *Id.*

⁸⁷ Non-member states currently include Korea, Micronesia, Haiti, Kiribati, Nauru, The Marshall Islands, Faroe Islands, Andorra, South Sudan, East Timor, Turkmenistan, Tuvalu, and the U.N. Observed the Holy See. *See* signatories to the U.N. CITES, *supra* note 80.

⁸⁸ U.N. CITES, *supra* note 80, at app. I–III.

⁸⁹ *Id.*; *see infra* notes 115–16 and accompanying text.

⁹⁰ U.N. CITES, *supra* note 80, at arts. II, VI, XVIII.

⁹¹ *Id.* app. I–III.

⁹² U.N. Convention on Int’l Trade in Endangered Species of Wild Flora and Fauna (CITES), Appendices I–III (June 2021), [hereinafter CITES Appendices I–III], <https://cites.org/sites/default/files/eng/app/2021/E-Appendices-2021-06-22.pdf> [<https://perma.cc/5RTE-LAGN>].

⁹³ *Id.*; *see* U.N. CITES, *supra* note 80, at art. II(1).

⁹⁴ *See* U.N. CITES, *supra* note 80, at app. I; *The CITES Appendices*, CITES [hereinafter *The CITES Appendices*], <https://cites.org/eng/app/index.php> [<https://perma.cc/VU59-Y4ZN>] (last visited Mar. 11, 2022).

⁹⁵ *How CITES Works*, U.S. FISH & WILDLIFE SERVS., <https://www.fws.gov/international/cites/how-cites-works.html> [<https://perma.cc/F43J-WL7F>] (last visited Mar. 11, 2022).

⁹⁶ *The CITES Appendices*, *supra* note 94.

⁹⁷ *Id.* In the United States, this is done through the Secretary of the Interior. *See* Kathryn

Appendix II controls trade under specific conditions.⁹⁸ Animals included in this appendix include “species that although currently not threatened with extinction, may become so without trade controls.”⁹⁹ Interestingly, species may be included on this list, not because of its own endangered status, but because they resemble other Appendix I or Appendix II animals (referred to as “look-like species”), and regulation is enforced to effectively control trade of the impacted species.¹⁰⁰ Two similar-looking fish, for example, may both be listed even if one fish is abundant and the other is endangered.¹⁰¹ Appendix II is the most heavily populated CITES appendix, currently listing 34,419 of the roughly 35,000 species.¹⁰² International trade of these species is authorized by import or export certificates, but no permit is required.¹⁰³ The authorization and certification process is similar to that of Appendix I, through the nation’s relevant management and scientific authorities, with the understanding that trade is allowed if it is believed it will “not be detrimental to the survival of the species in the wild.”¹⁰⁴

Finally, Appendix III requires certification of origin to trade, usually at the request of a singular member state.¹⁰⁵ Species on this list are added at the request of a party who believes international co-operation is required to better regulate trade in their own nation.¹⁰⁶ As of 2021, there are twenty-seven animals and one plant species listed in Appendix III, including map turtles, walruses, and cap stag beetles.¹⁰⁷ If granted Appendix III status, importation, exportation, and reimportation of these species requires permits or certificates from national governments.¹⁰⁸

Enforcement of CITES is multifaceted, including promoting of national law review, committee review, and suspended trade and sanctions.¹⁰⁹ While not written into the original text of the convention, the

A. Saterson, *Government Legislation and Regulations in the United States*, in *ENCYCLOPEDIA OF BIODIVERSITY* 712, 714 (Simon A. Levin ed., 2d ed. 2013).

⁹⁸ See U.N. CITES, *supra* note 80, at app. II.

⁹⁹ *Id.*; U.S. FISH & WILDLIFE SERVS., *supra* note 95.

¹⁰⁰ See U.N. CITES, *supra* note 80, at app. II; *The CITES Appendices*, *supra* note 94.

¹⁰¹ See U.N. CITES, *supra* note 80, at App. II, Art. IV.

¹⁰² *Id.*

¹⁰³ See *id.* app. II; *The CITES Appendices*, *supra* note 94.

¹⁰⁴ U.N. CITES, *supra* note 80, at app. II; *The CITES Appendices*, *supra* note 94.

¹⁰⁵ U.N. CITES, *supra* note 80, at app. II–III.

¹⁰⁶ *Id.*

¹⁰⁷ U.S. FISH & WILDLIFE SERVS., *supra* note 95.

¹⁰⁸ *The CITES Appendices*, *supra* note 94.

¹⁰⁹ CITES SECRETARIAT, UNITED NATIONS ENV'T PROGRAMME, CITES COMPLIANCE AND

enforcement language around “collective retorsion” developed through resolutions into a system of suspended trade and sanctions for non-compliance.¹¹⁰ Article XIV.1(a) of the convention allows nations to develop “stricter domestic measures regarding the conditions for trade, taking, possession or transport of specimens of species included in Appendices I, II, and III, or the complete prohibition thereof.”¹¹¹ Applying this language, nations can levy, and are in some ways encouraged to use, unilateral sanctions against nations for non-compliance, as long as it is not done in violation of international law norms.¹¹² International conventions are often criticized for lacking enforcement mechanisms, which CITES offers through a suspend trade system.¹¹³ This is critical for the protection of sharks and rays since CITES not only offers a monitoring process, but also a path to economically induce compliance.¹¹⁴

CITES has not focused on shark and ray populations over the previous years. While overfishing and increased demand seem to be present throughout the previous half decade, the first shark introduced to the CITES appendix did not occur until 2003.¹¹⁵ Since then, although there are over 1,000 species of sharks and rays, only a select few have been listed in Appendices I, II, and III.¹¹⁶ Around the same time, the FAO

ENFORCEMENT REGIME 9 (2012), <https://www.cbd.int/doc/meetings/abs/absem-comp-01/other/absem-comp-01-presentation-cites-en.pdf> [<https://perma.cc/BN6X-8P3Z>].

¹¹⁰ See Peter Sands, *Enforcing CITES: The Rise and Fall of Trade Sanctions*, 22 REV. EUR. CMTY. & INT’L ENV’T L. 251, 251 (2013). Collective retorsion is a method of international enforcement defined as “an unfriendly act made in response to an injurious act done by another state,” which includes sanctions, trade bans, travel bans, and removal of aid. JAN KLABBERS, *INTERNATIONAL LAW* 184 (3rd ed. 2020).

¹¹¹ U.N. CITES, *supra* note 80, at art. XIV(1)(a).

¹¹² *See id.*

¹¹³ The Parties shall take appropriate measures to enforce the provisions of the present Convention and to prohibit trade in specimens in violation thereof. These shall include measures: (a) to penalize trade in, or possession of, such specimens, or both; and (b) to provide for the confiscation or return to the State of export of such specimens.

Id. art. VII.

¹¹⁴ *See generally id.*

¹¹⁵ Snyder, *supra* note 25, at 219–21.

¹¹⁶ U.N. CITES, *supra* note 80, at app. II; *see also* Rebecca Pollack, *Cites COP17 Review*, 23 ANIMAL L. 539, 547 (2017) (“Sharks, specifically basking and whale sharks, were first added to Appendix II in February 2003, because, while sharks were not threatened with extinction, their trade needed to be ‘controlled to avoid utilization incompatible with their survival.’ Since initially adding basking sharks and whale sharks at the 12th Meeting of the Conference of the Parties (CoP12) in 2003, the Parties have added six shark species to Appendix II, for a total of eight, along with all manta rays and sawfish belonging to the Elasmobranchii subclass.”).

drafted, with the encouragement of CITES, an “International Plan of Action for the Conservation and Management of Sharks” (“IPOA-Sharks”),¹¹⁷ which is “a voluntary instrument that applies to all States whose fishermen engage in shark fisheries.”¹¹⁸ This plan “sets out a set of activities which implementing States are expected to carry out, including an assessment of whether a problem exists with respect to sharks, adopting a National Plan of Action for the conservation and management of sharks (“NPOA-SHARKS”), as well as procedures for national reviews and reporting requirements.”¹¹⁹ Actions taken, however, are non-binding and have been criticized as ineffective by CITES parties.¹²⁰

Since 2000, CITES has adopted resolutions at every conference, calling for greater protection of elasmobranchs.¹²¹ In 2002, Resolution 12.6 called for “species-specific recommendations on improving the conservation status of sharks and the regulation of international trade in these species.”¹²² In 2004, the same resolution found and reported “[n]ot much evidence of improved shark fishery management,” even with double the number of parties reporting progress towards IPOA-Sharks goals.¹²³ In 2007, “[f]urther extensive program of work on sharks was agreed—for Parties, the Secretariat and Animals Committee,” and in 2010, CITES’ rules on elasmobranchs were updated to “[e]xpress . . . continued concern at unsustainable trade and insufficient progress with IPOA-Shark.”¹²⁴

¹¹⁷ Pollack, *supra* note 116, at 547–48; U.N. CITES, *supra* note 80, at app. II.

¹¹⁸ FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL PLAN OF ACTION FOR THE CONSERVATION AND MANAGEMENT OF SHARKS at iv (1999).

¹¹⁹ The IPOA-SHARKS is a voluntary instrument that applies to all States whose fishermen engage in shark fisheries. The text sets out a set of activities which implementing States are expected to carry out, including an assessment of whether a problem exists with respect to sharks, adopting a National Plan of Action for the conservation and management of sharks (NPOA-SHARKS), as well as procedures for national reviews and reporting requirements. The calendar years by when these actions preferably should have been taken, are indicated.

Id.

¹²⁰ See Mary Lack & Glenn Sant, *The Future of Sharks: A Review of Action and Inaction*, THE PEW ENV'T GRP., Jan. 2011 at 2–3.

¹²¹ *History of CITES Listing of Sharks and Manta Rays*, U.N. CITES, https://cites.org/eng/prog/shark/history_old.php [<https://perma.cc/WDX6-MB88>] (last visited Mar. 11, 2022).

¹²² *Id.*; U.N. Convention on Int'l Trade in Endangered Species of Wild Fauna and Flora (CITES), Conference of the Parties Res. Conf. 12.6 (Rev. CoP18) (2002).

¹²³ See *History of Cites Listing of Sharks and Manta Rays*, CITES, https://cites.org/eng/prog/shark/history_old.php [<https://perma.cc/MU2L-BCJB>] (last visited Mar. 11, 2022).

¹²⁴ See *id.*

In the last decade, the number of species of sharks and rays included in the appendices of CITES has been expanded.¹²⁵ 2013's Conference finally drafted into Appendix II the inclusion of Oceanic Whitetip Sharks, Hammerheads, Porbeagles, and Manta Rays, and also drafted Sawfish into Appendix I.¹²⁶ In 2016, the committee included Thresher Sharks and Silky Sharks in Appendix II,¹²⁷ and added Mako Sharks, Giant Guitarfish, and Wedge Fish in 2019.¹²⁸ This was celebrated as progress by some conservation groups.¹²⁹ However, as of 2021, despite 35,000 species covered by CITES, only 46 out of the nearly 1,000 species of sharks or rays have been protected.¹³⁰ Out of the 46 protected, only the 5 species of sawfish are completely protected under Appendix I.¹³¹

Adding species to U.N. CITES is particularly challenging, as it requires international motivation for conservation to outweigh profit, which can work against the interests of more conservation friendly nations, like the United States.¹³² The Bluefin Tuna, for example, is the perfect example of the limitations of CITES.¹³³ Shortly after Sawfish were introduced to the CITES Appendices, the United States, among others, pushed for the protection of the Atlantic and Mediterranean Bluefin Tuna since

¹²⁵ See U.N. Convention on Int'l Trade in Endangered Species of Flora and Fauna (CITES) CoP15, Props. 15–18 (Mar. 2010).

¹²⁶ CITES, *supra* note 123.

¹²⁷ See U.N., Convention on Int'l Trade in Endangered Species of Wild Flora and Fauna (CITES), *Consideration of Proposals for Amendment of Appendices I and II*, CoP18 Props. 42–45 (Sep.–Oct. 2016) (adding Silky Sharks (Prop. 42), Thresher Sharks (Prop. 43), Devil Rays (Prop. 44), and Ocellate River Stingrays (Prop. 45)).

¹²⁸ U.N., Convention on Int'l Trade in Endangered Species of Wild Flora and Fauna (CITES), *Consideration of Proposals for Amendment of Appendices I and II*, CoP18 Props. 42–44 (May–June 2019) (adding Mako Shark (Prop. 42), Guitarfish (Prop. 43), and Wedge Fish (Prop. 44)).

¹²⁹ See *18 Shark & Ray Species Granted New Global Trade Controls at Wildlife Conference*, SHARKTRUST (Aug. 28, 2019), <https://www.sharktrust.org/News/cites-2019> [https://perma.cc/8GNS-Y8MC].

¹³⁰ See CITES Appendices I–III, *supra* note 92.

¹³¹ See Snyder, *supra* note 25, at 226 (“The United States has been one of the world leaders in shark conservation. For a country as large and politically impactful as the United States, not much international shark conservation could be enacted if it was not an active participant and leader along its own coastlines.”); Taiga Takahashi, *Left Out at Sea: Highly Migratory Fish and the Endangered Species Act*, 99 CAL. L. REV. 179, 226 (2011).

¹³² See Galland, *supra* note 66; Melissa Blue Sky, *Getting on the List: Politics and Procedural Maneuvering in CITES Appendix I and II Decisions for Commercially Exploited Marine and Timber Species*, 10 SUSTAINABLE DEV. L. & POL'Y 35, 40 (2010).

¹³³ See U.N. Convention on Int'l Trade in Endangered Species of Flora and Fauna (CITES) CoP15, Prop. 19 (Mar. 2010) (rejected by majority vote) [hereinafter CITES CoP15, Prop. 19].

overfishing was leading to a rapid population decline.¹³⁴ With one single fish reportedly selling for upwards of \$3,000,000 USD,¹³⁵ inclusion of the tuna species in CITES Appendix I or II would limit the profitability of nations with large tuna industries.¹³⁶ Predictably, this financial interest outweighed conservation motives, and the proposal to include the Bluefin Tuna was denied.¹³⁷ The United States turned instead to national regulations to enforce conservation of the tuna, as discussed below.¹³⁸

CITES' emphasis on trade and preventing profit-based interests from harming endangered species is the most direct and effective approach to international ocean management.¹³⁹ Yet, the reality is that U.N. CITES international co-operation and enforcement mechanisms offer a solution to population decline of sharks and rays only if greater species protection becomes available.¹⁴⁰ Protection mechanisms are currently, however, critically underused.¹⁴¹ Moreover, the convention does not cover domestic fishing, trade, or by-catch, all of which are major causes of population decrease.¹⁴²

II. DOMESTIC REGULATIONS FOR SUSTAINABLE IMPORT OF SPECIES

As international co-operation for species protection becomes increasingly limited by objecting nations, the United States has moved to relying on domestic trade laws on the import of sustainable seafood as its method of filling gaps and enforcing ocean protections abroad.¹⁴³ This

¹³⁴ See *id.*; see also *Press Release: Bluefin Tuna Main Course of CITES World Conference*, CITES, <https://cites.org/sites/default/files/eng/cop/15/prop/E-15-Prop-19.pdf> [<https://perma.cc/3S5K-PGB4>] (last visited Mar. 11, 2022).

¹³⁵ *Tuna Sells for Record \$3 Million in Auction at Tokyo's New Fish Market*, CNBC (Jan. 5, 2019, 7:17 AM), <https://www.cnbc.com/2019/01/05/tuna-sells-for-record-3-million-in-auction-at-tokyos-new-fish-market.html> [<https://perma.cc/82JH-XB89>].

¹³⁶ See CITES CoP15, Prop. 19, *supra* note 133.

¹³⁷ See *id.*; U.N. Convention on Int'l Trade in Endangered Species of Flora and Fauna (CITES) CoP15, Final Decisions on the Proposals for Amendment of Appendices I and II (Mar. 2010).

¹³⁸ See *infra* Part II.

¹³⁹ See generally U.N. Convention on Int'l Trade in Endangered Species of Wild Flora and Fauna (CITES), Mar. 3, 1973, 993 U.N.T.S. 243.

¹⁴⁰ See Murdock, *supra* note 6.

¹⁴¹ *Id.*

¹⁴² See Oliver et al., *supra* note 18, at 86; Davidson et al., *supra* note 10, at 439.

¹⁴³ See generally Kaitlin M. Wojnar, *Shark Laws with Teeth: How Deep Can U.S. Conservation Laws Cut into Global Trade Regulations?*, 19 ANIMAL L. 185, 186–89 (2012); see generally F. K. Killingsworth, *Import Control Under Federal Laws*, 2 FOOD DRUG COSM. L.Q. 498 (1947) (explaining the backbones of national trade law).

approach directly targets one of the largest motivators for other nations to leave gaps in international law—profit. The United States’ seafood imports have tripled in the previous two decades, creating a more than \$20,000,000 USD industry as of 2016.¹⁴⁴ The United States has its own fishing sustainability laws, largely enacted through the Magnuson-Stevens Act¹⁴⁵ and National Standard 4, which promotes conservation.¹⁴⁶ However, according to the U.S. National Oceanic and Atmospheric Administration (“NOAA Fisheries”) an estimated eighty percent of the seafood consumed in the United States is imported.¹⁴⁷ By setting standards that require imported seafood to maintain the same standards of sustainability as locally caught seafood, the United States introduced profit-based regulations into the international market, filling gaps left in international law.¹⁴⁸ This section examines the strength of some of the United States’ import laws before Part III, suggesting key improvements that will benefit elasmobranch population growth.

The United States’ laws regulating the import of wildlife, including ocean life, are as old as environmental law itself.¹⁴⁹ The first U.S. federal law protecting wildlife, the 1990 Lacey Act, made it “unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants . . . in violation of U.S. or Indian Law.”¹⁵⁰ The law protected CITES animals, as well as animals protected under state law, through enforcement of civil and criminal penalties.¹⁵¹ Moreover, the Lacey Act does not stand alone. In the previous half century, the United States has implemented a series of conservation laws regulating the import of oceanic creatures.¹⁵² The Pelly Amendment, passed in 1954, allows for restrictions on importation, and

¹⁴⁴ *USA Fisheries Statistics: Production, Consumption, and Trade*, FOOD AND AGRIC. ORG. OF THE U.N., <http://www.fao.org/in-action/globefish/countries/countries/usa/usa-trade/en/> [<https://perma.cc/ME7R-H2AZ>] (last visited Mar. 11, 2022).

¹⁴⁵ See The Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801–1891(d) (2014).

¹⁴⁶ National Standard 4 Allocations, 50 C.F.R. § 6000.325.

¹⁴⁷ FOOD AND AGRIC. ORG. OF THE U.N., *supra* note 144.

¹⁴⁸ Wojnar, *supra* note 143, at 204–05.

¹⁴⁹ See, e.g., Lacey Act, 16 U.S.C. §§ 3371–78 (Amend. 2008); Pelly Amendment, 22 U.S.C. § 1978; The Endangered Species Act as Amended by Public Law 97-304 (the Endangered Species Act Amendments of 1982) (Washington, U.S. G.P.O., 1983); The Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801–1891(d) (2014).

¹⁵⁰ Lacey Act, 16 U.S.C. §§ 3371–78 (Amend. 2008).

¹⁵¹ See *id.*

¹⁵² See Wojnar, *supra* note 143, at 189–91; FOOD AND AGRIC. ORG. OF THE U.N., *supra* note 144.

embargos on wildlife products, from nations that violate international fishery regulations or harm threatened species.¹⁵³ The Endangered Species Act (“ESA”), passed in 1966, creates a list of federally protected endangered animals, for which it is:

Unlawful to import or export; deliver, receive, carry, transport, or ship in interstate or foreign commerce in the course of a commercial activity; sell or offer for sale in interstate or foreign commerce; take . . . on the high seas; possess, ship, deliver, carry, transport, sell, or receive unlawfully taken wildlife.¹⁵⁴

The ESA has been heralded as successful in maintaining populations through trade and national controls, covering over 2,000 threatened and endangered species.¹⁵⁵ However, to date, it only includes eleven shark species, one ray species, and no skate species.¹⁵⁶ These additions are relatively new.¹⁵⁷ Prior to 2011, the ESA was criticized for not including a single highly migratory fish.¹⁵⁸

Finally, the Marine Mammal Protection Act (“MMPA”), enacted in 1972, requires any country exporting fish to the United States to have marine mammal protections equivalent to those in the United States.¹⁵⁹ The MMPA also includes import provisions that specifically address by-catch:

- “The Secretary of the Treasury shall ban the importation of commercial fish or products from fish

¹⁵³ Pelly Amendment, 22 U.S.C. § 1978 (1954) (stating presidential prohibition through a “certification” process can ban trade of species).

¹⁵⁴ See The Endangered Species Act as Amended by Public Law 97-304 (the Endangered Species Act Amendments of 1982), 16 U.S.C. § 1538; *Endangered Species, Permits: Frequently Asked Questions*, U.S. FISH & WILDLIFE SERV., [https://www.fws.gov/endangered/permits/faq.html#:~:text=The%20Endangered%20Species%20Act%20\(ESA,%2C%20wound%2C%20kill%2C%20trap%2C](https://www.fws.gov/endangered/permits/faq.html#:~:text=The%20Endangered%20Species%20Act%20(ESA,%2C%20wound%2C%20kill%2C%20trap%2C) [https://perma.cc/JW5Y-NP6D] (last visited Mar. 11, 2022).

¹⁵⁵ See Oliver A. Houck, *Reflections on the Endangered Species Act*, 25 NW. SCH. L. LEWIS & CLARK COLL. ENV'T L. 689, 689 (1995); Takahashi, *supra* note 131, at 179, 187.

¹⁵⁶ *Endangered Species Act Threatened and Endangered Species Directory*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., <https://www.fisheries.noaa.gov/species-directory/threatened-endangered> [https://perma.cc/56QS-KRUP] (under “Species Category” choose “Fish & Sharks”; then click “Search”) (last visited Mar. 11, 2022).

¹⁵⁷ See *id.*

¹⁵⁸ Takahashi, *supra* note 131, at 179, 204.

¹⁵⁹ Marine Mammal Protection Act, 16 U.S.C. § 1371(a)(2) (1972).

- which have been caught with commercial fishing technology which results in the incidental kill or incidental serious injury of ocean mammals in excess of United States standards,”¹⁶⁰ and
- “[t]he List of Foreign Fisheries will be organized by harvesting nation and other defining factors including geographic location of harvest, gear-type, target species or a combination thereof. Based upon the List of Foreign Fisheries, the Assistant Administrator will consult with harvesting nations, informing them of the regulatory requirements for exempt and export fisheries to import fish and fish products into the United States.”¹⁶¹

While the MMPA does not apply to elasmobranchs, since they are not mammals, it does provide an interesting framework for sustainability by requiring imported seafood to maintain the same mammal protection standards as the United States.¹⁶²

Recently, state and federal laws have turned their focus to specific areas of elasmobranch conservation not addressed by international regulations: the shark trade, by-catch, and traceability of sources.¹⁶³ For example, while shark finning has been largely prohibited in the United States since the Federal Shark Conservation Act of 2011, the international market continued to export shark fins to the U.S. market.¹⁶⁴ In response, fourteen states and territories, including California, Hawaii, Delaware, Guam, Illinois, Maryland, Massachusetts, American Samoa, Nevada, New Jersey, New York, Northern Mariana Islands, Oregon, Rhode Island, Texas, Florida, and Washington, implemented state level prohibitions against the possession and sale of shark fins.¹⁶⁵

¹⁶⁰ *Id.*

¹⁶¹ List of Foreign Fisheries, 82 Fed. Reg. 2961 (Jan. 10, 2017)

¹⁶² *See id.*; *see also* Tatum, *supra* note 11, at 3.

¹⁶³ *See, e.g.*, International Fisheries Agreement Clarification Act (Shark Conservation Act of 2010), 124 Stat § 3668 (Amending 16 U.S.C. § 1826 (i–k) (2011)) [hereinafter International Fisheries Agreement]; Elizabeth Neville, Note, *Shark Finning: A Ban to Change the Tide of Extinction*, 25 COLO. NAT. RES. ENERGY & ENV'T L. REV. 387, 395 (2014).

¹⁶⁴ International Fisheries Agreement, *supra* note 163.

¹⁶⁵ Neville, *supra* note 163, at 388, 395; *see, e.g.*, A.B. 376, Leg., Reg. Sess. (Cal. 2011) (California shark fin ban); S.B. 2169 CD1. DOC, Leg., Reg. Sess. (Haw. 2010) (Hawaii shark fin ban); Adm. C. 3000, 3500, Tit., 7 (Del. 2021) (Delaware shark fin ban); S1711B, Leg., Reg. Sess. (N.Y. 2013) (New York shark fin ban).

To address by-catch, the use of “driftnets”—the type of net most associated with elasmobranch by-catch—has been banned across the United States, with the exception of California Federal Waters.¹⁶⁶ A ban on driftnet use in California federal waters was introduced in Congress in 2020, and was passed by both the House of Representatives and Senate, before being vetoed by then President Trump.¹⁶⁷ These driftnet prohibitory laws, while they do not directly target international trade, create a national standard of sustainability that, if expanded, could prevent import and thereby meaningfully protect shark and ray populations.¹⁶⁸

While international law continues to prioritize profit over conservation, U.S. federal laws set tighter regulations on ocean use, including elasmobranch specific language.¹⁶⁹ However, while national regulations on oceanic mammals are automatically applied to international import through the MMPA, shark and ray protections remain more erratic.¹⁷⁰ These laws leave a smaller gap; they offer more domestic protections for elasmobranchs, yet they still leave international holes big enough for sharks to swim through. The next section addresses how expanding U.S. import laws could fill these gaps through bans, by-catch regulations, and traceability.

III. EXPANDING U.S. IMPORT LAWS TO FILL THE GAPS

U.S. law protects elasmobranch species in federal waters, but international law still does not prioritize their conservation. To successfully promote the growth of shark and ray populations, the United States should use its market power to prevent non-sustainably harvested seafood from being sold in the United States. For sharks and rays, this can be accomplished by banning imports, setting sustainable by-catch regulations, and creating species specific labelling and supply chain monitoring.

A. *Banning Import of Types of Elasmobranchs*

The first, most simple and direct method of promoting elasmobranch population growth is to simply remove it as an option on the U.S. market.

¹⁶⁶ See Driftnet Modernization Act, S. 906, 116th Cong. (2019) (did not pass); S.B. 1017, 2018–2019 Leg., Reg. Sess. (Cal. 2018).

¹⁶⁷ See Driftnet Modernization Act, S. 906.

¹⁶⁸ See *id.*

¹⁶⁹ See, e.g., *id.*

¹⁷⁰ ELIZABETH MURDOCK & VANESSA RIVAS VILLANUEVA, NAT'L RES. DEF. COUNCIL, UN-INTENTIONAL PARTNER: HOW THE UNITED STATES HELPS THE ILLEGAL SHARK FIN MARKET 4 (2019).

Some forms of prohibition already exist; shark finning is illegal in U.S. waters,¹⁷¹ species listed on CITES Appendix I or II are only allowed to be imported with a permit,¹⁷² and fourteen states have banned the sale of shark fins completely.¹⁷³ Yet, a market still exists; consumers have largely turned to international markets for fin imports.¹⁷⁴ FAO estimates that over a thousand metric tons of shark fins were imported into the United States in 2007.¹⁷⁵ The National Resource Defense Council (“NRDC”) estimates that “[f]rom 2010 to 2017, the United States unintentionally played middleman to somewhere between 650 and 772 tons of shark fin exports, accounting for as many as 1.29 million sharks.”¹⁷⁶

Efforts have been made to ban import of elasmobranchs to the United States. In 2019, U.S. Representatives Gregorio Kilili Camacho Sablan and Michael McCaul brought forward the Shark Fin Sales Elimination Act of 2019, which incorporates a trade ban on finning into federal law.¹⁷⁷ The law directly prohibits the import of sharks’ fins from endangered or threatened species, or import from countries without existing shark finning laws.¹⁷⁸ The Shark Fin Sales Elimination Act also protected rays and skates by including them in the national seafood traceability

¹⁷¹ Shark Fin Trade Elimination Act of 2017, S. 793, 115th Cong. (2017); Shark Fin Sales Elimination Act of 2019, H.R. 737, 116th Cong.; *see generally* United States v. Approximately 64,695 Pounds of Shark Fin, 520 F.3d 976 (9th Cir. 2007); *see generally* Chinatown Neighborhood Ass’n v. Harris, 794 F.3d 1136 (9th Cir. 2015).

¹⁷² U.N. CITES, *supra* note 80, at apps. I, IV (“A Management Authority of the State of import of any specimen shall cancel and retain the export permit or re-export certificate and any corresponding import permit presented in respect of the import of that specimen.”):

The provisions of the present Convention shall in no way affect the right of Parties to adopt: (a) stricter domestic measures regarding the conditions for trade, taking, possession or transport of specimens of species included in Appendices I, II and III, or the complete prohibition thereof; or (b) domestic measures restricting or prohibiting trade, taking, possession or transport of species not included in Appendix I, II or III.

Id. app. XIV.

¹⁷³ *See* Neville, *supra* note 163, at 395.

¹⁷⁴ FOOD AND AGRIC. ORG. OF THE U.N., *supra* note 144.

¹⁷⁵ FELIX DENT & SHELLEY CLARKE, FOOD AND AGRIC. ORG. OF THE U.N., STATE OF THE GLOBAL MARKET FOR SHARK PRODUCTS 44, 58 (2015).

¹⁷⁶ Jason Bittel, *The Surprise Middleman in the Illegal Shark Fin Trade: The United States*, NAT’L RES. DEF. COUNCIL (Nov. 20, 2019), <https://www.nrdc.org/onearth/surprise-middleman-illegal-shark-fin-trade-united-states> [<https://perma.cc/5UH3-N5D4>].

¹⁷⁷ Shark Fin Sales Elimination Act of 2019, H.R. 737, 116th Cong. (2019) (passed house Nov. 20, 2019) (reintroduced Apr. 22, 2021).

¹⁷⁸ *Id.*

program, which would keep track of imported elasmobranchs.¹⁷⁹ While the bill passed the House in 2019, it never passed the senate.¹⁸⁰

This leaves the United States with a legal double standard. While shark finning is banned in the United States, import is still largely legal since most forms of sharks are not covered by the ESA, CITES, or banned by the remaining thirty-six states.¹⁸¹ Rays and skates are offered even less protection.¹⁸² At the same time, the United States recognizes the vulnerability of these highly migratory species in its own national conservation regulations.¹⁸³ Unlike mammals, whose import is offered a duality with national laws under the MMPA, elasmobranch import is allowed even when national catch is not.¹⁸⁴ The solution to this problematic standard is twofold. First, federal import bans on elasmobranchs should be pursued through either new congressional legislation or through the Pelly Amendment. Second, a greater number of elasmobranch species should be covered in the ESA, recognizing the important role they play in ecosystems as well as the need for international recovery. Finally, as suggested again below, the MMPA should be expanded, or an equivalent be developed, to ensure national standards to protect elasmobranchs will apply to imports as well.

B. Improving By-Catch Import Regulations and Labelling Requirements

The second method of combatting international elasmobranch population decline is to directly target the ill effects of by-catch, which as of 2019, was responsible for between thirty and fifty percent of population decline.¹⁸⁵ There are a few methods of tackling the international by-catch

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ NAT'L OCEANIC & ATMOSPHERIC ADMIN., *supra* note 156.

¹⁸² *See* MURDOCK & VILLANUEVA, *supra* note 170, at 7; *see generally* Takahashi, *supra* note 131.

¹⁸³ *See, e.g.*, Shark Fin Trade Elimination Act of 2017, *supra* note 171; Shark Fin Sales Elimination Act of 2019, *supra* note 171.

¹⁸⁴ Marine Mammal Protection Act, 16 U.S.C. § 1371 (1972).

¹⁸⁵ *See generally* Samantha Petersen et al., *Understanding and Mitigating Vulnerable Bycatch in Southern African Trawl and Longline Fisheries*, 31 AFR. J. MARINE SCI. 215 (2009). *But see* Oliver et al., *supra* note 18, at 87 ("Approximately 50% of the global shark production is composed of sharks caught as bycatch in the high seas pelagic longline fisheries. Elasmobranch bycatch is rarely recorded at the species level in official fishery statistics, or often not reported at all. Therefore, inferring annual mortality of elasmobranchs

problem by using trade laws, including, potentially banning import of high-by-catch seafood, implementing international import standards for fishing gear, and creating general or elasmobranch specific labelling processes for imported seafood.¹⁸⁶

Using U.S. import laws to stop by-catch is nuanced and first requires an examination of how by-catch occurs. For elasmobranchs, certain types of netting are extremely lethal.¹⁸⁷ Gillnets, trawlers, purse seine nets, and long lines all have heavy shark and ray by-catch rates due to their expansive nature.¹⁸⁸ Gillnets, for example, are mesh walls attached to poles or free floating, which catch targeted species by entangling them in the small holes.¹⁸⁹ This type of net makes up about four percent of global catch, with thirty-four percent coming from the Indian Ocean tuna catch.¹⁹⁰ Yet it has a capture mortality rate of seventy percent for any elasmobranchs caught,¹⁹¹ especially in smaller mesh gillnets.¹⁹² Long line fishing, which leaves a long trail of baited hooks attached to a single line, is also incredibly deadly for sharks, which, as predators, are drawn to the fish caught on long lines.¹⁹³ This form of fishing is indiscriminate in what it catches, often resulting in the by-catch of juvenile elasmobranchs in addition to adults.¹⁹⁴ Trawlers and purse seine nets also have high by-catch rates, with one 2015 study finding “pelagic longlines, and deep-sea and coastal trawl fisheries had the largest total annual shark and ray bycatch, respectively” with coastal trawl fisheries having “substantial shark bycatch ratios.”¹⁹⁵

The United States has addressed by-catch in its national waters by banning the majority of gillnet use, and by implementing by-catch

from reported annual landings is likely to result in a significant underestimation of the true magnitude of fishing-related mortality.”).

¹⁸⁶ See Oliver et al., *supra* note 18, at 86–87.

¹⁸⁷ *Id.*; COSANDEY-GODIN & MOORGAN, *supra* note 22, at 4; see generally Alexander Gillespie, *Wasting the Oceans: Searching for Principles to Control Bycatch in International Law*, 17 INT’L J. MARINE & COASTAL L. 161 (2002).

¹⁸⁸ COSANDEY-GODIN & MOORGAN, *supra* note 22, at 4.

¹⁸⁹ *Id.*

¹⁹⁰ R. Anderson et al., *Cetacean Bycatch in Indian Ocean Tuna Gillnet Fisheries*, 41 ENDANGERED SPECIES RES. 39, 39, 46 (2020).

¹⁹¹ COSANDEY-GODIN & MOORGAN, *supra* note 22, at 4.

¹⁹² Grace Roskar et al., *Performance of Two Survey Gears Targeting Elasmobranchs in a Shallow, Subtropical Estuary*, 12 MARINE & COASTAL FISHERIES: DYNAMICS, MGMT., & ECOSYSTEM SCI. 50, 61 (2020).

¹⁹³ See NOAA FISHERIES, U.S. NATIONAL BYCATCH REPORT 369 (2011).

¹⁹⁴ COSANDEY-GODIN & MOORGAN, *supra* note 22, at 4–5.

¹⁹⁵ Oliver et al., *supra* note 18, at 86, 91.

standards.¹⁹⁶ On an international level, some fisheries have successfully avoided endangered species by-catch simply by adjusting their fishing methods to account for the reaction of a specific animal.¹⁹⁷ Fisheries who are “dolphin safe” avoid dolphins, whales, and other oxygen breathing by-catch by lowering nets a few feet off the ocean surface, allowing animals who swim up to the net, when threatened, to escape through the gap.¹⁹⁸ Fisheries attempting to avoid catching endangered cod species raise trawler nets a few feet off the ocean floor, since bottom dwellers like cod instinctively swim down when threatened.¹⁹⁹ Not enough research currently exists on elasmobranchs to make a determinative call—but the process of “keeping an eye out” for these species alone could make a difference, even if small.

Moreover, in recent years, fisheries have developed netting and technology to reduce by-catch, specifically in large and migratory animals. In India, fisheries created a “Dolphin Wall Net” that is deployed before releasing a seine net, preventing dolphins from approaching and getting tangled in the web.²⁰⁰ As turtles were increasingly found caught in trawler shrimp fishing nets, and global outrage grew, the fishing industry introduced the use of Turtle Excluder Devices (“TEDs”).²⁰¹ TED fishing nets have a metal grid with an ejection mechanism separating the wide netting at the front of the trawl from the narrow netting, called the “bag” at the end of the trawl.²⁰² The design allows small oceanic animals, like shrimp, to pass through the bars into the bag, while preventing by-catch of turtles—and sharks—who get ejected from the net on contact with the grid.²⁰³ Technological advancements to prevent by-catch are

¹⁹⁶ See 50 C.F.R. §§ 635.4(a)(6), (k), (m) (2000); see *Conti v. United States*, 48 Fed. Cl. 532 (Jan. 11, 2001).

¹⁹⁷ Gillespie, *supra* note 187, at 173.

¹⁹⁸ See *Q&A: Dolphin Safe Tuna Fishing*, EARTH ISLAND INST. (Aug. 5, 2021), <https://save-dolphins.eii.org/news/q-a-dolphin-safe-tuna> [<https://perma.cc/F6UX-4NKD>].

¹⁹⁹ See *Cod Can Recover If We Control Bycatch*, WORLD FISHING FOUND. (July 19, 2010), <https://www.worldfishing.net/news101/industry-news/wwf-cod-can-recover-if-we-control-bycatch> [<https://perma.cc/TG8A-8B3P>].

²⁰⁰ See generally K. K. Prajith et al., *Dolphin Wall Net (DWN)—An Innovative Management Measure Devised by Ring Seine Fishermen of Kerala-India to Reducing or Eliminating Marine Mammal–Fishery Interactions*, 102 OCEAN & COASTAL MGMT. 1 (2014).

²⁰¹ Scott W. Raborn et al., *Effects of Turtle Excluder Devices (TEDs) on the Bycatch of Three Small Coastal Sharks in the Gulf of Mexico Penaeid Shrimp Fishery*, 32 N. AM. J. FISHERIES MGMT. 333, 334 (2012); *Fishing Gear Turtle Excluder Devices*, NOAA FISHERIES (June 1, 2021), <https://www.fisheries.noaa.gov/southeast/bycatch/fishing-gear-turtle-excluder-devices> [<https://perma.cc/PJB9-7PEL>].

²⁰² Raborn et al., *supra* note 201, at 334.

²⁰³ *Id.*

possible and should be highly encouraged under international and national standards of sustainability.

For elasmobranchs, methods that could minimize by-catch currently exist. The existing technology of TEDs can be used to protect larger species of sharks and rays from fisheries targeting smaller animals.²⁰⁴ A 2018 study of fisheries in Australia found that attaching store bought magnets to the entrance of fishing nets effectively decreased elasmobranch by-catch by thirty percent.²⁰⁵ Sharks and rays are biologically more sensitive to electromagnetic fields than fish, due to a sensory organ referred to as the ampullae of Lorenzini, alerting them to the magnets, and therefore the existence of a net before they are caught.²⁰⁶

When filling the gaps in international law that fail to protect elasmobranch by-catch, the United States should focus on existing protective practices and technology. Fishing regulations dedicated to ending elasmobranch by-catch could, if taking the most efficient route, prohibit import from nations without existing by-catch laws, or from fisheries that use specific types of netting. The inclusion of elasmobranchs in the MMPA or an equivalent would promote informed fishing and increase market pressure.²⁰⁷ The MMPA bans import of seafood “caught with commercial fishing technology which results in the incidental kill or incidental serious injury of ocean mammals in excess of U.S. standards.”²⁰⁸ U.S. federal laws on by-catch currently offer more protection than international standards for sharks, rays, and skates, including the almost complete ban of gill-nets.²⁰⁹ By harmonizing national laws with import laws, the United States can fill some of the remaining gaps in international law that continue to be a barrier to population regrowth.²¹⁰

²⁰⁴ *Id.*; David Brewer et al., *The Impact of Turtle Excluder Devices and Bycatch Reduction Devices on Diverse Tropical Marine Communities in Australia’s Northern Prawn Fishery*, 81 FISHERIES RSCH. 176, 176–88 (2006).

²⁰⁵ R.J. Richards et al., *Permanent Magnets Reduce Bycatch of Benthic Sharks in an Ocean Trap Fishery*, 208 FISHERIES RSCH. 16, 19 (2018); *see also* Craig O’Connell et al., *Analysis of Permanent Magnets as Elasmobranch Bycatch Reduction Devices in Hook-and-Line and Longline Trials*, 109 FISHERY BULL. 394, 394–95 (2011).

²⁰⁶ O’Connell et al., *supra* note 205, at 394.

²⁰⁷ *See generally* Marine Mammal Protection Act (MMPA), 16 U.S.C. § 1371.

²⁰⁸ *Id.* § 1371(a)(2).

²⁰⁹ *New US Regulations Offer Better Protection from Bycatch*, WORLD WILDLIFE MAG., Spring 2017, [https://www.worldwildlife.org/magazine/issues/spring-2017/articles/new-us-regulations-offer-better-protection-from-bycatch#:~:text=But%20marine%20mammals%20may%20have,US%E2%80%94including%20measures%20against%20bycatch.\[https://perma.cc/86DK-DQUL\]](https://www.worldwildlife.org/magazine/issues/spring-2017/articles/new-us-regulations-offer-better-protection-from-bycatch#:~:text=But%20marine%20mammals%20may%20have,US%E2%80%94including%20measures%20against%20bycatch.[https://perma.cc/86DK-DQUL]).

²¹⁰ *See id.*

Finally, when addressing by-catch, consumer protection and labelling laws can be expanded to increase awareness of elasmobranch by-catch.²¹¹ A good example is the current use of the “dolphin safe tuna” labelling standard.²¹² Due to the high by-catch of dolphins in the Eastern Pacific Ocean tuna fishing rings, Congress passed the Dolphin Consumer Protection Act.²¹³ The Act created a tracking program and labelling system, allowing companies to only sell “dolphin safe tuna” which ensures that certain gear and by-catch control standards are met.²¹⁴ The World Trade Organization considers “dolphin safe tuna” fair trade, so long as federal and international standards are consistent.²¹⁵ This regime is an effective example of using market incentives to promote conservation. While the Dolphin Safe Program has been criticized as not completely preventing by-catch,²¹⁶ no labelling system exists for elasmobranchs in the United States.²¹⁷ The creation of labelling a system, which promotes a change to new by-catch friendly technology, could be an effective first step in preventing accidental shark and ray death. While like the Dolphin Safe Program it will not be fail-safe, an imperfect program is far superior to no program at all.

C. *Supply Chain Monitoring*

Finally, the United States should use national trade regulation to promote elasmobranch population growth. While there are bans on shark finning in U.S. waters, there are not strong enforcement or monitoring mechanisms in place.²¹⁸ Imported sharks and rays have even less traceability standards.²¹⁹ Currently, CITES and ESA have a method of “permits” that allows endangered sharks and rays to be imported only under controlled circumstances, including a system of approval, quota

²¹¹ See generally Erick Kraemer, *Tackling Problems of Overfishing: Protecting Sharks and Bluefin Tuna*, 25 ENV'T CL. J. 250 (2013).

²¹² Kristin L. Stewart, *Dolphin-Safe Tuna: The Tide Is Changing*, 4 ANIMAL L. 111, 118 (1998); but see Donald W. McChesney, *Dolphin-Safe or Fisherman-Friendly? Abuse of Discretion in Amendment of the Dolphin-Safe Tuna Labeling Standard*, 38 U.C. DAVIS L. REV. 1725, 1728 (2005).

²¹³ The Dolphin Protection Consumer Information Act, 16 U.S.C. § 1385 (2000).

²¹⁴ *Id.*

²¹⁵ See Stewart, *supra* note 212, at 117–20, 133 n.162.

²¹⁶ McChesney, *supra* note 212, at 1730, 1733–35.

²¹⁷ See generally *id.*

²¹⁸ *US Shark Fin Trade Bans*, SHARK STEWARDS, <https://sharkstewards.org/shark-science-education/us-shark-fin-trade-ban/> [<https://perma.cc/58SR-V6GN>] (last visited Mar. 11, 2022).

²¹⁹ See *id.*

monitoring, and scientific research exceptions.²²⁰ However, for sharks and rays not covered by CITES or ESA, few import laws regulating catch exist.²²¹ Moreover, as discussed in the by-catch section, importers of other seafood with high shark by-catch rates do not have to prove they used by-catch-friendly methods or avoided elasmobranch by-catch at all.²²² What this leaves us with is an issue of traceability more on the international scale than within U.S. waters. We do not know where legal shark and ray imports are coming from. The lack of tracing creates a gap, giving poachers an avenue through which to sell fins harvested from endangered sharks, or to sell sharks and rays illegally imported or illegally caught by unreported or unregulated fisheries.²²³

To improve traceability requires improving the standards already in place, as well as introducing new norms. CITES-protected animals, for example, are regulated by permit, which proves both the legality of the take and the right to import,²²⁴ but most elasmobranchs are not covered by CITES.²²⁵ Additionally, by-catch regulations regarding sharks and rays do not exist to the extent seen in the MMPA, which outlines that the:

Secretary of Commerce shall insist on reasonable proof from the government of any nation from which fish or fish products will be exported to the United States of the effects on ocean mammals of the commercial fishing technology in use for such fish or fish products exported from such nation to the United States.²²⁶

While the administrability of such regulation is beyond the scope of this Article, it is important to flag that for by-catch and catch import regulations to be successful there must be a traceability component included.

²²⁰ U.N. CITES, *supra* note 80, at art. VI.

²²¹ Carlo A. Balistrieri, *CITES: The ESA and International Trade (continued)*, 8 NAT. RES. & ENV'T 33, 75 (1993) (stating the overlap between CITES species enforcement of trade and ESA species enforcement causes backlog. "In the United States, the management and scientific authorities are the same agency responsible for much of the administration of the ESA: The Fish and Wildlife Service. Enforcement responsibilities belong to the Department of Agriculture. CITES imposes substantial burdens on these already strained staffs and resources.").

²²² *See generally* SHARK STEWARDS, *supra* note 218.

²²³ *See id.*

²²⁴ U.N. CITES, *supra* note 80.

²²⁵ *Sharks and Manta Rays*, CITES (Jan. 12, 2021), <https://cites.org/eng/prog/shark/more.php> [<https://perma.cc/R3T3-W4L4>].

²²⁶ *See* 16 U.S.C. § 1371(a)(2).

Traceability has been implemented with some success for other species, and there is no reason to believe that it cannot be used effectively for sharks and rays.²²⁷ The problem is not one of implementation, but rather of will. Much more can be done to protect shark and ray populations if conservation is prioritized over politics and profit.

CONCLUSION

There is a gap in international fishing regulations which needs to be filled by U.S. national import laws. International regulations have not adequately protected shark and ray populations, prioritizing national interests for profit above conservation. Unaddressed, this leaves sharks and rays vulnerable to dangerous population declines and extinctions. While U.S. federal laws reduce harm to sharks, rays, and skates within U.S. waters, the current protections do not go far enough to prevent over-fishing of elasmobranchs, or by-catch, in imported goods. In the past, the United States filled similar gaps to protect marine mammals under MMPA, and whales through its involvement in the ICW. It is time to do the same for sharks and rays.

The need to protect sharks and rays is real and urgent. The United States should start with protections already in place for other endangered species, and work to expand those protections to elasmobranchs. Adding elasmobranchs into the MMPA, or an equivalent, would tackle some of the existing gaps in protection by automatically incorporating national fishing standards into international import regulations. Additionally, segmented changes to import laws would better enforce standards protecting against shark and ray by-catch, effectively closing this gap. Ultimately, where international law fails to keep pace, the United States should use its market power to promote its own sustainability goals, using federal trade laws to protect sharks, rays, and skates, not only within its own borders, but also on the high seas.

²²⁷ See generally SHARK STEWARDS, *supra* note 218.