

Unraveling the Ocean from the Apex Down: The Role of the United States in Overcoming Obstacles to an International Shark Finning Moratorium

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*[T]he sea, which has long been the source of our sustenance, is both rising in rage to destroy us and becoming barren. This fury was caused by the abuses of humankind and we therefore need to take every action necessary to allow the oceans to heal themselves.***

I. INTRODUCTION	233
II. “THE STRENGTH AND BEAUTY OF SHARKS ARE A NATURAL BAROMETER FOR THE HEALTH OF OUR OCEANS”	234
A. The Life Cycle of Sharks Makes Them Vulnerable to Overexploitation	235
B. The Shark Finning Industry Continues to Decimate Global Shark Populations	236
C. Why Fishers Only Retain the Shark Fin	237
D. Why Sharks are Vital to Ocean Ecosystems	238
III. UNITED STATES SHARK CONSERVATION: A HISTORY OF EXPANSION, BLUNDER, AND REVISION	240
A. Early Attempts at Shark Conservation.....	240
B. The Shark Finning Prohibition Act of 2000.....	242
C. The Shark Conservation Act of 2010.....	244
1. The Smooth Dogfish Savings Clause	245

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** Johnson Toribiong, President of Palau, Speech to the U.N. General Assembly declaring Palau as the world’s first shark sanctuary (Sept. 25, 2009), *available at* SHARK TALK (Sept. 25, 2009, 10:57 PM), <http://sharksanctuary.blogspot.com/2009/09/president-toribiongs-speech-to-un.html>.

2. A Push for International Negotiations	246
IV. SHARK FINNING UNDER INTERNATIONAL LAW	247
A. Pervasive Problems Presented in Regulating the Shark Fin Trade	248
1. Illegal, Unreported, and Unregulated Fishing	248
2. Inadequate Scientific Knowledge	250
3. Enforcement and Resource Issues	250
4. Transshipment	251
B. The United States' Role in the International Forum	252
1. Import Prohibitions Under the Driftnet Act.....	252
2. Trade Sanctions Under the Pelly Amendment.....	253
3. Ethical Considerations for International Trade Sanctions	254
C. Shark Finning and the United Nations General Assembly	255
1. United Nations General Assembly Resolutions	255
2. UNCLOS as an Infrastructure for International Cooperation	256
3. 1995 Fish Stocks Agreement.....	257
4. Regional Fisheries Management Organizations	260
5. International Plan of Action for the Conservation and Management of Sharks	261
6. The Convention on International Trade in Endangered Species.....	262
D. Suggestions for the Direction of United States Efforts to Ban Shark Finning at the International Level.....	264
E. Suggestions for the Development of an International Conservation Regime for Sharks	265
V. PROGRESS IN THE CONSERVATION OF SHARKS	267
VI. CONCLUSION	269

I. INTRODUCTION

On the corrugated steel rooftops of warehouses in many port cities throughout the world, an endless scattering of triangular objects baking in the sun breaks up the undulating metallic pattern.¹ To the unknowing observer, these triangles are vaguely reminiscent of something they have once seen, but to local fishermen, the drying fins are like gold.² Shark fins are one of the oldest recorded royal delicacies; but today, they represent the latest “gold rush” in the human pattern of overexploiting a fashionable commodity.³ While newspaper and magazine headlines stress the ethical depravity of shark finning and attempt to elicit sentimental responses toward the treatment of sharks, this emphasis is misplaced. Arguments concerning sentiment and ethics play their role in garnering public support; however the main focus in professional forums should involve the debate between economics and sustainable ecosystems.⁴ The outcome of this debate could forever change the face of our oceans.

The recent passage of the federal Shark Conservation Act of 2010⁵ sparked an international push to reform shark finning legislation.⁶ When a fisher harvests shark fins, they generally cut the shark’s fins and tail off before dumping the shark, still alive, back into the sea.⁷ Sharks that have been finned either drown because they cannot pass water over their gills or are eaten because they are unable to defend themselves.⁸ Shark finning takes place across the globe to satisfy the demands of the shark fin market.⁹ A major portion of the market’s demand results from shark fins being the main component in the Chinese delicacy “shark fin soup.”¹⁰ The high price that shark fins fetch on the Asian market has resulted in an explosion in shark finning.¹¹ The growing industry has led to a sharp decline in the shark population and has left some shark species on

¹ See SHARKWATER (Warner Home Video 2007).

² *Id.*

³ See generally MIKE A. MCCOY, ADDRESSING SHARK FINNING IN FFA MEMBER COUNTRIES: ISSUES AND CONSIDERATIONS 11 (Gillett, Preston and Associates Inc. 2006).

⁴ *Id.*

⁵ See generally, H.R. Res. 81, 111 Cong. (2010) (Enacted).

⁶ See Haidee Eugenio, *Shark Finning Ban Now a CNMI Law*, Saipan Tribune, Jan. 28, 2011, available at <http://www.saipantribune.com/newsstory.aspx?cat=1&newsID=106535> (stating that the Northern Marianas Islands has signed a shark fin ban into law); see also Daniel Klotz, *Shark Conservation Moving Forward in Chile*, PEW Charitable Trusts, Apr. 8, 2011, available at <http://www.pewenvironment.org/news-room/fact-sheets/shark-conservation-moving-forward-in-chile-85899358453>.

⁷ Alexia C. Morgan, *Sharks: The State of Science*, in PEW ENVIRONMENT GROUP OCEAN SCIENCE SERIES 4 (Pew Charitable Trusts, 2010).

⁸ See SHARKWATER (Warner Home Video 2007).

⁹ An explanation of the reasons behind shark fin soup’s rise in popularity is discussed *infra* in § 2.

¹⁰ See DEAN CRAWFORD, SHARK, 132 (Jonathan Burt ed., Reaktion Books Ltd., 2008).

¹¹ MCCOY, *supra* note 3, at 12.

the verge of extinction.¹² As apex predators,¹³ the loss of sharks in the food chain can lead to an imbalance in the ocean's ecosystems and can disrupt the fragile interactions between species.¹⁴ To combat this practice, a few fishing nations completely banned shark finning, however illegal fishing and corruption continue to plague the market and render those measures inadequate.¹⁵ With controversy over environmental concerns already adding pressure to international politics, is the development of an international agreement to ban shark finning even possible?

This article analyzes the Shark Conservation Act of 2010¹⁶ as an impetus for an international moratorium on shark finning. Section II will discuss the role of sharks in the ecosystem and the implications for extracting large numbers of sharks from the ocean in a small timeframe. Section II will also look at the history of shark fin soup and its role in society. Section III will describe the history of shark conservation in the United States, the Shark Finning Prohibition Act of 2000, and the Shark Conservation Act of 2010. Section IV details the problems shark conservation measures face on the international level and international regimes in place for the conservation of sharks. Section IV also outlines suggestions for steps the United States should take in developing an international shark finning prohibition and suggestions for an international treaty for the conservation and management of sharks. Lastly, section V looks at recent progress in the area of shark fin prohibitions and shark conservation in general.

In the end, shark finning threatens to decimate our ocean's resources. The Shark Conservation Act of 2010 requires the United States to actively advocate for an international agreement to prohibit shark finning; a goal we cannot fail to achieve.

II. "THE STRENGTH AND BEAUTY OF SHARKS ARE A NATURAL BAROMETER FOR

¹² See LINDA PAUL, INTERNATIONAL TRADE IN SHARK FINS & ILLEGAL, UNREPORTED, AND UNREGULATED SHARK FISHING (Hawaii Audubon Society, 2008), available at www.pacfish.org/pub09/sharktrade.pdf.

¹³ "Apex predators (also alpha predators or super predators) are predators that are not themselves preyed upon as a species in the wild. These animals are often at the end of long food chains, where they have a crucial role in maintaining and determining the health of ecosystems." WEBSTER'S ONLINE DICTIONARY, www.websters-online-dictionary.org.

¹⁴ M.R. HEITHAUS ET AL., EFFECTS OF LOSING TOP PREDATORS 1 (Lenfest Ocean Program, 2008), available at http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Protecting_ocean_life/Top_predator_loss_rsr_final.pdf.

¹⁵ See *Gang Attacks Costa Rican Environmentalist Investigating Illegal Shark-Finishing Claims*, Tico Times, Jan. 10, 2011, available at http://www.ticotimes.net/News/News-Briefs/Gang-attacks-Costa-Rican-environmentalist-investigating-illegal-shark-finishing-claims_Monday-January-10-2011.

¹⁶ See generally, H.R. Res. 81, 111 Cong. (2010) (Enacted).

THE HEALTH OF OUR OCEANS¹⁷

Shark fins are usually collected and sold to dealers in a set that consists of the dorsal fin, both pectoral fins, and the lower lobe of the caudal fin.¹⁸ Shark finning is a particularly unsustainable practice because it “increase[s] the overall shark mortality by expanding the opportunity to retain only the most valuable portions of the animal in situations where it might otherwise be avoided or struck off.”¹⁹ Shark fin soup is made from the *ceratichthys*, or fin needles.²⁰ These are the slender fibers that lie between the cartilage in the shark fin.²¹ Less than five percent of the overall weight of a shark is retained during when a shark is finned.²² Only a small portion of each shark fin is actually utilized for human consumption in shark fin soup. This roughly equates to killing a human for its hands and feet, but then only retaining the tendons and finger nails for an end product.

A. *The Life Cycle of Sharks Makes Them Vulnerable to Overexploitation*

The life cycle of sharks, much like marine mammals,²³ makes them particularly vulnerable to over exploitation.²⁴ Sharks have a low replacement cycle²⁵ because of their slow growth rate, late age of sexual maturity, relatively long life spans, low fecundity,²⁶ and long gestation periods.²⁷ While the age of sexual maturity varies among shark species, most do not reach sexual maturity until the age of ten years.²⁸ One species of shark, the spiny dogfish (*S. acanthias*), does not reach sexual maturation until the age of twenty-five and can live as long as seventy years.²⁹ The gestation period of sharks averages one to

¹⁷ Johnson Toribiong, President of Palau, Speech to the U.N. General Assembly declaring Palau as the world’s first shark sanctuary (Sept. 25, 2009), available at SHARK TALK (Sept. 25, 2009, 10:57 PM), <http://sharksanctuary.blogspot.com/2009/09/president-toribiongs-speech-to-un.html> (hereinafter “Toribiong Speech”).

¹⁸ MCCOY, *supra* note 3, at 16; see NICK TRACHET ET AL., SO YOU WANT TO SELL SOME SHARK FIN? A MANUAL FOR RURAL FISHERMEN, (FAO/UNDP Regional Fishery Support Programme 1990).

¹⁹ MCCOY, *supra* note 3, at 16.

²⁰ *Id.* at 11.

²¹ *Id.*

²² *Id.*

²³ Unlike whales and dolphins, sharks are not marine mammals.

²⁴ Morgan, *supra* note 7.

²⁵ The replacement cycle is the rate at which a member of a population replaces itself with offspring.

²⁶ Fecundity is defined as “the quality in female organisms of reproducing rapidly and in great numbers.” WEBSTER’S ONLINE DICTIONARY, www.websters-online-dictionary.org.

²⁷ Andrew Herndon et al., *The Case for an International Commission for the Conservation and Management of Sharks (ICCMS)*, 34 MARINE POL’Y 1239 (Nov. 2010).

²⁸ *Id.* at 1241.

²⁹ *Id.*

two years with the spiny dogfish gestation period ranging from twenty to twenty-five months.³⁰ Most fish species produce hundreds of eggs at a time, but sharks reproduce by live birth with brooding sizes limited to only a few pups.³¹ This means that recruitment³² is very closely tied to the number of individuals in the population.³³ Taking large numbers of individual sharks will significantly affect the current overall number of sharks in the ocean and the future success of shark species.³⁴

B. The Shark Finning Industry Continues to Decimate Global Shark Populations

For centuries, people believed in the “bounty of the sea,” viewing the ocean is an inexhaustible resource.³⁵ Recent history has proven that this concept is completely invalid.³⁶ The Atlantic Cod fishery is a prime example of how overexploitation can decimate a species beyond the scope of recovery.³⁷ With the increasing demand for shark fins, shark populations have plummeted.³⁸ It is estimated that humans kill seventy to one hundred million sharks a year.³⁹ Atlantic hammerhead numbers are down eighty-nine percent, thresher sharks are down eighty percent, white sharks are down seventy-nine percent, and tiger sharks are down sixty-five percent.⁴⁰

Sharks have been pursued for centuries for their skin, oil, meat, and fins, but only in the past twenty years has demand escalated to its present unsustainable levels.⁴¹ Shark fin soup dates back to China’s Sung Dynasty, which began in

³⁰ *Id.*

³¹ CRAWFORD, *supra* note 10, at 121.

³² Recruitment is the addition of members to a population. Recruitment is especially important for the sustainability of populations subjected to fishing pressure.

³³ Herndon et. al., *supra* note 27, at 1241.

³⁴ *Id.*

³⁵ Hugo Grotius first proposed this argument in the 17th century with his work *Mare Liberum* in which he argued for the “open seas” or “freedom of the seas” concept based on his belief that the ocean was an inexhaustible resource. See HUGO GROTIUS, *THE FREE SEA*, (Richard Hakluyt trans., Liberty Fund, 2004) (1609).

³⁶ See generally DESTINED FOR EXTINCTION: THE FATE OF CHILEAN SEA BASS, (National Environmental Trust, 2001) (describing how the Chilean Sea bass, also known as Patagonian toothfish, was a relatively unheard of fish until it became a popular restaurant item in the late 1990s and high demand and high prices led to rampant overfishing and a collapse in stocks throughout much of its known grounds).

³⁷ MICHAEL BERRILL, *PLUNDERED SEAS* 113 (D&M Publishers Inc., 1997).

³⁸ CRAWFORD, *supra* note 10, at 115.

³⁹ *Id.* This estimation was determined exclusively on reported catches. It is probable that the actual number of sharks killed by humans is much higher because many shark fatalities go unreported. See Morgan, *supra* note 7, at 1.

⁴⁰ CRAWFORD, *supra* note 10, at 115.

⁴¹ *Id.* at 121-27.

960 A.D.⁴² Throughout history shark fin soup was reserved for emperors and noblemen only. During the Maoist era of the twentieth century shark fin soup was illegal, because officials regarded its consumption as a remnant of bourgeoisie imperialism.⁴³ Shark fin soup began its meteoric rise in popularity with the 1986 Chinese reform and the subsequent repeal of the ban in 1987.⁴⁴ Since 1990, China's booming economy has resulted in an expanding middle class and an increased demand for shark fin soup.⁴⁵ Global catch reports indicate that shark catches doubled between 1980 and 1990.⁴⁶ With prices ranging from sixty-five to one hundred fifty dollars a bowl, the soup is served at banquets and weddings as a delicacy to impress guests.⁴⁷ The shark fins are reportedly tasteless and add nothing to the soup's overall flavor.⁴⁸ Traditional Chinese belief correlates the consumption of shark fins with virility, but in one of nature's greatest ironies, studies have shown that seventy percent of shark fins contain hazardous levels of mercury, which is known to cause sterility.⁴⁹

C. *Why Fishers Only Retain the Shark Fin*

Shark finning threatens to decimate the shark population because it allows fishermen to retain less than five percent of the overall weight of the shark.⁵⁰ This means that exponentially more sharks must die before a fishing vessel's hull is full. One of the main reasons for this waste is a quandary in capacities.⁵¹ Shark fin is one of the most valuable products in the sea.⁵² Depending on the size and quality of the fin, prices normally exceed sixty dollars⁵³ per kilogram for unprocessed shark fin.⁵⁴ However, prices can reach seven hundred dollars for highly prized fins.⁵⁵ The enormous fin of a whale shark in perfect condition can sell for as much as ten thousand dollars.⁵⁶ Shark meat on the other hand

⁴² MCCOY, *supra* note 3, at 11.

⁴³ CRAWFORD, *supra* note 10, at 127; *see* MCCOY, *supra* note 3, at 11.

⁴⁴ CRAWFORD, *supra* note 10, at 127; *see* Jessica Spiegel, *Even Jaws Deserves to Keep His Fins: Outlawing Shark Finning Throughout Global Waters*, 24 B.C. INT'L & COMP. L. REV. 409, 411 (2001).

⁴⁵ Spiegel, *supra* note 44, at 411-12.

⁴⁶ CRAWFORD, *supra* note 10, at 127.

⁴⁷ *Id.* at 129.

⁴⁸ MCCOY, *supra* note 3, at 11.

⁴⁹ CRAWFORD, *supra* note 10, at 131.

⁵⁰ *See id.* at 128.

⁵¹ *Id.*

⁵² TRACHET ET AL., *supra* note 18, at 1.

⁵³ All prices are in U.S. dollars unless otherwise stated.

⁵⁴ Herndon et al., *supra* note 27, at 1240.

⁵⁵ Morgan, *supra* note 7, at 4.

⁵⁶ SHARKWATER (Warner Home Video 2007).

brings a return of approximately two dollars per kilogram.⁵⁷ Any businessman with high overhead expenses faced with the decision between returning with a boat full of gold, and returning with a boat containing five percent⁵⁸ gold and the rest aluminum does not have a real choice. The answer is obvious, even to those unversed in economics.

The meat of the shark is not retained for many reasons. First, production of shark meat on a large scale is not economically viable.⁵⁹ Shark meat contains high levels of urea that sharks use to regulate their buoyancy.⁶⁰ If not properly handled, bacterial enzymes quickly convert this urea to ammonia that immediately spoils the meat of not only the shark, but any fish that the ammonia comes into contact with in the vessel's hold.⁶¹ Therefore, a small to non-existent market for shark meat exists because of the possibility of ruining an entire hold of high priced tuna by mixing in a few shark carcasses.⁶²

Second, most sharks that are finned are landed as bycatch from tuna longliners and other fisheries.⁶³ Prior to the rise in popularity of shark fin soup, these sharks were avoided or struck off the line before being landed.⁶⁴ While shark fin is highly valuable, tuna meat is much more valuable than shark meat.⁶⁵ Economics dictate a tuna longliner to not fill its hull with the less valuable shark meat.⁶⁶ As a result, the valuable fins are retained while the rest of the shark is discarded to reserve room for tuna.⁶⁷

D. Why Sharks are Vital to Ocean Ecosystems

Sharks are apex predators playing a vital role in balancing the ocean's ecosystems. While it may seem counterintuitive, ecosystems with a high number of apex predators are significantly more balanced, which results in a greater level of overall fish biomass.⁶⁸

⁵⁷ Morgan, *supra* note 7, at 4.

⁵⁸ Many national and international regulatory bodies generally regulate on the proposal that the average fin to carcass weight ratio in sharks is roughly five percent. *See generally* WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION, PACIFIC ISLANDS – REGIONAL PLAN OF ACTION FOR SHARKS (2009), available at <http://www.ffa.int/sharks>.

⁵⁹ MCCOY, *supra* note 3, at 14.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.* at 13.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ CRAWFORD, *supra* note 10, at 128.

⁶⁷ MCCOY, *supra* note 3, at 13.

⁶⁸ “When top predators disappear from the ocean, their principal prey species, sometimes called *mesoconsumers*, can increase in abundance. These are species in the middle of the food web. . . which both eat and are eaten by other marine species. As mesoconsumers increase in number, they

The reason for this is a “cascading” or “top down” effect that results from the removal of apex predators having a detrimental effect on organisms at lower trophic levels.⁶⁹ This has been seen in many other terrestrial and aquatic ecosystems. The removal of sea otters in the Pacific Northwest led to an escalation in algae-eating sea urchins and a decline in the vitality of kelp forests.⁷⁰ The major concern facing ocean ecosystems is that fisheries are operating without the proper scientific knowledge to understand whether these species can withstand the fishing effort.⁷¹ The effect of a massive decline in the shark population is uncertain because so little is understood about apex predators and sharks in general.⁷² There is a growing understanding that “species may be extirpated before we even understand their role in the ecosystem.”⁷³ The repercussions of eliminating shark populations have recently evinced in a few fisheries.

Along the East Coast of the United States, the overfishing of shark populations has already resulted in ecosystem reorganization.⁷⁴ The loss of a significant percentage of the large shark population resulted in an explosion in the number of smaller sharks, rays, and skates (“chondrichthyes”).⁷⁵ These smaller chondrichthyes, especially the rays, eat scallops, clams, and oysters (“bivalves”).⁷⁶ Consequentially, the bivalve fisheries collapsed in many areas due to the increased pressure placed on the species by the overabundance of rays.⁷⁷ In turn, the bivalve populations gain nourishment through filter feeding, which results in clean and clear water.⁷⁸ The loss of filter feeders on the coasts and in the bays along the East Coast has been compared to a pool that lost its filtration system.⁷⁹ This makes the ocean, which already bears the burden of dealing with pollution and runoff, more susceptible to increased algal blooms

can in turn put more pressure on the species that they consume. A cascade of effects can occur through several layers of the food web as the mesoconsumers eat more of the smaller fish, crustaceans and plants at lower levels in the web.” The overabundance of mesoconsumers will overexploit the smaller fish, crustaceans, and plants, leading to a loss of food for the mesoconsumers and an eventual collapse of the ecosystem. HEITHAUS ET AL., *supra* note 14.

⁶⁹ *Id.*

⁷⁰ Mike Bennett, *The Role of Sharks in the Ecosystem*, SEAWEEK (2005) at 2.

⁷¹ *Id.*

⁷² *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Shelley Clarke, PhD, Visiting Researcher Imperial College London).

⁷³ Bennett, *supra* note 70, at 2.

⁷⁴ Griffin et al., *Predators as Prey: Why Healthy Oceans Need Sharks*, OCEANA (July 2008), at 5-6.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ Griffin et al., *supra* note 74, at 6.

⁷⁹ *Id.*

and dead zones.⁸⁰

The Caribbean Sea has also witnessed ecosystem decline in many areas.⁸¹ Coral reef is the foundation of many marine ecosystems.⁸² In a healthy reef, there is a balance of power between the algae and coral that helps to maintain the basic building blocks of the near shore marine habitat.⁸³ In that system, herbivorous fish⁸⁴ feed on the algae, keeping algae populations at bay and allowing the coral to flourish.⁸⁵ Large sharks keep the populations of intermediary predators, such as grouper, in check.⁸⁶ With a loss of large sharks in the Caribbean, there has been an increase in the number of intermediary predators.⁸⁷ This has led to a decline in herbivorous fish species.⁸⁸ That, in turn, enabled an algae explosion⁸⁹ that has overtaken vast stretches of coral reef.⁹⁰ As the coral dies, the structure that provides food and shelter for a majority of fish and other species deteriorates and results in a collapse in overall fish biomass.⁹¹

III. UNITED STATES SHARK CONSERVATION: A HISTORY OF EXPANSION, BLUNDER, AND REVISION

A. *Early Attempts at Shark Conservation*

The United States has a long history of enacting shark conservation legislation prior to the Shark Conservation Act of 2010. Before the Shark Finning Prohibition Act of 2000⁹², all shark protection measures were promulgated under the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (“Magnuson-Stevens Act”).⁹³ Under the Magnuson-Stevens Act, the Secretary of Commerce regulates shark fisheries because they

⁸⁰ *Id.*

⁸¹ Morgan, *supra* note 7.

⁸² Griffin et al., *supra* note 74, at 9.

⁸³ *Id.* at 8.

⁸⁴ Herbivorous fish are fish that eat plants and algae.

⁸⁵ Griffin et al., *supra* note 74, at 9.

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ The loss of large sharks in the ocean is only one factor contributing to the algal explosion. Other factors are increased sea temperature, acidification, invasive species, pollution, and sedimentation. *Id.* at 9.

⁹⁰ Griffin et al., *supra* note 74, at 9.

⁹¹ Griffin et al., *supra* note 74, at 10. Biomass is the amount of living matter in a unit area or volume of habitat. MERRIAM-WEBSTER, available at <http://www.merriam-webster.com/dictionary/biomass>.

⁹² Shark Finning Prohibition Act of 2000, H.R. 5461, 106th Cong. (2000).

⁹³ Magnuson-Stevens Fishery Conservation and Management Reauthorization Act, 16 U.S.C. §§ 1801-1891 (2006); Spiegel, *supra* note 44, at 415.

are “highly migratory species” and thus beyond the scope of regulation vested in the regional fishery management councils.⁹⁴ This, however, does not prohibit states from regulating shark fisheries within state waters.⁹⁵ The Secretary of Commerce has delegated the responsibility for shark conservation to the National Marine Fisheries Service (“NMFS”).⁹⁶

Shark conservation became a concern after a 1993 report by the National Oceanic and Atmospheric Administration (“NOAA”) revealed that certain shark species had declined as much as eighty percent between the early 1970s and late 1980s.⁹⁷ This led to the formation of the 1993 Atlantic Shark-Fishery Management Plan for Sharks of the Atlantic Ocean in which NMFS prohibited the finning of sharks in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea.⁹⁸ This plan, however, prohibited only the wasteful practice of cutting off the shark fins at sea and discarding the carcasses.⁹⁹ It still allowed commercial ships with permits to possess fins as long as the number of fins was proportional to the number of carcasses on board.¹⁰⁰ In 1997, a further decline in shark populations prompted NMFS to extend the shark finning ban to all sharks instead of just the thirty-nine originally listed species.¹⁰¹

In 1999, Congress enacted the “Pacific Resolution” in an effort to complete the shark finning ban in United States’ waters.¹⁰² The impetus for this resolution came from a NMFS report that the number of sharks killed in the Central and Western Pacific fisheries rose from 2,289 in 1991 to 60,857 in 1998.¹⁰³ The Pacific Resolution lacked substance because it only defined “shark finning” and urged all federal and state agencies to ban the practice in their waters.¹⁰⁴

⁹⁴ 16 U.S.C.S. § 1857 (West 2011). There are eight Fisheries Management Councils: New England, Mid-Atlantic, South Atlantic, Caribbean, Gulf of Mexico, Pacific, North Pacific, and Western Pacific. Each council is composed of a state officer, the regional director for NMFS, and four to twelve qualified individuals appointed by the Secretary of Commerce from candidates chosen by the governors of the regional states. *See* DALE GOBLE & ERIC FREYFOGLE, WILDLIFE LAW CASES AND MATERIALS 830-832 (Foundation Press, 2nd ed. 2010).

⁹⁵ Spiegel, *supra* note 44. State waters extend three miles from shore, except for those of Texas and Florida which extend nine miles out to sea. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, STATE JURISDICTION AND FEDERAL WATERS 2 (2011), *available at* www.seagrant.gso.uri.edu/coast/cmstp_material/state_fed-waters.pdf.

⁹⁶ *Blue Water Fishermen’s Ass’n v. Mineta*, 122 F. Supp. 2d 150, 155-56 (D. D.C. 2000).

⁹⁷ Spiegel, *supra* note 44, at 412.

⁹⁸ *Id.* at 416

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 417.

¹⁰² *Id.* at 420.

¹⁰³ *Id.* at 419-20.

¹⁰⁴ *Id.* at 423.

B. *The Shark Finning Prohibition Act of 2000*

Congress promulgated the Shark Finning Prohibition Act of 2000¹⁰⁵ (“SFPA”) to “amend the Magnuson-Stevens Fishery Conservation and Management Act to eliminate the wasteful and unsportsmanlike practice of shark finning.”¹⁰⁶ This was the first attempt by Congress to enact federal legislation to ban shark finning throughout all United States’ waters. Even though it was Congress’ clear intent to ban shark finning in the United States, major loopholes existed that allowed United States waters, harbors, and ships to facilitate the trade in shark fins globally. These loopholes are best illustrated by analyzing a landmark shark finning case.

In *United States v. Approximately 64,695 Pounds of Shark Fins*, the King Diamond II (“KD II”) was a vessel owned by an American company and hired by a Hong Kong company.¹⁰⁷ The vessel retrieved shark fins from twenty different foreign fishing vessels on the high seas and delivered the fins to Guatemala in 2002.¹⁰⁸ The United States Coast Guard boarded the KD II 250 miles off the coast of Guatemala and found approximately 64,695 pounds of shark fins, but no carcasses.¹⁰⁹ The KD II was then detained and escorted back to San Diego where the shark fins were seized.¹¹⁰ Questions arose as to whether the KDII was a fishing vessel under the SFPA, if the company had notice that their vessel could be considered a fishing vessel under the SFPA, and whether the seizure violated due process.

The SFPA amended the Magnuson-Stevens Act and, therefore, relies on that Magnuson-Stevens Act for its definition of “fishing vessel.”¹¹¹ The Magnuson-Stevens Act defines a fishing vessel as

[A]ny vessel, boat, ship, or other craft which is used for, equipped to be used for, or of a type which is normally used for—(A) fishing; or (B) aiding or assisting one or more vessels at sea in the performance of any activity relating to fishing, including, but not limited to, preparation, supply, storage, refrigeration, transportation, or processing.¹¹²

In turn, the SFPA makes it unlawful to remove the fins of a shark and discard the carcass at sea; “to have custody, control, or possession of any such fin aboard a fishing vessel without the corresponding carcass; or . . . to land any

¹⁰⁵ Shark Finning Prohibition Act of 2000, 16 U.S.C. § 1822 (2000).

¹⁰⁶ *Id.*

¹⁰⁷ U.S. v. *Approximately 64,695 Pounds of Shark Fins*, 520 F.3d 976, 978 (9th Cir. 2008).

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 979.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Approximately 64,695 Pounds of Shark Fins*, 520 F.3d at 978.

such fin without the corresponding carcass.”¹¹³ The SFPA also establishes a

[R]ebutable presumption that any shark fins landed from a fishing vessel or found on board a fishing vessel were taken, held, or landed in violation of subparagraph (P) if the total weight of shark fins landed or found on board exceeds 5 percent of the total weight of shark carcasses landed or found on board.¹¹⁴

As these statutory provisions demonstrate, the prohibition hinges on whether a boat is considered a fishing vessel. The SFPA requirements do not apply to vessels that are not fishing vessels, as defined under the Magnuson-Stevens Act.

The KD II was originally registered with a “Fishery” endorsement; however, before leaving Hawai’i, the company re-documented the KD II with a “Registry” endorsement.¹¹⁵ Despite its lack of a fisheries endorsement, the district court held that the KD II was a fishing vessel under the Magnuson-Stevens Act because it “aided and assisted vessels at sea in the performance of fishing-related activities.”¹¹⁶ “Specifically, the district court found that the KD II’s ‘purchase, storage, and transport’ of the shark fins aided and assisted the foreign fishing vessels.”¹¹⁷

The Ninth Circuit Court of Appeals reversed this finding and held that the KD II was not a fishing vessel under the Magnuson-Stevens Act and thus did not violate the SFPA.¹¹⁸ The Ninth Circuit reasoned that the charterers of the KD II purchased and transported the fins for their own financial gain and therefore were not assisting the fishing vessels in any way.¹¹⁹ The court further ruled that

[A] reasonable person would not have fair notice that the activities of the KD II would render it a fishing vessel under [the SFPA]. As a result, we hold that the district court’s application of the possession prohibition of the SFPA to the KD II as a fishing vessel under [the SFPA] violated due process.¹²⁰

The KD II case instigated a furious debate that eventually led to a giant loophole being torn into the SFPA. The district court found that the KD II aided

¹¹³ 16 U.S.C.A. § 1857(1)(P) (West 2008), quoted in *Approximately 64,695 Pounds of Shark Fins*, 520 F.3d at 978.

¹¹⁴ Shark Finning Prohibition Act of 2000, 16 U.S.C. § 1822(3) (2000).

¹¹⁵ *Approximately 64,695 Pounds of Shark Fins*, 520 F.3d at 978. Under a “Fishery” endorsement, a vessel is allowed to engage in fishing and land its catch in U.S. ports. See 46 C.F.R. § 67.21(a) (2009). A “Registry” endorsement “entitles a vessel to employment in foreign trade. . . and any other employment for which a . . . fishery endorsement is not required. See 46 C.F.R. § 67.17(a) (2009).

¹¹⁶ *Approximately 64,695 Pounds of Shark Fins*, 520 F.3d at 978.

¹¹⁷ *Id.* at 980.

¹¹⁸ *Id.* at 981, 983.

¹¹⁹ *Id.* at 980-81.

¹²⁰ *Id.* at 983.

and assisted the fishing vessels because it allowed the fishing vessels to stay out longer than normal, catch more sharks, and harvest more shark fins.¹²¹ The Ninth Circuit's holding directly inspired Congressional action to reform the United States' position on shark finning with clear intent to comprehensively ban shark finning involving United States' ships, ports, and waters.¹²²

C. The Shark Conservation Act of 2010

The Shark Conservation Act of 2010 ("SCA") was Congress' answer to the SFPA's loopholes. The SCA amends the SFPA by making it a prohibited act:

- to remove any of the fins of a shark (including the tail) at sea;
- to have custody, control, or possession of any such fin aboard a fishing vessel unless it is naturally attached to the corresponding carcass;
- to transfer any such fin from one vessel to another vessel at sea, or to receive any such fin in such transfer, without the fin naturally attached to the corresponding carcass; or
- to land any such fin that is not naturally attached to the corresponding carcass, or to land any shark carcass without such fins naturally attached.¹²³

This section is supplemented by the amended "rebuttable presumption clause"¹²⁴ that dictates a rebuttable presumption that any shark fins found aboard a vessel, other than a fishing vessel, that are not naturally attached to a shark carcass were transferred in violation of the SCA.¹²⁵ Also, if the weight of shark fins exceeds five percent of the weight of shark carcasses landed on any vessel,

¹²¹ *Approximately 64,695 Pounds of Shark Fins*, 520 F.3d at 981.

¹²² "The bill before us today, H.R. 81, remedies the problem presented by the 2008 court ruling. The proposed language clarifies that all vessels, not just fishing vessels, are prohibited from having custody, control, or possession of shark fins without the corresponding carcass, thereby eliminating the unexpected loophole related to the transport of shark fins." 1020 CONG. REC. H8791 (daily ed. Dec. 21, 2010) (statement of Rep. Faleomavaega).

¹²³ 16 U.S.C. § 1857(1)(P)(i)-(iv) (2006).

¹²⁴ A rebuttable presumption is "[a]n inference drawn from certain facts that establish a prima facie case, which may be overcome by the introduction of contrary evidence." BLACK'S LAW DICTIONARY 1306 (9th ed. 2009).

¹²⁵ "For purposes of subparagraph (P), there shall be a rebuttable presumption that if any shark fin (including the tail) is found aboard a vessel, other than a fishing vessel, without being naturally attached to the corresponding carcass, such fin was transferred in violation of subparagraph (P)(iii) or that if, after landing, the total weight of shark fins (including the tail) landed from any vessel exceeds five percent of the total weight of shark carcasses landed, such fins were taken, held, or landed in violation of subparagraph (P). In such subparagraph, the term "naturally attached", with respect to a shark fin, means attached to the corresponding shark carcass through some portion of uncut skin." 16 U.S.C. § 1857 (2006).

it is presumed that the fins were taken, held, or landed, in violation of the SCA.¹²⁶

These amendments demonstrate Congress' firm intent to outlaw the possession of fins onboard a vessel or the landing of shark fins unless they are naturally attached to a shark carcass. Many conservation groups believe this measure will effectively make shark finning illegal in all U.S. waters.¹²⁷

1. The Smooth Dogfish Savings Clause

There is one remaining loophole in the Shark Conservation Act of 2010 that has many members of the conservation community up in arms.¹²⁸ The Smooth Dogfish Savings Clause states that the SCA regulation against the possession of shark fins does not apply to individuals that possess a license to commercially fish smooth dogfish (*Mustelus canis*) within fifty miles of shore as long as the weight of smooth dogfish fins do not exceed twelve percent of the total weight of smooth dogfish carcasses.¹²⁹

This saving clause arises out of a 2009 North Carolina law that bans shark finning but protects the smooth dogfish fishery that thrives along the North Carolina coast.¹³⁰ North Carolina fishermen insist that the shark must be processed at sea to preserve the meat.¹³¹ They also claim that the North Carolina dogfish fishery does not pose the classic unsustainability problems due to the relatively high price and substantial market for smooth dogfish meat, which eliminates temptation to dispose of the carcasses at sea.¹³² Scientist have come forward in defense of the Smooth Dogfish Savings Clause by demonstrating that smooth dogfish have a quick maturity rate and short gestation period, which

¹²⁶ 16 U.S.C. § 1857 (2006).

¹²⁷ Juliet Eilperin, *Congress passes shark protection bill*, WASH. POST, Dec. 21, 2010, available at <http://www.washingtonpost.com/wp-dyn/content/article/2010/12/20/AR2010122004046.html>; see *Big Gains Made in Shark Conservation, But Extinction Still Possible*, ALTERNET ENVTL. NEWS SERV., Jan. 7, 2011, available at http://www.alternet.org/water/149442/big_gains_made_in_shark_conservation_but_extinction_still_possible?page=entire.

¹²⁸ See Jeff Mackey, *Virginia and North Carolina Going the Wrong Way for Sharks*, THE PETA FILES, Oct. 22, 2009, available at <http://www.peta.org/b/thepetafiles/archive/2009/10/22/virginia-and-north-carolina-going-the-wrong-way-for-sharks.aspx>.

¹²⁹ The amendments made by subsection (a) do not apply to an individual engaged in commercial fishing for smooth dogfish (*Mustelus canis*) in that area of the waters of the United States located shoreward of a line drawn in such a manner that each point on it is fifty nautical miles from the baseline of a State from which the territorial sea is measured, if the individual holds a valid State commercial fishing license, unless the total weight of smooth dogfish fins landed or found on board a vessel to which this subsection applies exceeds twelve percent of the total weight of smooth dogfish carcasses landed or found on board. 16 U.S.C. § 1857(b)(1) (2006).

¹³⁰ Posting by Chuck to Ya Like Dags?, *Shark Finning Fisheries and Smooth Dogfish*, YA LIKE DAGS?, <http://yalikedags.southernfriedscience.com/?p=388> (Dec. 31, 2010).

¹³¹ *Id.*

¹³² *Id.*

could mean that it may be one of the very few shark populations that could support a sustainable fishery.¹³³ For good or ill, the status of the Smooth Dogfish will surely be a highly debated topic in the years to come.

2. A Push for International Negotiations

An important part of the SCA is the amendment to the High Seas Driftnet Fishing Moratorium Protection Act¹³⁴ that requires the Secretary of Commerce to take action to protect sharks on an international level.¹³⁵ The SCA specifically dictates that:

The Secretary, in consultation with the Secretary of State, and in cooperation with relevant fishery management councils and any relevant advisory committees, shall take actions to improve the effectiveness of international fishery management organizations in conserving and managing fish stocks under their jurisdiction. These actions shall include:

(1) urging international fishery management organizations to which the United States is a member – (F) to adopt shark conservation measures, including measures to prohibit removal of any of the fins of a shark (including the tail) and discarding the carcass of the shark at sea[.]¹³⁶

And

(3) seeking to enter into international agreements that require measures for the conservation of sharks, including measures to prohibit removal of any of the fins of a shark (including the tail) and discarding the carcass of the shark at sea, that are comparable to those of the United States, taking into account different conditions[.]¹³⁷

Due to the highly migratory nature of most sharks, United States conservation efforts alone will not be sufficient to save the ocean's ecosystems from the cascading effects of apex predator loss. SCA section 102 requires the Secretary of Commerce to (1) push for shark finning prohibitions within fishery management organizations that the United States is already a part of, and (2) to develop new international agreements to prohibit the practice of shark finning.¹³⁸ Besides shark finning specific bilateral and multilateral international

¹³³ *Id.*

¹³⁴ High Seas Driftnet Fishing Moratorium Protection Act, 16 U.S.C.A § 1826d-k (West 2007).

¹³⁵ H.R. 81, 111th Cong. (2010), Cong. Res. Serv. Bill Summary and Status, *available at* <http://www.govtrack.us/congress/bills/111/hr81>.

¹³⁶ 16 U.S.C.A. § 1826i(1)(F) (West 2011).

¹³⁷ *Id.* § 1826i(3).

¹³⁸ *Id.* §§ 1826i(1)(F), i(3).

agreements¹³⁹ with foreign states, there are many international governing bodies, conventions, treaties, and management cooperatives that could include a shark finning prohibition within their current structure. The next section of this article examines some of these pre-existing frameworks to determine where a future international shark finning prohibition should rest.

IV. SHARK FINNING UNDER INTERNATIONAL LAW

International cooperation is crucial to prevent the overexploitation of sharks, but there is no internationally agreed upon norm or regime for shark conservation. There are over four hundred species of sharks.¹⁴⁰ They cover the spectrum of habits and behavior.¹⁴¹ Some are the world's greatest hunters, while others placidly filter plankton as they cruise through the sea.¹⁴² Some are enormous.¹⁴³ Others are very small.¹⁴⁴ The vast array of shark habits and habitat makes them very difficult to manage, which can hinder conservation efforts.¹⁴⁵ The most difficult characteristic of sharks for management and conservation is their highly migratory nature.¹⁴⁶ Sharks travel from the territorial waters of one nation, into the high seas, and back into the territorial waters of another nation.¹⁴⁷ This means that one nation alone cannot effectively conserve a shark population. A coordinated international effort is essential to save sharks from overfishing and other unsustainable practices.¹⁴⁸

Shark fishing occurs in waters throughout the globe; however, the majority of shark fishing effort is concentrated among a handful of fishing fleets.¹⁴⁹ The top twenty shark fishing states account for eighty percent of the world's annual shark catch.¹⁵⁰ Indonesia, India, Spain, and Taiwan make up the top four shark fishing states and comprise thirty-five percent of the annual catch.¹⁵¹ Indonesia

¹³⁹ A bilateral agreement is a treaty or agreement reached by two states while a multilateral agreement is a treaty or agreement that includes more than two states. *See* BLACK'S LAW DICTIONARY 1112 (9th ed. 2009).

¹⁴⁰ *See* CRAWFORD, *supra* note 10, at 18.

¹⁴¹ *See generally id.* at 21-46.

¹⁴² *Id.* at 45.

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ Herndon et al., *supra* note 27, at 1240.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ MARY LACK & GLENN SANT, THE FUTURE OF SHARKS: A REVIEW OF ACTION AND INACTION 2 (TRAFFIC International and the PEW Environmental Group 2011), available at http://www.pewtrusts.org/our_work_report_detail.aspx?id=327611.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

alone boasts thirteen percent of the world's catch.¹⁵² While China is the focal point of hostility toward the shark fin trade and is the impetus behind the practice, it is not one of the top shark fishing states.¹⁵³ This means that China's shark fishing comprises around one percent of the annual shark catch – they simply buy the fins from other fishers.¹⁵⁴ To improve the sustainability of shark fishing, public awareness efforts should focus on changing China's public attitude toward shark fin soup. Meanwhile, diplomatic efforts should focus on pressuring top shark fin producing nations to adopt fishing regulations.

A. *Pervasive Problems Presented in Regulating the Shark Fin Trade*

The shark fin trade is a perfect example of the “tragedy of the commons.”¹⁵⁵ This tragedy is compounded by myriad other factors resulting in a prime example of unsustainable practices that threaten to unravel our ocean resources beginning with the apex predators and then running down the food chain. These factors consist of: (1) illegal, unregulated, and unreported fishing (“IUU”); (2) a lack of scientific knowledge necessary to determine sustainable quotas; (3) a lack of funding and governance arrangements in developing countries to properly implement and enforce regulations; and (4) the transshipment of shark fins at sea which makes regulation nearly impossible.

1. *Illegal, Unreported, and Unregulated Fishing*

Illegal, unregulated, and unreported fishing is an issue intrinsically linked to shark finning over the past decade. The United Nations Food and Agriculture Organization (“FAO”) defined IUU as “activities which contravene established requirements of RMFO’s¹⁵⁶, nations, and international law.”¹⁵⁷ A 2006 report placed a 9.5 billion dollar annual value on the IUU fish market.¹⁵⁸ Some

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ The “tragedy of the commons” is the idea that, in an open resource system, it is in each individual's best interest to exploit the resource to his or her fullest potential before someone else does; even though he/she knows this exploitation is patently unsustainable. See Garrett Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243, 1244 (Dec. 13, 1968).

¹⁵⁶ Regional Fisheries Management Organization's (“RFMO's) are governing bodies set up by international treaty to manage either a specific directed fishery (such as Indian Ocean Tuna Commission) or a geographic region (such as the Western and Central Pacific Fisheries Commission). See generally Erika J. Techera & Natalie Klein, *Fragmented Governance: Reconciling Legal Strategies for Shark Conservation and Management*, *ELSEVIER MARINE POLICY* 35, 73 (2011).

¹⁵⁷ *Shark Conservation: Hearing on H.R. 5741 before Committee on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (statement of J. Charles Fox, Senior Officer of PEW Environmental Group).

¹⁵⁸ *Id.*

scholars believe IUU could comprise as much as fifty percent of the total fish catch entering the market.¹⁵⁹

The IUU presence undermines conservation in many ways. First, many nations reject more stringent fishing regulations because they would increase IUU profits while hurting legal fishermen.¹⁶⁰ This is because stringent regulations constrain legal fishermen and thus preserve the bulk of the stock for IUU fishermen.¹⁶¹ Second, IUU undermines scientists' ability to determine the annual fishing effort and to establish accurate sustainable fishing quotas.¹⁶²

A major problem in regulating fishing is the concept of "flags of convenience."¹⁶³ Under international law, a vessel must fly a single nation's flag and that nation is responsible for ensuring that the vessel complies with international fishing regulations.¹⁶⁴ While a majority of the states take this responsibility seriously, some nations are incapable or uninterested in governing vessels under their flag.¹⁶⁵ This makes vessels unaccountable to a specific prosecuting body for fishing violations on the high seas.¹⁶⁶ This problem is compounded by the ease at which a vessel can "re-flag" itself.¹⁶⁷ If faced with a situation that makes it necessary, a vessel can re-flag itself to a "flag of convenience" at sea in only a matter of hours through websites such as www.flagsofconvenience.com.¹⁶⁸

IUU fishing does not only plague developing states; the United States is currently battling IUU fishing along its border with Mexico.¹⁶⁹ Fishing communities, such as Playa Bagdad, near the United States border, have been growing with the increasing demand for shark fins.¹⁷⁰ These fishermen use small skiffs and turn off all boat lights to cross the border into United States' waters at night.¹⁷¹ To combat this, the United States Coast Guard increased its presence, but the IUU fishing communities continue to grow.¹⁷² Many arrests have been made, but most only lead to an overnight stay in jail, a seizure of the

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ Kevin Seiff, *Quest for Shark Fins Brings Mexican Fishermen to American Waters*, WASH. POST, March 17, 2011, available at http://www.washingtonpost.com/world/quest-for-shark-fins-brings-mexican-fishermen-to-american-waters/2011/03/02/ABhwmAf_story.html.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

vessel and fishing gear, and deportation the following day.¹⁷³ Many arrested fishermen are back on the water within days.¹⁷⁴ Local fishermen point to lax regulations, overfishing, and depleted stocks in Mexican waters as the impetus for crossing the border into the shark rich waters of the United States.¹⁷⁵ IUU fishing families in Playa Bagdad can make five thousand to ten thousand dollars a month.¹⁷⁶ One member of the community related that, “I’ve lost more than thirteen boats to the patrol in the last ten years. We’ve lost thousands of dollars in equipment . . . But we’ve made four times more money fishing across the border than we would have made otherwise. It’s worth the risk.”¹⁷⁷

2. Inadequate Scientific Knowledge

A lack of scientific knowledge also hinders shark conservation efforts.¹⁷⁸ The lack of long-term data makes it difficult to assess shark stocks and to formulate a conclusion with certainty that shark stocks are in decline.¹⁷⁹ Without this certainty it is hard to convince some fisheries management bodies that strict conservation measures are necessary.¹⁸⁰ This is especially true where sharks are caught as bycatch in more profitable fisheries, such as the tuna industry, where efforts to reduce shark bycatch will inevitably reduce the target catch.¹⁸¹ Stock abundance assessments rely on the collection and analysis of catch data; the high level of unreported shark mortality from fishing fleets precludes any meaningful estimate of stock size and abundance trends.¹⁸²

3. Enforcement and Resource Issues

Efforts in shark conservation and management necessitate a complex web of officials, enforcement agents, and port-based facilities.¹⁸³ Many developing or recently developed nations do not have and cannot afford the infrastructure necessary to properly implement shark conservation measures.¹⁸⁴ A lack of

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ See generally Bennett, *supra* note 70.

¹⁷⁹ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Shelley Clarke, PhD, Visiting Researcher Imperial College London).

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² Interview with Allison Rieser, Professor of Ocean Policy, University of Hawaii, in Honolulu, Haw. (Apr. 20, 2011).

¹⁸³ See SHARKWATER (Warner Home Video 2007).

¹⁸⁴ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House*

facilities in developing countries for checking and recording catches creates loopholes in which shark fin traders can land and process their product before exportation.¹⁸⁵ Once a shark fin is landed and processed, it becomes nearly impossible trace.¹⁸⁶ This makes even the most wary consumer or official unable to determine whether a product comes from a sustainable fishery or is the result of IUU fishing.¹⁸⁷

4. Transshipment

Transshipment¹⁸⁸ at sea has quickly become the norm for fisheries such as shark finning.¹⁸⁹ A fishing vessel can now stay at sea for months with supplies and crew provided by support vessels.¹⁹⁰ A fishing vessel offloads its catch directly onto a processing or cargo ship, thus emptying its hold and allowing it to stay at sea to catch more fish.¹⁹¹ As the shark fin market increases in China and the number of suppliers is limited by international regulation, competition for shark fins in the market is becoming fierce.¹⁹² Transshipment at sea affords producers a way to “scoop” the competition and purchase shark fins at sea before they become available in the highly competitive land-based markets.¹⁹³ This makes regulating bodies that determine quotas based on fishing vessel landings obsolete.¹⁹⁴

There are many obstacles and quandaries in regulating the shark fin industry, but there are international bodies, treaties, and agreements presently in place that, if properly implemented, could effectively reverse the overexploitation and save shark populations from extinction.

Natural Resources Subcommittee on Fisheries, Wildlife and Oceans, 110th Cong. (2008) (Statement of Dr. Rebecca Lent, National Oceanic and Atmospheric Administration U.S. Department of Commerce).

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ Transshipment is the movement of articles or goods from one vessel to another. See Business Dictionary.com, <http://www.businessdictionary.com/definition/transshipment.html>.

¹⁸⁹ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Shelley Clarke, PhD, Visiting Researcher Imperial College London).

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.*

B. The United States' Role in the International Forum

1. Import Prohibitions Under the Driftnet Act

The Shark Conservation Act (“SCA”) of 2010 sets up a powerful infrastructure for the United States to utilize in compelling an international end to shark finning.¹⁹⁵ The SCA amends the High Seas Driftnet Fishing Moratorium Act (“Driftnet Act”) to require nations to adopt “equivalent conservation measures” to those of the United States in regard to shark finning.¹⁹⁶ If a nation fails to do so, the United States can impose import prohibitions on the offending nation under the Driftnet Act¹⁹⁷ and, if needed, it can issue heavy sanctions under the Pelly Amendment.¹⁹⁸

The Pelly Amendment enlists tiers of escalating severity designed to coerce an offending nation into compliance with United States conservation measures. Initially, the Secretary of Commerce (“Secretary”) is to identify and list any nation that:

[H]as not adopted a regulatory program to provide for the conservation of sharks, including measures to prohibit removal of any of the fins of a shark (including the tail) and discarding the carcass of the shark at sea, that is comparable to that of the United States, taking into account different conditions.¹⁹⁹

The Secretary, acting through the Secretary of State, is directed to notify the offending nation of the United States’ policy under the Driftnet Act,²⁰⁰ initiate discussions to develop²⁰¹ or amend²⁰² bilateral or multilateral conservation treaties, and to seek an agreement through the United Nations, the FAO Committee on Fisheries, or the appropriate international fisheries management

¹⁹⁵ See Shark Conservation Act of 2010, 16 U.S.C.A. § 1801 (West 2011).

¹⁹⁶ While the scope of this paper is limited to an analysis of shark finning regulations, the “equivalent conservation measures” also include infrastructure to certify any nation if “fishing vessels of that nation are engaged, or have been engaged during the preceding calendar year, in fishing activities or practices in waters beyond any national jurisdiction that target or incidentally catch sharks.” 16 U.S.C.A. § 1826k(a)(2)(A) (West 2011). This section basically calls on the Secretary to push for an international prohibition of shark harvest on the high seas. Also outside the scope of this article, there are “equivalent conservation measures” relating to identification of nations that do not comply with U.S. regulations on bycatch of protected marine living resources and nations that do not adopt a regulatory program to reduce bycatch. 16 U.S.C.A. § 1826k (West 2011).

¹⁹⁷ 16 U.S.C.A. § 1826a (West 2011).

¹⁹⁸ Pelly Amendment to the Fisherman’s Protective Act of 1967, 22 U.S.C. § 1978 (2006) (amending 22 U.S.C. § 1978 (1971)).

¹⁹⁹ 16 U.S.C.A. § 1826k(a)(2)(B) (West 2011).

²⁰⁰ *Id.* § 1826k(b)(1).

²⁰¹ *Id.* § 1826k(b)(2).

²⁰² *Id.* § 1826k(b)(4).

body for conservation measures.²⁰³ The Secretary is also required to biennially submit a list to Congress giving each fishing nation a positive or negative certification of compliance with United States' conservation measures.²⁰⁴ A nation receiving a negative certification, or failing to receive a certification, will be subject to import prohibitions listed in the provisions of the Driftnet Act.²⁰⁵

The Driftnet Act provides a variety of import prohibition options to persuade nations to align their conservation regulations with those of the United States.²⁰⁶ The Secretary of the Treasury can revoke clearance and deny entry to the vessels of a negatively certified nation to any place in the United States and to its navigable waters.²⁰⁷ The President, upon receiving notification of a nation's negative certification, shall direct the Secretary of the Treasury to "prohibit the importation into the United States of fish and fish products . . ." that were caught in IUU fishing.²⁰⁸ The Secretary is then to certify the offending nation to the President under the Pelly Amendment if: (1) the offending nation fails to conform its practices within six months of the issuance of a negative certification, and (2) the Secretary determines that the initial import prohibitions against IUU fish and fish products are insufficient to bring the offending nation into compliance or that nation has retaliated against the United States because of the initial sanctions.²⁰⁹

2. Trade Sanctions Under the Pelly Amendment

The Pelly Amendment is the United States' big stick in championing for marine conservation. Nations can be certified under the Pelly Amendment for two reasons. First, the Secretary can certify any nation "conducting fishing operations in a manner or under circumstances that diminish the effectiveness of an international fishery conservation program."²¹⁰ Second, the Secretary can certify any nation "engaging in trade or taking which diminishes the effectiveness of any international program for endangered or threatened species."²¹¹ As such, the resource being exploited either has to be under an international fishery program or be listed in an international program for

²⁰³ *Id.* § 1826k(b)(3).

²⁰⁴ *Id.* § 1826k(c).

²⁰⁵ *Id.* §§ 1826a(a), (b)(3), (b)(4), 1826k(c)(5).

²⁰⁶ The Driftnet Act contains an intricate and complicated web of possible sanctions, this article only outlines the sanctions that immediately apply to a nation's failure to implement equivalent shark finning prohibitions.

²⁰⁷ 16 U.S.C.A. § 1826a(a)(2) (West 2011).

²⁰⁸ *Id.* § 1826a(b)(3)(A)(ii); *see* 16 U.S.C.A. § 1826k(c)(5) (West 2011) (limiting the sanction to fish and fish products caught in IUU fishing).

²⁰⁹ 16 U.S.C.A. § 1826a(b)(4) (West 2011) (stating that certification under this section is equivalent to certification under the Pelly Amendment).

²¹⁰ 22 U.S.C.A. § 1978(a)(1) (West 2011).

²¹¹ *Id.* § 1978(a)(2).

endangered or listed species to fall under the Pelly Amendment.²¹² There are many arguments for how shark finning could fall under one of these categories, but these arguments are tenuous at best and would require protracted negotiation. To avoid the issue, Congress placed shark finning prohibition measures under the Pelly Amendment, through the Driftnet Act. Congress essentially sidestepped having to discuss the Pelly Amendment's two triggers.²¹³ This means that any nation lacking shark finning prohibitions equivalent to those of the United States is automatically a candidate for certification under the Pelly Amendment after going through the tiers of the Driftnet Act discussed *supra*.

The Pelly Amendment gives the President, through the Secretary of the Treasury, wide discretion to decide trade sanctions for a violation of conservation measures. The Pelly Amendment states that,

[u]pon receipt of any certification . . . the President may direct the Secretary of the Treasury to prohibit the bringing or the importation into the United States of any products from the offending country for any duration as the President determines appropriate and to the extent that such prohibition is sanctioned by the World Trade Organization . . . or the multilateral trade agreements. . . .²¹⁴

The penalty for violating a trade sanction under the Amendment is not more than ten thousand dollars for the first violation and twenty-five thousand dollars for each subsequent violation. Violations also include the possibility being required to forfeit illegally imported goods or the monetary value thereof.²¹⁵

3. Ethical Considerations for International Trade Sanctions

The ethics of international coercion have been widely debated and its effectiveness is yet to be established.²¹⁶ Many scholars advocate use of a mixed approach using both negative and positive reinforcement.²¹⁷ If the threat of trade sanctions is negative reinforcement, “offers of technical and financial assistance to build administrative, regulatory, and enforcement capacity” should be positive reinforcement.²¹⁸ Either way, the United States has lost its ability to

²¹² *Id.* §§ 1978(a)(1), (a)(2).

²¹³ 16 U.S.C. § 1826a(b)(4) (2006).

²¹⁴ 22 U.S.C.A. § 1978(a)(4) (West 2011).

²¹⁵ 22 U.S.C.A. § 1978(e)(1)-(2) (West 2011).

²¹⁶ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Dr. Rebecca Lent, National Oceanic and Atmospheric Administration U.S. Department of Commerce).

²¹⁷ *Id.*

²¹⁸ *Id.*

“bully” China due to the current economic reality. Luckily, China is only the greatest *importer* of shark fins, and the threat of trade sanctions against the top shark fishing nations, such as Indonesia, could be sufficient to encourage the nation to reconsider its shark finning regulations.

C. *Shark Finning and the United Nations General Assembly*

The necessity of international coordination of shark fin regulations makes the United Nations (“U.N.”) General Assembly the most appropriate body to address this issue. Another U.N. body, the Food and Agriculture Organization (“FAO”), has adopted policies promoting responsible and sustainable fisheries, in addition to collecting data on catches and trade. Much like other unsustainable and destructive fishing practices on the high seas that reap a high benefit on the international market, such as driftnet fishing and bottom trawling, shark finning regulations in the U.N. have received an equivocal standing.²¹⁹

1. United Nations General Assembly Resolutions

Shark finning has attained a special place in the international fisheries’ spotlight due to the work of non-government organizations (“NGOs”), the media, and ambassadors from many concerned nations.²²⁰ Shark finning first appeared in a United Nation’s General Assembly (“UNGA”) resolution²²¹ in 2006.²²² This resolution took a firm stance on the issue of shark finning by proclaiming that the UNGA:

Urges States, including those working through subregional or regional fisheries management organizations and arrangements, to implement fully the International Plan of Action for the Conservation and Management of Sharks, notably through the collection of scientific data regarding shark catches and the adoption of conservation and management measures, particularly where shark catches from directed and non-directed fisheries have a significant impact on vulnerable or threatened shark stocks, in order to ensure the conservation and management of sharks and their long-term sustainable use, including by banning directed shark fisheries conducted

²¹⁹ Fiji Addresses U.N. on Sea Law, ConnectMe, (Dec. 14, 2010, 9:11 AM), <http://www.connectme.com.fj/news/national/Fiji-addresses-UN-on-Sea-Law?page=2>. U.N. efforts to prohibit shark finning have been vague and lack any enforcement mechanism. U.N. Resolutions have “urg[ed]” and “called upon states . . . to consider” banning directed fisheries for shark fins. See G.A. Res. 61/105 ¶ 10, U.N. Doc. A/RES/61/105 (Nov. 9, 2006).

²²⁰ Fiji Addresses U.N. on Sea Law, ConnectMe, (Dec. 14, 2010, 9:11 AM), <http://www.connectme.com.fj/news/national/Fiji-addresses-UN-on-Sea-Law?page=2>.

²²¹ UNGA resolutions are non-binding agreements made in the UNGA that pass with a fifty percent plus one vote, unless it is an “important question”, then there is a required two-thirds majority vote.

²²² G.A. Res. 61/105, ¶ 10, U.N. Doc. A/RES/61/105 (Nov. 9, 2006).

solely for the purpose of harvesting shark fins and by taking measures for other fisheries to minimize waste and discards from shark catches, and to encourage the full use of dead sharks[.]²²³

The mention of shark finning was omitted from the UNGA resolution in 2007, but reappeared in subsequent resolutions in 2008, 2009, and 2010.²²⁴ Later resolutions took a much more equivocal approach to shark finning. The UNGA:

Calls upon States to take immediate and concerted action to improve the implementation of and compliance with existing regional fisheries management organization or arrangement and national measures that regulate shark fisheries, in particular those measures which prohibit or restrict fisheries conducted solely for the purpose of harvesting shark fins, and, where necessary, to consider taking other measures, as appropriate, such as requiring that all sharks be landed with each fin naturally attached.²²⁵

Many nations viewed the change in language as “backsliding” by UNGA on shark fin prohibitions and the United States and many Pacific Island states have since called for more stringent international standards for a shark finning ban.²²⁶

2. UNCLOS as an Infrastructure for International Cooperation

The basic legal principles and framework for conserving living marine resources are contained in the United Nations Convention on the Law of the Sea (“UNCLOS”).²²⁷ UNCLOS’ preamble explicitly states the U.N.’s desire for UNCLOS to be the agreement under which conservation of high seas resources are managed.²²⁸ In that preamble, the U.N. recognizes:

[T]he desirability of establishing through this Convention, with due regard

²²³ G.A. Res. 61/105, *supra* note 222, ¶ 10.

²²⁴ G.A. Res. 65/38, ¶ 14, U.N. Doc. A/RES/65/38 (March 30, 2011).

²²⁵ G.A. Res. 64/72, ¶ 14, U.N. Doc. A/RES/64/72 (Nov. 9, 2009).

²²⁶ U.N. GA, 65th Sess., 58th & 59th plen. mtg. U.N. Doc. GA/11031 (Dec. 7, 2010), *available at* <http://www.un.org/News/Press/docs/2010/ga11031.doc.htm>.

²²⁷ Unfortunately, the U.S. has not acceded to UNCLOS, which undermines the ability of the U.S. to effectively push for international cooperation in fisheries management. However, a 2009 Presidential Directive on the U.S. role in the Arctic stated that “[t]he Senate should act favorably on U.S. accession to the U.N. Convention on the Law of the Sea promptly, to protect and advance U.S. interests[.]” George W. Bush, *National Security Presidential Directive and Homeland Security Presidential Directive*, Office of the Press Secretary (Jan. 12, 2009), *available at* <http://georgewbush-whitehouse.archives.gov/news/releases/2009/01/20090112-3.html>.

²²⁸ Third United Nations Conference on the Law of the Sea, Montego Bay, Jamaica, 1973-1982, *Agreement Relating to the Implementation of Part XI of the Convention*, U.N. Doc. A/CONF.62/122 (Dec. 10, 1982), *available at* http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm [hereinafter UNCLOS].

for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment[.]²²⁹

UNCLOS Article 119, titled “Conservation of the Living Resources of the High Seas,” outlines a nation’s duties for cooperative conservation.

In determining the allowable catch and establishing other conservation measures for the living resources in the high seas, States shall: (a) take measures which are designed, on the best scientific evidence available to the States concerned, to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global; (b) take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.²³⁰

Under UNCLOS, member nations have an explicit duty to cooperate to conserve the ocean’s resources and maintain healthy fish stocks.²³¹ In furtherance of achieving UNCLOS’ goals, the U.N. established a framework for conserving sharks that many other treaties and management organizations rely on.²³²

3. 1995 Fish Stocks Agreement

*The loss of freedom to hunt without restriction on the high seas is the only way to save ourselves from ourselves . . . “Conservation,” “management,” “regulation,” and “enforcement” are words we associate with loss of freedom, but they are also increasingly associated with any hopes we have of sustaining fish stocks.*²³³

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ *Id.*

²³² For example, both RMFOs and economic cooperatives (such as the Asia Pacific Economic Cooperative) urge member nations to implement the IPOA as part of their conservation measures. *See generally* APEC Marine Resources Conservation Working Group – Report of the 17th Meeting, Asia Pacific Economic Cooperative (2004) at 10-12, *available at* http://sta.epa.gov.tw/cooperation/APEC%20MRC%20web/wwwroot/Bulletin/Bulletin_VI-1.pdf.

²³³ BERRILL, *supra* note 37, at 136.

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 Stocks²³⁴ (“Fish Stocks Agreement”) promotes international cooperation in the conservation and management of highly migratory species under the precautionary principle²³⁵ and using the best scientific data available.²³⁶ The Fish Stocks Agreement is binding on member nations and seeks to preserve fish stocks that straddle a nation’s exclusive economic zone (“EEZ”) and fish stocks in the high seas.²³⁷ The main impetus for this agreement was to protect highly migratory species that travel through both the high seas and many different EEZs.²³⁸ One nation with unsustainable fishing practices can decimate a highly migratory species while it is in their EEZ or on the high seas, and thus render the conservation efforts of some states useless.²³⁹

Under the Fish Stocks Agreement, nations with an interest in a fish stock or regional fishery are encouraged to join the Regional Fisheries Management Organization (“RFMO”) that oversees a particular fish stock or a particular region.²⁴⁰ Only parties to the RFMO, or nations that agree to the conservation and management measures of the RFMO, are allowed access to that fishery resource.²⁴¹ Where no RFMO is established, interested fishing nations *shall*

²³⁴ United Nations Conference on Straddling Fish Stocks and High Migratory Fish Stocks, New York, July 24 – Aug. 4, 6th Sess., *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*, U.N. Doc. A/CONF.164/37, 34 (Sept. 8 1995) [hereinafter *Fish Stocks Agreement*].

²³⁵ The precautionary principle “ensures that a substance or activity posing a threat to the environment is prevented from adversely affecting the environment, even if there is no conclusive scientific proof linking that particular substance or activity to environmental damage” J. Cameron & J. Abouchar, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment*, 14 INT’L AND COMP. L. REV. 1, 53 (1991).

²³⁶ LACK & SANT, *supra* note 149.

²³⁷ Katherine Webber, *Can You Eat Your Fish and Save It Too? Improving the Protection of Pirated Marine Species Through International Trade Measures*, 25 J. LAND USE & ENVTL. LAW 265, 281 (2010).

²³⁸ *Id.*

²³⁹ An example of this is the bigeye and yellowfin tuna that spawn in the Gulf of Guinea and remain there for two or three years before moving out into the central tropical Atlantic. Overfishing of immature tuna in the Gulf of Guinea depletes the stock before it reaches maturity and enters U.S. fishing grounds. By depleting this stock before it reaches maturity, the fishermen in the Gulf of Guinea endanger the sustainability of the bigeye and yellowfin tuna and hurt the interests of U.S. fishermen. This is a prime example of where an international conservation agreement on highly migratory fish could save both a fish and a fishery. See Russell Nelson, *Pirates, Tunafish and You*, TIDE MAGAZINE (Mar./Apr. 2010), available at http://www.joincca.org/TIDE/Pirates_tuna_you.html.

²⁴⁰ Fish Stocks Agreement, *supra* note 234, at Art. 8 § 3.

²⁴¹ *Id.* § 4.

cooperate to establish an organization or enter into other arrangements for the conservation and management of the resource.²⁴² Nations wishing to establish a new conservation and management organization must consult with preexisting RFMOs if establishing a new organization would have “a significant effect on conservation and management measures already established by a competent subregional or regional fisheries management organization.”²⁴³ Therefore, if the United States wishes to propose a regional or global shark management regime, they need to first consult with the tuna fishing RFMOs, because shark fishing regulations would have a “significant effect” on tuna fishery conservation and management measures.

The Fish Stocks Agreement calls for a strengthening of existing RMFOs,²⁴⁴ transparency in RMFOs,²⁴⁵ the responsibilities of a flag state,²⁴⁶ and the collection and exchange of scientific information.²⁴⁷ The Fish Stocks Agreement also sets up a structure for international enforcement. Article 20 allows a coastal state, after gaining proper authorization from the flag state, to investigate and board a vessel on the high seas if it has reasonable grounds for believing the vessel participated in unauthorized fishing in the state’s waters.²⁴⁸ Article 21 allows member states of an RMFO to board and inspect any vessel on the high seas in an area covered by the RMFO to ensure compliance with conservation and management measures.²⁴⁹ If, after boarding and inspecting, the inspecting state has “clear grounds” for believing a violation occurred, the inspecting state is authorized to “secure evidence” and inform the vessel’s flag state.²⁵⁰ If the flag state does not respond or fulfill its obligations to take action, members of the inspecting state may remain on board and require the violating vessel to enter the nearest appropriate port.²⁵¹ Article 23 allows a port state to prohibit the landing or transshipment when it has established that the catch undermined the conservation efforts of RMFOs or global agreements.²⁵²

The Fish Stocks Agreement is a powerful tool for the development of international conservation and provides a means for coastal states to protect their interests through enforcement measures. This Agreement has brought the RFMOs into the center of the fishery conservation movement by delegating an

²⁴² *Id.* § 5.

²⁴³ *Id.* § 6.

²⁴⁴ *Id.* Art. 13.

²⁴⁵ *Id.* Art. 12.

²⁴⁶ *Id.* Art. 18.

²⁴⁷ *Id.* Art. 14.

²⁴⁸ *Id.* Art. 20.

²⁴⁹ *Id.* Art. 21.

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.* Art. 23.

enormous responsibility to them for regulating straddling and highly migratory species.

4. Regional Fisheries Management Organizations

RFMOs cover either a geographic location or a targeted fishing industry and adopt conservation and management measures that member States adopt and apply to fishing fleets under their authority.²⁵³ Under an RFMO treaty, a member nation agrees that it will adopt national legislation and regulations comparative to the measures agreed upon in the RFMO.²⁵⁴

Most of the RFMOs have implemented anti-shark finning conservation and management measures.²⁵⁵ While regulations vary widely, most have adopted language to ensure that fishermen must:

- Retain the entirety of a shark, except the head, guts, and skin, up to the point of landing;
- Not have a fin to carcass ratio that exceeds 5%;
- Not participate in the illegal transshipment, retention, or landing of fins; and
- Release live sharks caught as bycatch.²⁵⁶

Most RFMOs also encourage implementation of the IPOA and some have more stringent, species-specific regulations.²⁵⁷

In regulating shark finning, one of the most important RFMOs is the Indian Ocean Tuna Commission (“IOTC”).²⁵⁸ Indonesia, India, and Spain, the top three shark fishing nations, are all members of the IOTC.²⁵⁹ Strict regulations on shark finning in this forum, if properly implemented and enforced, could greatly reduce shark finning worldwide.

RFMOs have been moderately successful in curbing unsustainable and destructive fishing practices. However, there are still problems in their structure that, if fixed, could lead to greater compliance. The primary issue with RFMOs

²⁵³ LACK & SANT, *supra* note 149, at 11.

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ LACK & SANT, *supra* note 149. For example, in 2010 the International Commission for the Conservation of Atlantic Tuna (“ICCAT”) implemented recommendations to prohibit the catch of hammerhead sharks (*family sphynridas*). KARYL BREWSTER-GEISZ, UPDATE ON ATLANTIC SHARK MEASURES 5 (NOAA Fisheries Service 2011), available at http://www.nmfs.noaa.gov/sfa/hms/AdvisoryPanels/AP2011/April_2011_Shark_Rule_Update_for_ap_public.pdf.

²⁵⁸ *Id.*

²⁵⁹ *Id.*

is the lack of accountability for non-compliance with RFMO guidelines.²⁶⁰ At present, there is no structure for the RMFO to directly implement an enforcement action against a nation that is not in compliance.²⁶¹ Many of the shark finning measures adopted by RFMOs contain ambiguous language that is easily exploited.²⁶² There is also a severe lack of publicly available data on RFMO findings and compliance.²⁶³ A final problem is that most RFMOs derive their measures and quotas from “woefully incomplete” scientific findings.²⁶⁴

5. International Plan of Action for the Conservation and Management of Sharks

In 1994, a resolution by the Convention on International Trade in Endangered Species²⁶⁵ (“CITES”) called upon the FAO to set up a structure to collate biological and trade data on sharks.²⁶⁶ As a result, the FAO’s Committee on Fisheries established the International Plan of Action for the Conservation and Management of Sharks²⁶⁷ (“IPOA”).²⁶⁸ While conservation measures are an integral part of the IPOA, the current guidelines are focused primarily on providing a mechanism for collating data on shark fishing and shark species to inform future shark fisheries’ regulations. The IPOA is a voluntary set of guidelines for nations to use in setting up a Nation Plan of Action (“NPOA”) for the conservation and management of sharks.²⁶⁹

Unfortunately, the IPOA does not suggest nations completely ban shark finning. It alludes to prohibiting shark finning in two of its recommendations,

²⁶⁰ *Id.* at 14.

²⁶¹ Erika J. Techera and Natalie Klein, *Fragmented Governance: Reconciling Legal Strategies for Shark Conservation and Management*, ELSEVIER, MARINE POLICY 35 (2011) at 73, 75.

²⁶² Fin to weight ratios generally do not specify the whole or dressed weight of the carcass. When dealing with many tons of landed sharks, this can make a huge difference in the amount of fins a vessel is able to retain. The general theory behind this omission is that the U.S. specifies dressed weight while the European Union specifies whole weight. To avoid conflict the RFMOs have left out language specifying whole or dressed weight. *Shark Conservation: Hearing on H.R. 5741 before Committee on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (statement of J. Charles Fox, Senior Officer of PEW Environmental Group).

²⁶³ *Id.*

²⁶⁴ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Shelley Clarke, PhD, Visiting Researcher Imperial College London).

²⁶⁵ Convention on International Trade in Endangered Species of Wild Flora and Fauna, Mar. 3, 1973, 27 U.S.T 1087, 993 U.N.T.S. 243 [hereinafter CITES], available at <http://www.cites.org/eng/disc/text.php>.

²⁶⁶ LACK & SANT, *supra* note 149, at 8.

²⁶⁷ U.N. Food & Agric. Org. [FAO], *International Plan of Action for the Conservation and Management of Sharks* (Nov. 1999), available at www.fao.org/docrep/006/x3170e/x3170e03.htm.

²⁶⁸ Mary Lack and Glenn Sant, *supra* note 149, at 8.

²⁶⁹ *Id.*

which provide that nations minimize waste from shark catches and encourage the full use of dead sharks.²⁷⁰

While the IPOA could provide the best mechanism for an international agreement to end shark finning, it has produced only minimal results thus far.²⁷¹ Many scholars point to the voluntary nature of the IPOA as lacking a strong mandate of compliance.²⁷² A 2005 FAO study concluded that a few countries had met or exceeded the goals of the IPOA,²⁷³ but a most countries had made little or no progress. Of the countries that have implemented an NPOA, “[m]any do not contain specific actions or schedules for action, and most are not closely linked to the principles of the IPOA.”²⁷⁴ Today, only thirteen of the top twenty shark fishing nations have submitted an NPOA for sharks to FOA and most of these are severely lacking in substance.²⁷⁵

6. The Convention on International Trade in Endangered Species

*It is unreasonable to expect human populations, particularly in the most impoverished countries, to neglect an available source of food or money to tolerate dangerous and destructive wild animals in the name of conservation.*²⁷⁶

The Convention on International Trade in Endangered Species²⁷⁷ (“CITES”) imposes international trade restrictions on endangered wildlife.²⁷⁸ The global practice of shark finning is inherently fueled by the value placed on shark fins in the international market. As a restriction on the international trade in wildlife products, CITES poses an opportunity to remove the fuel feeding the flame.

CITES separates species of concern into three appendices: appendix one is reserved for species threatened with extinction that are or may be affected by international trade; appendix two is reserved for species that may become threatened without restrictions on international trade; and appendix three is reserved for species identified by parties as subject to regulation within its jurisdiction.²⁷⁹ Trade of appendix one species requires permits from both the

²⁷⁰ *Id.*

²⁷¹ *Id.*

²⁷² Techera and Klein, *supra* note 261, at 73; see Holly Edwards, *When Predators become Prey: The Need for International Shark Conservation*, 12 OCEAN AND COASTAL L.J. 305, 322 (2007).

²⁷³ LACK & SANT, *supra* note 149, at 9.

²⁷⁴ *Id.*

²⁷⁵ *Id.*

²⁷⁶ See GOBLE & FREYFOGLE, *supra* note 94 (for proceedings of the Eighth Conference of the Parties to CITES (1992), submitted by Botswana, Malawi, Namibia, and Zimbabwe).

²⁷⁷ CITES, *supra* note 265.

²⁷⁸ *Id.* Art. 2 § 4.

²⁷⁹ *Id.* Art. 2.

exporting nation and the importing nation.²⁸⁰ Both permits require the nation's scientific authority to determine that the trade will "not be detrimental to the survival of the species involved."²⁸¹ Trade of appendix two species requires an export permit. This export permit must be presented prior to importing the species into any member nation.²⁸² Trade of appendix three species only require the issuance of an export permit stating that the specimen was not obtained in violation of the exporting nation's laws.²⁸³

While CITES provides protection for listed species in international trade, there are many obstacles in protecting sharks from shark finning under this convention. First, there is a powerful voting block determined to keep marine species out of CITES control.²⁸⁴ This block, spearheaded by China and Japan, successfully denied the listing of three species of shark (scalloped hammerheads, oceanic whitetip, and spiny dogfish) as well as blue fin tuna at the U.N. conference on endangered species in 2010.²⁸⁵ Because of this block, only three species of shark are listed under CITES.²⁸⁶ The listing of these sharks renders little protection because they are all listed under appendix two. Further, both Indonesia and Japan entered reservations to the listing of all three shark species, which makes these two nations non-parties in regard to these species.²⁸⁷

Second, once the fins are removed from the shark carcass, they are virtually impossible to identify. This makes regulation of only a few species of shark extremely difficult because it is nearly impossible for enforcement officers to differentiate between regulated shark fins and unregulated shark fins. Scientists have developed a means to identify shark fins by species through DNA testing, but this process is both time consuming and cost prohibitive with the enormous number of shark fins moving through developing countries each year.²⁸⁸

Third, there is little infrastructure in place in many developing countries to both inspect trade and identify prohibited articles.²⁸⁹ For enforcement, CITES relies on member parties to regulate trade through internally appointed officials

²⁸⁰ *Id.* Art 3.

²⁸¹ *Id.*

²⁸² *Id.* Art. 4.

²⁸³ *Id.* Art. 5.

²⁸⁴ David Jolly, *U.N. Group Rejects Shark Protections*, N. Y. TIMES (Mar. 23, 2010), available at <http://www.nytimes.com/2010/03/24/science/earth/24shark.html>.

²⁸⁵ *Id.*

²⁸⁶ Edwards, *supra* note 272, at 333.

²⁸⁷ *Id.*

²⁸⁸ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Dr. Rebecca Lent, National Oceanic and Atmospheric Administration U.S. Department of Commerce).

²⁸⁹ *Id.*

and scientists.²⁹⁰ Enforcement issues also include the detection and prosecution of the black market trade that develops with the regulation of trade in any species or substance.²⁹¹ Enforcement issues in the shark fin trade reflect the enforcement issues of the shark fin industry overall – the development of an effective enforcement regime is one of the largest obstacles to obtaining the objective of conservations measures.

D. Suggestions for the Direction of United States Efforts to Ban Shark Finning at the International Level

One of the main impediments to the United States' involvement in international fisheries conservation efforts is that the United States is not a party to UNCLOS. As one expert declared:

How many times have colleagues from other governments, and now fishing industry friends from fishing associations in other countries, said to me, 'United States arguments for a given conservation approach would be so much more compelling if you demonstrated that you felt strongly enough about marine conservation to join the Law of the Sea Convention.'²⁹²

In order for the United States to effectively negotiate for a shark finning moratorium, UNCLOS must be acceded to and implemented.

The United States should also adopt a program to assist developing nations in implementing a NPOA for sharks. The lack of a NPOA for sharks in developing countries allows IUU shark finning to be funneled through these nations and into the stream of commerce. International enforcement cooperation should also be a high priority because it would (1) aid in the development of more precise scientific data on the current status of shark populations and sustainable quotas, and (2) prevent IUU fishing, which undermines conservation regulations.²⁹³

The United States needs to push the U.N. General Assembly to adopt a resolution that unequivocally prohibits the practice of shark finning in both national waters and on the high seas.²⁹⁴ A powerful U.N. General Assembly resolution will give the United States greater justification in developing enforcement of a shark finning ban on the high seas.²⁹⁵

²⁹⁰ *Id.*

²⁹¹ *Id.*

²⁹² *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Stetson Tinkham, Director of the National Fisheries Institute).

²⁹³ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Dr. Rebecca Lent, National Oceanic and Atmospheric Administration U.S. Department of Commerce).

²⁹⁴ Interview with Allison Rieser, *supra* note 182.

²⁹⁵ *Id.*

The United States should propose an International Commission for the Conservation and Management of Sharks (“ICCMS”) either within the jurisdiction of the U.N. or as a separate international agreement. This will be an unpopular proposal and will likely be met with hostility from a number of the poorer shark fishing nations. The United States may need to resort to listing shark species under the Driftnet Act or the Pelly Amendment for this measure to gain widespread acceptance.

E. Suggestions for the Development of an International Conservation Regime for Sharks

With shark populations in decline and the presence of a highly mobile IUU fishing fleet, now is the time to develop an International Commission for the Conservation and Management of Sharks (“ICCMS”).²⁹⁶ The development of the ICCMS must learn from the failures and successes of previous regimes and regulations.²⁹⁷ In order to promote a cohesive and productive regime for the conservation of sharks:

- The language of the treaty should incorporate fundamental norms favoring the conservation of all shark species but have operational provisions flexible enough to change with developments in science, changes in ecosystems, and changes in the public perception of sharks as a resource.²⁹⁸ Instituting majority voting rather than the use of unanimity or consensus voting can most easily achieve flexibility.²⁹⁹
- Catch limits for sharks should be developed on a species by species basis using the best scientific data available. Catch limits must use the precautionary principle and analyze the role of sharks in the ecosystem rather than as an isolated population. This can best be implemented by developing catch limits using the theory of optimum sustainable population³⁰⁰ and eliminating the theory of maximum sustainable yield.³⁰¹ Where catch data is

²⁹⁶ Herndon et al., *supra* note 27, at 1239.

²⁹⁷ *Id.* (describing the problems faced by the International Whaling Commission (“IWC”) and way to avoid these problems in the development of the ICCMS).

²⁹⁸ Interview with Allison Rieser, *supra* note 182.

²⁹⁹ Herndon et al., *supra* note 27, at 1244.

³⁰⁰ “The term ‘optimum sustainable population’ means, with respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element.” Marine Mammal Protection Act of 1972, 16 U.S.C. § 1361 (amended 1997).

³⁰¹ The maximum sustainable yield is the largest catch that can be harvested on a sustainable basis. This theory is based on the belief that net recruitment is highest when population density is

insufficient to establish precautionary reference points, as required by the 1995 U.N. Fish Stocks Agreement, catch quotas should be set at zero.³⁰²

- Resolutions and regulations promulgated by the ICCMS must be binding on member nations.
- Exemptions should be minimized and carefully worded to avoid loopholes and exploitation.
- The treaty should establish an independent secretariat to enhance the body's administrative capacity and streamline problem solving capabilities.³⁰³
- Corruption in the voting process should be eliminated. Past regimes have suffered from non-fishing nations joining a voting bloc in one regime in exchange for votes under another treaty or regime.³⁰⁴ There have also been allegations that developing nations have joined a voting bloc in exchange for financial assistance.³⁰⁵ This corruption undermines the ability of a governing body to come to an equitable conclusion under the majority vote system.
- Marine Protected Areas should be broadened using the best scientific data available to protect important breeding and feeding grounds.³⁰⁶ These areas should be free from any direct and indirect shark fishing.³⁰⁷
- The ICCMS should foster a close relationship with epistemic

below the carrying capacity. Under this theory, fishing quotas are kept high to keep the fish stocks in the margin below carrying capacity but above levels for population collapse. This theory is flawed for many reasons. First, it assumes that there is a steady carrying capacity at which point a population will always return once fishing has ceased. Second, it requires exact scientific knowledge of the population size: an impossibility using our current scientific capabilities. Third, it assumes that each fisher will completely cooperate in the quota scheme. Fourth, it does not take into account external environmental factors (such as a variation of optimum breeding temperature, a variation in currents, amount of rainfall, etc.) that also contribute to variations in population recruitment from year to year. "This model is inconsistent with our current understanding of nature." See GOBLE & FREYFOGLE, *supra* note 94, at 830-32.

³⁰² Herndon et al., *supra* note 27, at 1244.

³⁰³ *Id.* at 1245 (stating that the establishment of an independent secretariat for the IWC in 1975 greatly enhanced the body's administrative capacity and streamlined problem solving capabilities).

³⁰⁴ 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 ENVTL. L. AND POL'Y J. 121, 144 (2011).

³⁰⁵ *Id.* at 144.

³⁰⁶ See Techera & Klein, *supra* note 261, at 73.

³⁰⁷ *Id.*

communities³⁰⁸ to gain scientific knowledge and promote public awareness.³⁰⁹

- A cooperative enforcement regime must be established in which all member nations provide enforcement personnel and resources taking into account each countries capability.
- Most importantly for this Article, sharks land with fins attached, transshipment of fins should be prohibited, and catch reports and observers must be mandatory.

In this forum, formal avenues for negotiation could improve the effectiveness of conservation efforts by allowing parties to discuss trade-offs and compromises.³¹⁰ This cooperation could create greater uniformity in international shark finning regulations and reduce the confusion that has developed with the many layers of regulation that currently surround the shark fishing industry.³¹¹ By harmonizing regulations and unifying parties, conservation efforts could overcome many of the shark fin trade's current hurdles.

V. PROGRESS IN THE CONSERVATION OF SHARKS

Shark finning is still prevalent in almost every ocean in the world, but great progress has been made in just the past few years. In China, NGOs' monumental effort to curb the shark fin soup market has seen increasing success.³¹² NGOs have found powerful spokespeople for their anti-shark finning cause in celebrities like Yao Ming and Jackie Chan.³¹³ Both Disney Hong Kong³¹⁴ and Hong Kong University³¹⁵ removed shark fin soup from their menus due to public pressure and massive letter writing campaigns. In March, Ding Ligu, a Chinese billionaire and deputy to the National People's Congress, filed a formal written proposal to the Chinese legislature urging a ban on the shark fin trade.³¹⁶

³⁰⁸ Epistemic communities include interested government organizations, non-government organizations, and individuals with special knowledge and understanding of sharks and marine ecosystems.

³⁰⁹ Herndon et al., *supra* note 27, at 1245.

³¹⁰ *Id.*

³¹¹ See Techera & Klein, *supra* note 261, at 73.

³¹² MCCoy, *supra* note 3.

³¹³ CRAWFORD, *supra* note 10, at 129.

³¹⁴ *Id.* at 129.

³¹⁵ Doug Crets & Mimi Lau, *HKU Bans Shark Fin Dishes*, THE STANDARD, Nov. 3, 2005, available at http://www.thestandard.com.hk/news_detail.asp?pp_cat=11&art_id=4810&sid=5300167&con_type=1.

³¹⁶ Ma Shukun & Cao Guochang, *Lawmaker Urges Shark Fin Trading Ban*, CHINA.ORG.CN

The massive campaign to end shark finning has resulted in national shark finning bans across the globe. As of 2008, shark finning bans are in place in the United States, Australia, Brazil, Canada, Cape Verde, Costa Rica, Ecuador, El Salvador, Egypt, Mexico, Namibia, Nicaragua, Oman, Panama, Seychelles, and South Africa.³¹⁷ The European Union proposed new legislation in November of 2011 that would close loopholes in their current shark finning laws and align their laws with the United States' comprehensive legislation.³¹⁸ In July, Chile passed shark finning legislation³¹⁹ and, even more recently, Taiwan has stepped forward as the first Asian nation to ban the practice of shark finning with laws to take effect in 2012.³²⁰

For the United States, Hawai'i led the way in 2010 by adopting comprehensive legislation banning the possession and sale of shark fins.³²¹ In October 2011, California completed the closure of all Pacific ports to the shark fin trade by joining Hawai'i, Oregon, and Washington, in prohibiting the sale and trade of shark fins.³²² The Commonwealth of the Northern Mariana Islands and Guam has also prohibited the possession, sale, or trade of shark fins.³²³ Hopes are high that this swath of new legislation will curb the shark fin trade. Records estimate that Hawai'i's shark finning legislation led to a fifty-four percent decrease in the number of shark fins entering the Hong Kong market from the United States in its first year.³²⁴

A number of nations have also produced complete shark fishing prohibitions. Palau led the way in 2009 by declaring its waters a shark sanctuary.³²⁵ Palau banned all commercial shark fishing.³²⁶ In 2010, Honduras declared a shark fishing and export moratorium until more research about fish stocks and

Mar. 10, 2011, available at http://www.china.org.cn/china/2011-03/10/content_22097340.htm.

³¹⁷ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Shelley Clarke, PhD, Visiting Researcher Imperial College London).

³¹⁸ Charlie Dunmore, *EU Proposes Ban on Shark Finning*, REUTERS, Nov. 21, 2011, available at <http://www.reuters.com/article/2011/11/21/us-eu-sharks-ban-idUSTRE7AK1C320111121>.

³¹⁹ Elizabeth Weise, *Chile Bans Shark Finning*, USA TODAY, July 8, 2011, available at <http://content.usatoday.com/communities/sciencefair/post/2011/07/chile-bans-shark-finning/1>.

³²⁰ Erica Ho, *In First For Asia, Taiwan to Ban Shark Finning*, TIME, Dec. 1, 2011, available at <http://newsfeed.time.com/2011/12/01/taiwan-to-become-first-asian-nation-to-ban-shark-finning>.

³²¹ *Hawaii to Make Eating Shark Fins Illegal*, MSNBC, May 29, 2010, available at http://www.msnbc.msn.com/id/37416078/ns/us_news-environment/.

³²² Judy Lin, *California Governor Signs Ban on Shark Fin Trade*, BLOOMBERG BUSINESSWEEK, Oct. 7, 2011, available at <http://www.businessweek.com/ap/financialnews/D9Q7NEIO1.htm>.

³²³ Haidee V. Eugenio, *Shark Finning Ban Now A CNMI Law*, SAIPAN TRIBUNE, Jan. 28, 2011, available at <http://www.saipantribune.com/newsstory.aspx?newsID=106535>.

³²⁴ *Shark Conservation Act of 2008: Hearing on H.R. 5741 Before the H. Comm. on House Natural Resources Subcommittee on Fisheries, Wildlife and Oceans*, 110th Cong. (2008) (Statement of Shelley Clarke, PhD, Visiting Researcher Imperial College London).

³²⁵ LACK & SANT, *supra* note 149, at 10

³²⁶ *Id.*

sustainable quotas can be completed.³²⁷ Also in 2010, the Maldives declared a shark fishing ban and prohibited the export of shark products because the government believes that sharks are more important to the ecotourism industry than as a targeted fishery.³²⁸

VI. CONCLUSION

The unsustainable practice of shark finning threatens to destroy the fragile balance in the food chain and completely alter the way in which the ocean's ecosystems function. The United States has been a world leader in shark conservation, but national legislation alone cannot effectively save highly migratory species of shark from overexploitation and extinction. The United States must propose the development of an International Commission for the Conservation and Management of Sharks. The United States should also impose import prohibitions and trade sanctions on any nation that refuses to join the ICCMS or adopt equivalent national legislation to prohibit shark finning.

The world depends on healthy oceans for food, oxygen, stable weather patterns, excess carbon absorption, and pleasure.³²⁹ Healthy ocean ecosystems can more readily adapt to the variable conditions caused by climate change.³³⁰ The fate of sharks is closely tied to the health of the oceans and the sustainability of human life on this planet. Humankind cannot risk losing such an important player in the functioning of ecosystems. The loss of sharks would unravel oceanic ecosystems from the apex predators down. Immediate action must be taken to form a comprehensive international agreement to prohibit the unsustainable practice of shark finning before it is too late.

³²⁷ *Id.*

³²⁸ *Id.*

³²⁹ See United Nations Environment Programme World Oceans Day 2009, <http://www.unep.org/wod> (last visited Apr. 24, 2011).

³³⁰ *Id.*