



REPORT TO CONGRESS

2018 Shark Finning Report

Developed pursuant to: Shark Finning Prohibition Act (Public Law 106-557)

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I. Executive Summary

This report describes the efforts of the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) during calendar year 2017 to implement the 2000 Shark Finning Prohibition Act and more recent shark conservation legislation. As one of the top ocean predators, sharks play an important role in the food web and help ensure balance in the ocean's ecosystem. With increased demand and exploitation rates for some shark species and shark products, concern has steadily grown regarding the status of many shark stocks and their exploitation in global fisheries. NMFS is committed to shark conservation and sustainable management of shark fisheries.

During 2017, the main countries of origin for shark fins imported into the United States were: China (Hong Kong Special Administrative Region), Burma, New Zealand, Ukraine, India, and Italy. The mean value of imports dropped from \$12,000 to \$5,000 per metric ton from 2016 to 2017. The majority of shark fins exported in 2017 were sent from the United States to China, with smaller amounts going to Mexico and Thailand. The mean value of exports decreased from \$71,000 per metric ton in 2016 to \$8,000 per metric ton in 2017. For more information, see Section 2 of the Appendix.

Domestically, U.S. fishermen landed over 28 million pounds of sharks in 2017, valued at over \$6.8 million.¹ In 2017, four out of 38 U.S. shark stocks or stock complexes (11 percent) were listed as subject to overfishing and six (16 percent) were listed as overfished. During the same year, NMFS finalized Amendment 5b to the 2006 Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP), which aims to reduce fishing mortality and rebuild Atlantic dusky sharks.

Internationally, NMFS has advanced projects in multiple venues. For example, in 2017 NMFS supported projects aimed at assisting other governments to improve their implementation of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) shark and ray listings. In addition, NMFS scientists assisted with many international studies and stock assessments for sharks. Finally, the Western and Central Pacific Fisheries Commission formed an intersessional working group to begin development of a comprehensive approach to shark and ray management, with a view to adopting a new conservation and management measure in 2018.

II. Introduction

The 2000 Shark Finning Prohibition Act amended the Magnuson-Stevens Fishery Conservation and Management Act (MSA) to prohibit the practice of shark finning by any person under U.S. jurisdiction, and requires NMFS to promulgate regulations to implement its provisions, initiate discussion with other nations to develop international agreements on shark

¹ Commercial Fishery Statistics Database, <https://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings/index>

finning and data collection, provide Congress with annual reports describing efforts to carry out the Shark Finning Prohibition Act, and establish research programs. This report describes NMFS' efforts during calendar year 2017 to implement legislation on shark conservation.

III. Background and Context

Sharks are among the ocean's top predators and vital to the natural balance of marine ecosystems. They are also a valuable recreational fishing species and food source. The practice of shark finning and shark bycatch in some fisheries can affect the status of shark stocks and the sustainability of their exploitation in world fisheries. When the Shark Finning



Prohibition Act became law in 2000, global annual shark catches reported to the Food and Agriculture Organization of the United Nations (FAO) had tripled since 1950, reaching an all-time high of 888,000 metric tons (mt). Since then, the United States has implemented several measures and maintains some of the strongest shark management measures in the world. Since 2000, global shark catches have continued to decrease, reaching 767,155 mt in 2016.² The most recent FAO report (2018) reported global imports of shark fins at approximately 12,194 mt in 2016, the most recent year data has been made available, and the lowest volume since 2011.³ In 2016, the average value of global shark fin imports increased to \$19,045/mt, and the average value of exports decreased slightly to \$12,517/mt. China (Hong Kong Special Administrative Region) was the largest importer and Thailand the largest exporter of shark fins in 2016. In response to continued concerns about shark populations internationally, many countries have banned shark fishing in their waters in favor of promoting tourism opportunities. In addition, many nations have adopted finning bans.

IV. Domestic

The MSA, as amended by the 2000 Shark Finning Prohibition Act and the 2010 Shark Conservation Act⁴, is the Federal law governing the conservation and management of Federal fisheries in the United States. The suite of conservation and management measures required of all Federal fisheries under the MSA makes the United States a leader in the sustainable management of domestic shark fisheries. Shark fisheries are valuable contributors to the U.S. economy. In 2017, U.S. fishermen landed over 28 million pounds of sharks, valued at over \$6.8 million.⁵ This was a decrease of approximately 4 million pounds and \$1.2 million from 2016. In 2017, four out of 38 U.S. shark stocks or stock complexes (11 percent) were listed as subject to overfishing and six (16 percent) were listed as overfished. Fifteen stocks or stock complexes (39

² Food and Agriculture Organization of the United Nations, FishStatJ database, <https://www.fao.org>

³ Food and Agriculture Organization of the United Nations, FishStatJ database, <https://www.fao.org>

⁴ <https://www.fisheries.noaa.gov/national/laws-and-policies/shark-conservation-act>

⁵ Commercial Fishery Statistics Database, <https://www.st.nmfs.noaa.gov/commercial-fisheries/commercial-landings/annual-landings/index>

percent) were listed as not subject to overfishing, and 10 (26 percent) were listed as not overfished. Nineteen stocks or stock complexes (50 percent) had an unknown overfishing status and 22 (58 percent) had an unknown overfished status. Ten stocks or stock complexes (28 percent) were neither subject to overfishing nor overfished (Table 1, Page 12). It is important to clarify that an “unknown” status does not mean NMFS is unknowledgeable about the stock. In some cases, an “unknown” stock status means that NMFS does not have the type of information that can be used in data-intensive stock assessments⁶ to determine a “stock status.” NMFS and partners, such as the councils and states, collect other information such as life history, catch rates, and landings data. While such data do not always provide definitive information regarding a stock’s status, they do provide important information about trends that help inform management decisions and ensure all sharks are sustainably and responsibly harvested.

In the United States, shark finning has been prohibited since 2000. In 2008, NOAA implemented even more stringent regulations to require all Atlantic sharks to be landed with all fins naturally attached, to facilitate species identification and reporting and improve the enforceability of existing shark management measures, including the finning ban. In 2011, President Obama signed the Shark Conservation Act of 2010, which amended the High Seas Driftnet Fishing Moratorium Protection Act and the 2000 Shark Finning Prohibition Act provisions of the MSA to further improve domestic and international shark conservation measures, including additional measures against shark finning. In addition, as of 2017, many U.S. states and territories have passed laws addressing the possession, sale, trade, or distribution of shark fins, including Hawaii (2010), California (2011), Oregon (2011), Washington (2011), the Commonwealth of the Northern Mariana Islands (2011), Guam (2011), American Samoa (2012), Illinois (2012), Maryland (2013), Delaware (2013), New York (2013), Massachusetts (2014), Rhode Island (2016), and Texas (2016).

Domestically, the Shark Conservation Act states that it is illegal “... 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.” These provisions improved the United States’ ability to enforce shark finning prohibitions in domestic shark fisheries. The Shark Conservation Act also created an exception for smooth dogfish (*Mutelis canis*) in the Atlantic “... 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 12 percent of the total weight of smooth dogfish carcasses landed or found on board.”

V. International

In 1998, the United States participated in the development of and endorsed the FAO International Plan of Action (IPOA) for the Conservation and Management of Sharks (IPOA-

⁶ In some cases, stock assessments are not possible because the stock is rarely caught and there is not enough data to run an assessment. In other cases, the stock assessment may have produced conflicting results, which can mean additional information or changes to models are needed before a definitive assessment can be conducted.

Sharks), which is voluntary. The IPOA-Sharks encourages all FAO members to adopt a corresponding National Plan of Action if their vessels conduct directed fisheries for sharks or if their vessels regularly catch sharks in non-directed fisheries. Consistent with the IPOA-Sharks, the United States developed a National Plan of Action for the Conservation and Management of Sharks in February 2001 and updated it in 2014. Many other FAO members have developed national plans of action, and several regional plans of action have been developed. In addition to meeting the statutory requirement of the Shark Finning Prohibition Act, this annual Report to Congress serves as a periodic update of information called for in both the International and National plans of action for sharks.

The Shark Conservation Act amended the High Seas Driftnet Fishing Moratorium Protection Act in two important ways. First, it requires the Secretary of Commerce to identify a nation if fishing vessels of that nation have been engaged in fishing activities or practices in waters beyond any national jurisdiction that target or incidentally catch sharks and if that nation has not adopted a regulatory program for the conservation of sharks. Such conservation measures must be comparable to that of the United States, taking into account different conditions. Identification is the first step in a three-step process that ultimately ends in the United States issuing either a positive or negative certification of each identified nation. The Shark Conservation Act also directs the United States to urge international fishery management organizations of which the United States is a member 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. In addition, it directs the United States to enter into international agreements that require measures for the conservation of sharks that are comparable to those of the United States, taking into account different conditions. These approaches, along with our strong domestic shark fishery management, have made the United States a leader in the conservation and management of sharks globally.

In response to continuing issues regarding illegal, unreported, and unregulated (IUU) fishing or seafood fraud, NMFS published a final rule on December 9, 2016, creating the Seafood Import Monitoring Program (81 FR 88975). This final rule established permitting, reporting, and recordkeeping procedures relating to the importation of certain fish and fish products, including sharks, identified as being at particular risk of IUU fishing or seafood fraud. This program provides additional protections for the sustainability of sharks. It is the first phase of a risk-based traceability program that requires the importer of record to provide and report key data from the point of harvest to the point of entry into U.S. commerce.

VI. 2017 Accomplishments in Response to Requirements of the Shark Finning Prohibition Act

Section 6 of the Shark Finning Prohibition Act requires the Secretary of Commerce, in consultation with the Secretary of State, to provide to Congress an annual report describing efforts to carry out the Act. Report requirements are:

1. Include a list that identifies nations whose vessels conduct shark finning and detail the extent of the international trade in shark fins, including estimates of value and information on harvesting, landings, or transshipment of shark fins.

2. Describe and evaluate the progress taken to carry out this Act.
3. Set forth a plan of action to adopt international measures for the conservation of sharks.
4. Include recommendations for measures to ensure that the actions of the United States are consistent with national, international, and regional obligations relating to shark populations, including those listed under the CITES.

NMFS' 2017 accomplishments to carry out the Act are discussed below. An appendix including detailed information on U.S. shark management and enforcement (Section 1), imports and exports of shark fins (Section 2), international shark conservation and management efforts (Section 3), 2017 NOAA research on sharks (Section 4), ongoing NOAA shark research (Section 5), and references (Section 6) has been posted online. A copy of this report and the appendix are available online at: <https://www.fisheries.noaa.gov/national/laws-and-policies/shark-conservation-act>

A. International Participation in Shark Finning and Trade

Data on the international trade of shark fins are available from the FAO, and data on U.S. imports and exports of shark fins are available from the U.S. Census Bureau (as provided by U.S. Customs and Border Protection). It is important to note that, due to the complexity of the shark fin trade, fins are not necessarily harvested by the same country from which they are exported. During 2017, shark fins were imported through the following U.S. Customs and Border Protection districts: Los Angeles, Miami, Tampa, and New York. In 2017, countries of origin were Burma, China (Hong Kong Special Administrative Region), India, Italy, New Zealand, and Ukraine (see Table 2.1.1 in Section 2 of the appendix). The mean value of U.S. imports per metric ton decreased sharply to \$5,000 per metric ton from a mean of \$12,000-\$13,000/mt from 2013–2016. The majority of shark fins exported in 2017 were sent from the United States to China, with smaller amounts going to Mexico (Table 2.2.1). The mean value of U.S. exports per metric ton also declined sharply to \$8,000/mt in 2017 from a mean value of \$71,000/mt in 2016, which had represented a notable increase compared to 2015. Detailed information regarding imports and exports of shark fins can be found in Section 2 of the appendix associated with this report.

B. U.S. Progress Implementing the Shark Finning Prohibition Act

Sharks in Federal waters are managed under 11 fishery management plans under the authority of the MSA. The New England, Mid-Atlantic, Pacific, North Pacific, and Western Pacific fishery management councils have developed 10 of those plans. The Secretary of Commerce has developed the fishery management plan for oceanic sharks and other highly migratory species of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea as required by the MSA. All recent shark-related management, enforcement,

international, and research activities in support of the Shark Finning Prohibition Act are summarized in the appendix.

During calendar year 2017, shark-related research took place at all six NOAA regional fisheries science centers and included research on data collection, stock assessments, biological information, incidental catch reduction, and post-release survival.

Major management actions took place both domestically and internationally in 2017. Domestically, NMFS published a final rule to implement Amendment 5b to the 2006 Consolidated Atlantic HMS FMP (82 FR 16478; April 4, 2017). Amendment 5b implemented measures in commercial and recreational shark fisheries to stop overfishing and rebuild Atlantic dusky sharks. In recreational shark fisheries, NMFS implemented a requirement for fishermen to complete an online training course and obtain a shark endorsement in order to fish for or retain sharks. Recreational shark fishermen are also required to use circle hooks when targeting sharks in most areas and situations. Amendment 5b also implemented several requirements for commercial HMS fishermen, including safe shark release protocols, shark identification training, and fleet communication and relocation measures in the presence of dusky sharks. Additionally, fishermen using bottom longline to target sharks are required to use circle hooks. Circle hooks have been shown to reduce post-release mortality by reducing the incidents of gut hooking. On December 13, 2017, NMFS determined that the North Atlantic shortfin mako shark stock was overfished and was experiencing overfishing based on the results of an International Commission for the Conservation of Atlantic Tunas (ICCAT) Standing Committee on Research and Statistics (SCRS) stock assessment. Subsequently, NMFS began to prepare an emergency rule to implement an ICCAT recommendation in commercial and recreational fisheries to address overfishing of North Atlantic shortfin mako sharks.



On September 21, 2015, NMFS received a petition from Defenders of Wildlife to list the oceanic whitetip shark (*Carcharhinus longimanus*) as threatened or endangered under the Endangered Species Act (ESA) throughout its entire range or, as an alternative, to list two distinct population segments (or DPS) of the oceanic whitetip shark as threatened or endangered. In 2016, NMFS issued both a positive 90-day review (81 FR 1376; January 12, 2016) and a proposed rule to list oceanic whitetip sharks as threatened under the ESA (81 FR 96304; December 29, 2016), based on the best scientific and commercial information available and taking into account efforts being made to protect the species. NMFS published a final rule on January 30, 2018, listing oceanic whitetip sharks as threatened, based on the best scientific and commercial information available and taking into account efforts being made to protect the species (83 FR 4153). Details on specific shark management, enforcement, and education activities can be found in Section 1 of the

appendix, and information on 2017 shark research activities can be found in Sections 4 and 5 of the appendix.

C. Plans to Adopt International Measures for Shark Conservation and U.S. Consistency with National, International, and Regional Obligations

NMFS continues to work with the Department of State to promote the global conservation and sustainable management of sharks by having ongoing consultations consistent with the Shark Finning Prohibition Act. The United States brings forward recommendations through bilateral, multilateral, and regional efforts. As measures are adopted by international organizations of which the United States is a member, the United States implements those measures.



Throughout 2017, NMFS participated in meetings of international regional fishery management organizations. At many of these meetings, the U.S. delegations supported or introduced proposals to strengthen international shark management. For example, NMFS supported projects aimed at assisting other governments with training opportunities and tools to improve implementation of the CITES shark and ray listings that were adopted at the 16th meeting of the Conference of the Parties to CITES (CoP16) in 2013. These efforts include continued support for a collaborative project intended to equip and train Ecuadorian officials in standard genetic techniques to identify shark products in trade. Southeast and Northeast Fisheries Science Center scientists continued collaborations with scientists from several nations as part of the ICCAT Shark Research and Data Collection Program. These activities include several projects on shortfin mako sharks with Japan, Uruguay, and Portugal that address population genetics, age and growth dynamics, as well as two projects that use archival satellite tags to determine post-release mortality and stock boundaries, movement patterns, and habitat use. During 2017, ICCAT's Shark Species Group conducted an updated shortfin mako benchmark stock assessment wherein the North Atlantic stock was found to be overfished and subject to overfishing.

The U.S. delegations to the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) and its Shark Working Group (SHARKWG) worked on stock assessments for both blue and shortfin mako sharks in 2017. For mako sharks, the SHARKWG developed two models for consideration in early 2018. The first was a fully integrated assessment model developed with Stock Synthesis (SS) (Carvalho et al. in prep), and the second a virtual population analysis (or VPA) model (Kanaiwa et al. in prep). In addition, the 2017 assessment report on blue sharks in the North Pacific Ocean (ISC 2017) was completed using data through 2015. The assessment used a fully

integrated approach in SS with model inputs that have been greatly improved since the previous assessment. Results indicate that spawning stock biomass is higher than maximum sustainable yield (MSY) and fisheries mortality is lower than that at MSY, consistent with the blue shark stock in the North Pacific neither being overfished nor subjected to overfishing.

The Western and Central Pacific Fisheries Commission formed an intersessional working group to begin development of a comprehensive approach to shark and ray management, with a view to adopting a new conservation and management measure in 2018. Detailed information on international shark-related efforts during 2017 is provided in Section 3 of the appendix. References and internet sources used to compile this report can be found in Section 6 of the appendix.

Table 1. Overfishing and Overfished Status of Shark Stocks and Stock Complexes in U.S. Fisheries as of December 31, 2017

Status of Shark Stocks and Stock Complexes in U.S. Fisheries as of December 31, 2017				
Fishery Management Council (FMC)	Fishery Management Plan (FMP) or Fishery Ecosystem Plan (FEP)	Stock or Stock Complex	Overfishing	Overfished
New England FMC & Mid-Atlantic FMC	Spiny Dogfish FMP	Spiny dogfish – Atlantic coast	No	No
NMFS Highly Migratory Species Management Division	Consolidated Atlantic Highly Migratory Species FMP	Atlantic large coastal shark complex*	Unknown	Unknown
		Atlantic pelagic shark complex**	Unknown	Unknown
		Atlantic sharpnose shark-Atlantic	No	No
		Atlantic sharpnose shark- Gulf of Mexico	No	No
		Blacknose shark – Atlantic	Yes	Yes
		Blacknose shark – Gulf of Mexico	Unknown	Unknown
		Blacktip shark – Gulf of Mexico	No	No
		Blacktip shark – Atlantic	Unknown	Unknown
		Blue shark – Atlantic and Gulf of Mexico	No	No
		Bonnethead – Atlantic	Unknown	Unknown
		Bonnethead – Gulf of Mexico	Unknown	Unknown
		Dusky shark – Atlantic and Gulf of Mexico	Yes	Yes
		Finetooth shark – Atlantic and Gulf of Mexico	No	No
		Porbeagle – Atlantic and Gulf of Mexico	No	Yes
		Sandbar shark – Atlantic and Gulf of Mexico	No	Yes
		Scalloped hammerhead shark – Atlantic and Gulf of Mexico	Yes	Yes
		Shortfin mako – North Atlantic	Yes	Yes
Smoothhound shark complex – Gulf of Mexico	No	No		
Smooth dogfish – Atlantic	No	No		
Pacific FMC	Pacific Coast Groundfish FMP	Other Fish Complex*** (Leopard shark – Pacific Coast)	No	Unknown
		Spiny dogfish – Pacific Coast	No	No

Pacific FMC & Western Pacific FMC	U.S. West Coast Fisheries for Highly Migratory Species & Pacific Pelagic FEP	Thresher shark**** – North Pacific	Unknown	Unknown
		Bigeye thresher**** - Pacific	Unknown	Unknown
		Pelagic thresher**** - North Pacific	Unknown	Unknown
		Shortfin mako shark – North Pacific	Unknown	Unknown
		Blue shark – North Pacific	No	No
Western Pacific FMC	FEP for Pelagic Fisheries of the Western Pacific Region (Pacific Pelagic FEP)	Longfin mako shark – North Pacific	Unknown	Unknown
		Oceanic whitetip shark – Western and Central Pacific	Unknown	Unknown
		Salmon shark – North Pacific	Unknown	Unknown
		Silky shark – Western and Central Pacific	Unknown	Unknown
Western Pacific FMC	American Samoa FEP	American Samoa Coral Reef Ecosystem Multi-Species Complex	Unknown	Unknown
Western Pacific FMC	Mariana Archipelago FEP	Guam Coral Reef Ecosystem Multi- Species Complex	Unknown	Unknown
		Northern Mariana Islands Coral Reef Ecosystem Multi-Species Complex	Unknown	Unknown
Western Pacific FMC	Pacific Remote Islands Areas FEP	Pacific Island Remote Areas Coral Reef Ecosystem Multi-Species Complex	Unknown	Unknown
North Pacific FMC	Gulf of Alaska Groundfish FMP	Gulf of Alaska Shark Complex	No	Unknown
North Pacific FMC	Bering Sea/Aleutian Islands Groundfish FMP	Bering Sea/Aleutian Islands Shark Complex	No	Unknown
Western Pacific FMC	Hawaiian Archipelago FEP	Hawaiian Archipelago Coral Reef Ecosystem Multi-Species Complex	Unknown	Unknown
Totals:			4 “yes” 15 “no” 19 “unknown”	6 “yes” 10 “no” 22 “unknown”

* LCS complex assessed in 2006. Since then, species-specific assessments have been performed only on individual species.

** Pelagic sharks are now being assessed individually. The only pelagic sharks that have not had a species-specific assessment are common thresher and oceanic whitetip sharks.

*** We removed soupfin shark from this list as it is now considered an ecosystem component species.

**** In prior reports, the three thresher shark species were combined in one species complex. As they now have separate stock assessments, we provide a separate status for each species.