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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 223**

**[Docket No. 151110999-7999-03]**

**RIN 0648-XE314**

**Endangered and Threatened Wildlife and Plants: Listing the Oceanic Whitetip Shark as Threatened under the Endangered Species Act**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** In response to a petition by Defenders of Wildlife, we, NMFS, are issuing a final rule to list the oceanic whitetip shark (*Carcharinus lonigmanus*) as threatened under the Endangered Species Act (ESA). We have reviewed the status of the oceanic whitetip shark, including efforts being made to protect the species, and considered public comments submitted on the proposed listing rule as well as new information received since publication of the proposed rule. Based on all of this information, we have determined that the oceanic whitetip shark warrants listing as a threatened species. At this time, we conclude that critical habitat is not determinable because data sufficient to perform the required analyses are lacking; however, we solicit information on habitat features and areas in U.S. waters that may meet the definition of critical habitat for the oceanic whitetip shark.

**DATES:** This final rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Endangered Species Conservation Division, NMFS Office of Protected Resources (F/PR3), 1315 East West Highway, Silver Spring, MD 20910.

**FOR FURTHER INFORMATION CONTACT:** Chelsey Young, NMFS, Office of Protected Resources, *chelsey.young@noaa.gov*, (301) 427-8491.

**SUPPLEMENTARY INFORMATION:**

**Background**

On September 21, 2015, we received a petition from Defenders of Wildlife to list the oceanic whitetip shark (*Carcharhinus longimanus*) as threatened or endangered under the ESA throughout its entire range, or alternatively, to list two distinct population segments (DPSs) of the oceanic whitetip shark, as described in the petition, as threatened or endangered, and to designate critical habitat. We found that the petitioned action may be warranted for the species; and, on January 12, 2016, we published a positive 90-day finding for the oceanic whitetip shark (81 FR 1376), announcing that the petition presented substantial scientific or commercial information indicating the petitioned action may be warranted range wide, and explaining the basis for the finding. We also announced the initiation of a status review of the species, as required by section 4(b)(3)(a) of the ESA, and requested information to inform the agency's decision on whether the species warranted listing as endangered or threatened under the ESA. On December 29, 2016, we published a proposed rule to list the oceanic whitetip shark as threatened (81 FR 96304). We requested public comments on the information in the proposed rule and associated status review during a 90-day public comment period, which closed on March 29, 2017. This final rule provides a discussion of the public comments received in response to the

proposed rule and our final determination on the petition to list the oceanic whitetip shark under the ESA.

### **Listing Determination under the ESA**

We are responsible for determining whether species meet the definition of threatened or endangered under the ESA (16 U.S.C. 1531 *et seq.*). To make this determination, we first consider whether a group of organisms constitutes a “species” under the ESA, then whether the status of the species qualifies it for listing as either threatened or endangered. Section 3 of the ESA defines a “species” to include any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife, which interbreeds when mature. The oceanic whitetip shark is a formally recognized species with no taxonomic uncertainty and thus meets the ESA definition of a “species.”

Section 3 of the ESA defines an endangered species as any species which is in danger of extinction throughout all or a significant portion of its range and a threatened species as one which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. We interpret an “endangered species” to be one that is presently in danger of extinction. A “threatened species,” on the other hand, is not presently in danger of extinction, but is likely to become so in the foreseeable future (that is, at a later time). In other words, the primary statutory difference between a threatened species and endangered species is the timing of when a species may be in danger of extinction, either presently (endangered) or in the foreseeable future (threatened).

When we consider whether a species might qualify as threatened under the ESA, we must consider the meaning of the term “foreseeable future.” It is appropriate to interpret “foreseeable future” as the horizon over which predictions about the conservation status of the species can be

reasonably relied upon. The foreseeable future considers the life history of the species, habitat characteristics, availability of data, particular threats, ability to predict threats, and the reliability to forecast the effects of these threats and future events on the status of the species under consideration. Because a species may be susceptible to a variety of threats for which different data are available regarding the species' response to that threat, or which operate across different time scales, the foreseeable future is not necessarily reducible to a particular number of years.

Section 4(a)(1) of the ESA requires us to determine whether any species is endangered or threatened due to any one or a combination of the following five threat factors: the present or threatened destruction, modification, or curtailment of its habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting its continued existence. We are also required to make listing determinations based solely on the best scientific and commercial data available, after conducting a review of the species' status and after taking into account efforts being made by any state or foreign nation to protect the species.

In assessing the extinction risk of the oceanic whitetip shark, we considered demographic risk factors, such as those developed by McElhany *et al.* (2000), to organize and evaluate the forms of risks. The approach of considering demographic risk factors to help frame the consideration of extinction risk has been used in many of our previous status reviews (see <http://www.nmfs.noaa.gov/pr/species> for links to these reviews). In this approach, the collective condition of individual populations is considered at the species level according to four demographic viability factors: abundance and trends, population growth rate or productivity, spatial structure and connectivity, and genetic diversity. These viability factors reflect concepts

that are well-founded in conservation biology and that individually and collectively provide strong indicators of extinction risk.

Scientific conclusions about the overall risk of extinction faced by the oceanic whitetip shark under present conditions and in the foreseeable future are based on our evaluation of the species' demographic risks and section 4(a)(1) threat factors. Our assessment of overall extinction risk considered the likelihood and contribution of each particular factor, synergies among contributing factors, and the cumulative impact of all demographic risks and threats on the species.

Section 4(b)(1)(A) of the ESA requires the Secretary, when making a listing determination for a species, to take into consideration those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect the species. Therefore, prior to making a listing determination, we also assess such protective efforts to determine if they are adequate to mitigate the existing threats.

### **Summary of Comments**

In response to our request for comments on the proposed rule, we received a total of 356 comments. Comments were submitted by multiple organizations and individual members of the public from a minimum of 19 countries (Australia, Brazil, Canada, Costa Rica, Ecuador, Egypt, England, Guatemala, India, Mexico, Netherlands, New Zealand, Norway, Panama, Philippines, South Africa, St. Kitts and Nevis, Sweden, and the United States). Most of the comments were supportive of the proposed listing of the oceanic whitetip shark as threatened. A few commenters argued that the oceanic whitetip should be listed as endangered, and some commenters were opposed to the proposed listing of the oceanic whitetip shark altogether. We have considered all public comments, and we provide responses to all relevant issues raised by comments. We have

not responded to comments outside the scope of this rulemaking, such as comments regarding the potential economic impacts of ESA listings, comments suggesting that certain types of activities be covered or excluded in any future regulations pursuant to ESA section 4(d) for threatened species, or comments suggesting the ESA is not the appropriate tool for conserving the oceanic whitetip shark. Summaries of comments received regarding the proposed rule and our responses are provided below.

#### *Comments on Proposed Listing Determination*

*Comment 1:* We received numerous comments that support the proposed listing of the oceanic whitetip shark as a threatened species under the ESA. A large majority of the comments were comprised of general statements expressing support for listing the oceanic whitetip shark as threatened under the ESA and were not accompanied by substantive information or references. Some of the comments were accompanied by information that is consistent with, or cited directly from, our proposed rule or draft status review report, including the observed population declines of the species, its prevalence in the international trade of shark fins, and the inadequacy of existing regulations to protect the species. Many comments also noted the importance of sharks as apex predators and their role in maintaining the balance of marine ecosystems. We also received two letters of support for our proposed rule to list the oceanic whitetip shark under the ESA that were accompanied by thousands of signatures: one letter had 3,306 signatures and the other had 24,020 signatures.

*Response:* We acknowledge the numerous comments and the considerable public interest expressed in support of the conservation of the oceanic whitetip shark.

*Comment 2:* We received several comments that disagreed with our proposed listing determination of threatened for the oceanic whitetip shark, and argued that the species should be

listed as endangered instead for a variety of reasons. One commenter noted that the species should be listed as endangered (as opposed to threatened) because the species' stock is "much lower than accounted for in the finding." Another commenter wrote that global warming, pollution (including increasing volumes of trash and plastic) and lack of genetic diversity all contribute to an endangered status. This particular commenter also disagreed that persistence at diminished abundance levels justifies a threatened listing, alleging that we characterized population declines of 70-80 percent as "reasonable." Other commenters stated that while they agreed with us that the oceanic whitetip shark warrants listing under the ESA, they believe the best available scientific and commercial information indicates that the species warrants listing as endangered as opposed to threatened due to inadequate regulatory mechanisms. One commenter provided a substantive discussion of several regulatory mechanisms in the Eastern Pacific that were deemed inadequate (see Comment 11 below for a detailed summary and response). Another commenter asserted that the species is endangered because past regulatory efforts to protect sharks have been unsuccessful in the United States (*e.g.*, Magnuson-Stevens Fishery Conservation and Management Act (MSA), Shark Finning Prohibition Act of 2000, and Shark Conservation Act of 2010). Other commenters noted that if the oceanic whitetip shark is likely going to be endangered in the foreseeable future, we should use a precautionary approach and list it as endangered now. Finally, a few commenters noted that listing the oceanic whitetip as threatened would not suffice to protect the species, and asserted that we can only promulgate take prohibitions for species that are listed as endangered.

*Response:* We disagree with commenters that the oceanic whitetip shark should be listed as endangered. As explained in the proposed rule, there are several reasons why the oceanic whitetip shark does not meet the definition of an endangered species under the ESA. The oceanic

whitetip shark is a globally distributed species that has not undergone any range contraction or experienced population extirpations in any portion of its range despite heavy harvest bycatch. Given that local extirpations are often a precursor to extinction events range wide, we consider this one indication that the species is not presently in danger of extinction. We could also not find any evidence to suggest that the threats of global warming or plastic pollution are having negative population-level effects on this species and the commenter provided no substantive information to support their claim that these are operative threats on the species. With regard to the species' low genetic diversity, we addressed this threat in detail in the status review report and proposed rule. We explained that the Extinction Risk Analysis (ERA) team acknowledged the low genetic diversity of the species and concluded that it did not, in and of itself, necessarily equate to a risk of extinction, but when combined with the low levels of abundance and continued exploitation, it could pose a viable risk in the foreseeable future. In terms of oceanic whitetip shark abundance, we did not receive any information to suggest that the species' abundance is lower than what we accounted for in our status review report and proposed rule. We also never characterized this species' population declines as "reasonable;" in fact, the species' historical and ongoing declining trends in abundance is one of the major demographic risks we identified for the oceanic whitetip that led to our proposed determination of threatened for the species. However, based on analyses of fisheries observer data conducted by the ERA team and presented in the status review report (Young *et al.*, 2017), the oceanic whitetip shark is showing stabilizing trends in abundance in a couple of areas, including the Northwest Atlantic and Hawaii. We concluded that these trends are likely attributable to U.S. fisheries management plans and species-specific regulations that have been in place for the oceanic whitetip for several years and will likely help maintain these trends in the near-term. Additionally, with respect to the



adequacy of regulatory mechanisms, we concluded that the increase in species-specific regulatory mechanisms that prohibit the species in numerous fisheries throughout its range should help to reduce fisheries-related mortality and slow (but not necessarily halt) population declines to some degree, thus providing a temporal buffer in terms of the species' extinction risk. As such, we cannot conclude that the species is presently in danger of extinction throughout all or a significant portion of its range; rather, we maintain that the species is likely to become endangered throughout all or a significant portion of its range in the foreseeable future, and thus meets the statutory definition of a threatened species under the ESA.

With regard to comments about using a precautionary approach when making a listing determination, we are only able to consider the best available scientific and commercial information to determine whether the species meets the definition of a threatened or endangered species under the ESA. Therefore, we are unable to utilize a precautionary approach and list a species as endangered when it does not meet the statutory definition of an endangered species at the time of listing.

Finally, commenters are incorrect in their statements that only endangered species are afforded protections under the ESA in the form of take prohibitions. While it is true that only endangered species receive automatic protections under section 9 of the ESA at the time of listing, we have the discretion and ability to promulgate 4(d) regulations for threatened species to apply any or all of the same protections for threatened species, should we find them necessary and advisable for the conservation of the species.

*Comment 3:* In contrast to Comment 2 above, we also received a comment supporting our determination that the oceanic whitetip shark does not qualify as an endangered species. The commenter stated that the information in the proposed rule clearly does not support a conclusion

that the species is presently “on the brink of extinction” and requested that we provide a more detailed explanation in our final decision as to why the oceanic whitetip shark does not qualify as an endangered species.

*Response:* Although we disagree with the interpretation of endangered as being equivalent to “on the brink of extinction,” we do agree with the commenter regarding our determination that the oceanic whitetip shark is not presently in danger of extinction throughout its range (*i.e.*, endangered). We explain our final decision regarding the listing status of the oceanic whitetip shark in our response to Comment 2 above and in the *Final Listing Determination* section below.

*Comment 4:* One commenter asserted that we did not conduct the required analysis to determine that the oceanic whitetip shark is currently threatened. The commenter stated that although we provided a comprehensive summary of the present status of the oceanic whitetip shark, we did not provide an adequate analysis of the expected status of the species at the end of the foreseeable future. In other words, the commenter contends that we did not properly analyze whether, how, when and to what degree the identified threats will affect the species’ status by the end of the foreseeable future (*i.e.*, 30 years). The commenter also asserted that our reliance on the Extinction Risk Analysis (ERA) team’s assessment is flawed because there were mixed results regarding the species’ overall extinction risk (*e.g.*, 20 out of 60 likelihood points were allocated to the “low risk” category; 34 out of 60 likelihood points were allocated to the “moderate risk” category; and 6 out of 60 likelihood points were allocated to the “high risk” category). The commenter concluded that we did not consider the factors relevant to our decision nor make a rational connection between the facts and our determination.

*Response:* We disagree with the commenter's characterization of our extinction risk analysis. With regard to the ERA team's methods and conclusions, the available data for the oceanic whitetip shark did not allow for a quantitative analysis or model of extinction risk into the foreseeable future. Therefore, the ERA team adopted the "likelihood point" (*i.e.*, FEMAT; Forest Ecosystem Management Assessment Team 1993) method for ranking the overall risk of extinction to allow individuals to express uncertainty. As explained in the proposed rule, this method has been used in previous NMFS status reviews (*e.g.*, Pacific salmon, Southern Resident killer whale, Puget Sound rockfish, Pacific herring, and black abalone) to structure the team's thinking and express levels of uncertainty when assigning risk categories. Therefore, while the ERA team distributed their likelihood points among all three risk categories to express some level of uncertainty, more than half of the available likelihood points were allocated to the "moderate risk" category. The ERA team's scientific conclusions about the overall risk of extinction faced by the oceanic whitetip shark is based on an evaluation of current demographic risks and identified threats to the species, and how these factors will likely impact the trajectory of the species into the foreseeable future. As noted in the proposed rule, the ERA team determined that due to significant and ongoing threats of overutilization and largely inadequate regulatory mechanisms, current trends in the species' abundance, productivity and genetic diversity place the species on a trajectory towards a high risk of extinction in the foreseeable future. In other words, given the likely continuation of present-day conditions over the next 30 years or so, the oceanic whitetip will more likely than not be at or near a level of abundance, productivity, and/or diversity that places its continued persistence in question, and may be strongly influenced by stochastic or compensatory processes. Therefore, while we were unable to quantify or model the expected condition of the species at the end of the foreseeable future, we

thoroughly evaluated the best available scientific information regarding the species' current demographic risks and threats and made rational conclusions regarding the species' trajectory over the next 30 years based on the ERA team's expertise and professional judgement regarding the species, its threats, and fisheries management.

#### Comments on Distinct Population Segments (DPSs)

We received a few comments suggesting that we identify distinct population segments of the oceanic whitetip shark.

*Comment 5:* One group of commenters disagreed with the proposed global listing of the oceanic whitetip shark as a threatened species. The commenters asserted that we failed to reach conclusions regarding recent genetic studies discussed in the status review and proposed rule (Ruck 2016 and Camargo *et al.*, 2016), which they argue supports the identification of at least two DPSs. They provided further discussion of theories proposed by Ruck (2016) and Camargo *et al.* (2016) that population structure may reflect thermal barriers and female philopatry. As such, they requested that we re-assess the extinction risk of the species following a thorough analysis of potential distinct population segments (DPSs), specifically the Atlantic and Indo-Pacific populations, because the commenters believe that extinction risk analyses of these individual DPSs may result in a different listing determination. The commenters asserted that "Even when listing is warranted for the global species, NMFS has a duty to analyze potential DPSs." The commenter also stated that conducting an extinction risk analysis at the DPS level (as opposed to the global level) would be "more meaningful and scientifically relevant for the oceanic whitetip shark's future management, including critical habitat designation and recovery planning strategies."

*Response:* We disagree with the commenters regarding our duty to analyze potential DPSs after finding the species warrants listing range-wide. The petition we received from Defenders of Wildlife clearly requested that we list the oceanic whitetip shark as threatened or endangered throughout its range. As an alternative to a global listing, the petition requested that if we found that there are DPSs of oceanic whitetips (specifically Indo-Pacific and Atlantic populations), that those DPSs be listed under the ESA. At the 90-day finding stage, we determined that the petition presented substantial scientific or commercial information indicating listing may be warranted for the oceanic whitetip shark range-wide, and therefore, we initiated the status review on the global population (81 FR 1376, January 12, 2016). We specifically explained in the 90-day finding that if after this review we determined that the species did not warrant listing range-wide, then we would consider whether the populations requested by the petition qualify as DPSs and warrant listing. We concluded that the oceanic whitetip shark warrants listing as a threatened species throughout its range. As such, we have discretion as to whether we should divide a species into DPSs, and the commenter is incorrect that we are required to commit additional agency resources to conduct an analysis and break up the species into the smallest listable entity (*i.e.*, DPSs) despite a warranted listing for the species globally. Nonetheless, we re-reviewed the two available genetic studies for the species (Ruck 2016 and Camargo *et al.*, 2016), particularly in regards to discreteness between Atlantic and Indo-Pacific subpopulations. These studies differ in genetic markers and sampling locations, but neither provides strong evidence for genetic discontinuity. Camargo *et al.* (2016) compared mitochondrial DNA sequences of samples collected in eight locations, including the southeast Atlantic and the southwest Indian Oceans (*i.e.*, on either side of the southern tip of Africa). They concluded there was an absence of genetic structure between the East Atlantic and Indian Ocean

subpopulations. Though the Indian Ocean sample size was small ( $n = 9$ ), it included four haplotypes, all of which were also found in Atlantic Ocean subpopulations. Camargo *et al.* (2016) explained that this genetic connectivity (*i.e.*, the existence of only one genetic stock around the African continent) may be facilitated by the warm Agulhas current, which passes under the Cape of Good Hope of South Africa and may transport oceanic whitetips from the Indian Ocean to the eastern Atlantic. Ruck (2016) compared longer mitochondrial DNA sequences and 11 microsatellite DNA loci of samples collected in seven locations; however, there were no samples from the southeast Atlantic and the southwest Indian Oceans (*i.e.*, the closest sampling locations were Brazil and Arabian Sea). Ruck (2016) found weak but statistically significant differentiation between West Atlantic and Indo-Pacific subpopulations but explained that her study shows genetic evidence for contemporary migration between the West Atlantic and Indo-Pacific as a result of semi-permeable thermal barriers (*i.e.*, the warm Agulhas current). Thus, we compare one study which may lack resolution but demonstrates genetic connectivity between the southeast Atlantic and the southwest Indian Ocean subpopulations (*i.e.*, across the Agulhas current; Camargo *et al.*, 2016) to another that finds weak genetic structure and low-level contemporary migration across great distances (*i.e.*, the West Atlantic and the northern Indian Ocean; Ruck 2016). We conclude that neither study provides unequivocal evidence for genetic discontinuity or marked separation (*i.e.*, discreteness) between Atlantic and Indo-Pacific Ocean subpopulations. Therefore, the best available data do not support the identification of these populations as DPSs.

Overall, given the ambiguous nature of the genetics data, limited information regarding the movements of oceanic whitetip sharks, and our discretion to identify DPSs, we do not find cause nor are we required to break up the global population into DPSs. We also do not agree that

breaking the global population up into two DPSs would enhance conservation of the species under the ESA. For a threatened species, we have the discretion to promulgate ESA section 4(d) regulations that can be tailored for specific populations and threats should we find it necessary and advisable for the conservation of the species. Recovery planning can also be tailored for the species in different parts of its range.

*Comment 6:* Another commenter also urged us to break up the global population into DPSs due to differences in regulatory mechanisms and management, specifically between the Northwest Atlantic and South Atlantic. The commenter argued that while regulatory measures in U.S. fisheries operating in the Northwest Atlantic are adequate for the oceanic whitetip, regulations for other fishing fleets in the South Atlantic (particularly Brazil) are likely inadequate. Therefore, the commenter asserted that oceanic whitetip sharks occurring in U.S. waters of the Northwest Atlantic should be identified as a DPS, such that the Northwest Atlantic population would not qualify as a threatened species.

*Response:* We disagree with the commenter's interpretation of the DPS Policy and its intent. As noted previously, we have discretion with regard to listing DPSs in the case of the oceanic whitetip shark, and Congress has indicated that the provision to list DPSs should be used sparingly. Furthermore, the DPS Policy (61 FR 4722, February 7, 1996) identifies two specific criteria that populations must meet in order to be listed as a DPS – discreteness and significance; and while management differences may be considered in our analysis, management differences are not a sufficient basis for delineating populations as DPSs. Additionally, in many cases recognition of DPSs can unduly complicate species management rather than further the conservation purposes of the statute. In this case, we could find no overriding conservation benefit to break up the global species into DPSs. Finally, as explained in the status review and

proposed rule (Young *et al.*, 2017; 81 FR 96304), despite the stabilizing trend in its current state, the Northwest Atlantic population represents a very small portion of the range of the species and is likely persisting at a diminished abundance, particularly given the common abundance documented historically for the oceanic whitetip in this part of its range. With no clear indication of population recovery to date, we still have some concern for the species in this part of its range. Therefore, given the species warrants listing as threatened throughout its range, we do not find cause to break up the population into smaller units.

#### Comments on Significant Portion of its Range

*Comment 7:* One commenter asserted that the status review and proposed rule failed to analyze whether any particular regions of the oceanic whitetip shark's range qualify as significant portions of the species' range (SPR) under the SPR Policy. The commenter contended that had we conducted analyses of potential SPRs, we may have determined that oceanic whitetip sharks in a particular ocean basin (*e.g.*, Atlantic and Pacific) or regions within an ocean basin (*e.g.*, eastern and western Atlantic) face different levels of extinction risk and would result in a likely change of listing determination for the oceanic whitetip shark.

*Response:* We disagree with the commenter's interpretation of the SPR Policy (79 FR 37577, July 1, 2014), as well as their statement that we failed to analyze whether there are any portions of the oceanic whitetip shark's range that would qualify as an SPR, which implies we were required to do so. We believe Congress intended that, where the best available information allows the Services to determine a status for the species rangewide, such listing determination should be given conclusive weight. A rangewide determination of status more accurately reflects the species' degree of imperilment, and assigning such status to the species (rather than potentially assigning a different status based on a review of only a portion of the range) best



implements the statutory distinction between threatened and endangered species. Maintaining this fundamental distinction is important for ensuring that conservation resources are allocated toward species according to their actual level of risk. We also note that Congress placed the “all” language before the “significant portion of its range” phrase in the definitions of “endangered species” and “threatened species.” This suggests that Congress intended that an analysis based on consideration of the entire range should receive primary focus, and thus that the agencies should do a “significant portion of its range” analysis as an alternative to a rangewide analysis only if necessary. Under this reading, we should first consider whether listing is appropriate based on a rangewide analysis and proceed to conduct a “significant portion of its range” analysis if (and only if) a species does not qualify for listing as either endangered or threatened according to the “all” language. We note that this interpretation is also consistent with the 2014 Final Policy on Interpretation of the Phrase “Significant Portion of its Range” (79 FR 37578 (July 1, 2014)), which provides that a portion of a species’ range can be “significant” only if the species is not currently endangered or threatened throughout all of its range. The current SPR Policy defines “significant” as follows: “A portion of the range of a species is ‘significant’ if the species is not currently endangered or threatened throughout all of its range, but the portion’s contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range” (79 FR 37578, July 1, 2014). For all of these reasons and based on the SPR Policy, because we determined the oceanic whitetip shark is currently threatened throughout all of its range, we did not conduct an additional SPR analysis to determine if a portion of the species’ range is significant and whether the species is endangered in that portion.

## Comments on Threats to the Species

*Comment 8:* We received a comment letter that articulated concern for an omission of information regarding various NMFS time/area seasonal closures for pelagic longline (PLL) gear in the United States Exclusive Economic Zone (EEZ) that have been in place for many years along the East Coast. The commenter asserted that these closures have resulted in a reduction of oceanic whitetip shark bycatch, and this information should have been included in the status review report as an example of management that has benefited the species.

*Response:* We acknowledge that the status review report did not specifically discuss the time/area seasonal closures for PLL gear in the U.S. EEZ along certain sections of the East Coast. We have since incorporated this information into the status review report. However, the commenter did not provide any details or data to show how these particular regulations have reduced oceanic whitetip shark bycatch in particular, and we are not aware of any scientific study or data that demonstrates the impacts of these closures on oceanic whitetip shark abundance. We agree that it's possible these particular regulations may have had a positive effect on reducing bycatch of oceanic whitetip shark in the Northwest Atlantic PLL fishery, particularly given the stabilizing trend shown by the ERA team's analysis of observer data from the fishery (which cover the aforementioned time/area seasonal closures), but there's no way to confirm this assertion based on the available data and information. Overall, as we explained in the status review report and proposed rule, we do agree that regulatory mechanisms in the Northwest Atlantic have likely improved the status of the oceanic whitetip shark in this portion of its range; however, the incorporation of this new information does not alter our overall assessment of the species' extinction risk throughout its global range.

*Comment 9:* We received a comment letter from the Blue Water Fishermen's Association that disagreed with our conclusion that inadequate regulatory mechanisms are contributing to an increased risk of extinction for the species, and thus, our decision to list the species as threatened. The substance of the comment focused on regulatory mechanisms implemented for U.S. fishing vessels in the Northwest Atlantic, and asserted that these measures adequately reduce bycatch-related mortality and protect the species from fishing pressure, thus rendering the impacts of U.S. fisheries to the oceanic whitetip shark negligible. The commenter also asserted that the relevant Regional Fishery Management Organizations (RFMOs) have taken adequate measures to protect the species globally by implementing measures to prohibit the retention of oceanic whitetip sharks in the fisheries over which they have competence. The commenter concluded that global regulations of both fisheries and trade (including the Convention on International Trade of Endangered Species of Wild Fauna and Flora; (CITES)) are adequate to protect the oceanic whitetip shark, and therefore, the species does not warrant listing under the ESA.

*Response:* As discussed previously in the response to *Comment 8* above, we agree that regulatory mechanisms implemented in the Northwest Atlantic for the U.S. PLL fishery have likely contributed to the stabilization of the oceanic whitetip shark population in this portion of its range. We also agree that the no-retention measures implemented by the relevant RFMOs will also likely help reduce fisheries-related mortality of the species to some degree, when adequately enforced. Although there is arguably high compliance with, and adequate enforcement of, U.S. fisheries regulations, the oceanic whitetip shark is a highly migratory species and thus a shared resource across the Atlantic Ocean basin. Several other pelagic longline fleets impact the species, many of which have poor compliance with and enforcement of fisheries regulations. As such,

U.S. regulatory mechanisms have limited impact on the global stage in that they only provide protections to oceanic whitetip sharks while in U.S. waters. While this does not make U.S. regulations inadequate in terms of their purpose of protecting oceanic whitetip sharks while in U.S. waters, regulations are likely inadequate in other parts of the world to prevent further population declines of oceanic whitetip as a result of overutilization. For example, we explained in the status review report and proposed rule that Brazil, which is the top oceanic whitetip catching country in the Atlantic, has poor enforcement of its fisheries regulations to mitigate the significant fishing pressure on oceanic whitetip sharks in the region. In fact, a recent review paper of legal instruments to manage fisheries in Brazil noted a “complete disrespect for the regulations” and showed that fleets continued to land prohibited or size limited species, including the oceanic whitetip shark (Fiedler *et al.*, 2017). This means Brazil is not only non-compliant with their own national regulations that prohibit the landing and retention of oceanic whitetip sharks, but with international management measures as well.

We also disagree that global regulations for fisheries and trade are adequate to control for the threat of overutilization via fishing pressure and the fin trade. For example, across the Pacific Ocean basin, the species has experienced and continues to experience concentrated fishing pressure and associated mortality in its core tropical distribution (Rice *et al.*, 2015; Hall and Roman 2013). We also noted that implementation and enforcement of regulations to protect the species are likely variable across countries. Additionally, the retention-prohibition enacted by the Western and Central Pacific Fisheries Commission is not being strictly adhered to in longline fisheries (Rice *et al.*, 2015) and will not likely decrease mortality from purse seine fisheries (Young *et al.*, 2017). Given the depleted status of oceanic whitetip sharks across the Pacific Ocean basin, less-than-full implementation of management measures will likely undermine

benefits to the species. In terms of the shark fin trade, we discussed in the status review and proposed rule several incidents of illegal oceanic whitetip fin confiscations from fishing vessels in violation of RFMO management measures. Additionally, since the listing of oceanic whitetip shark under CITES Appendix II went into effect in 2014 to control for trade, approximately 1,263 kg (2,784 lbs) of oceanic whitetip fins have been confiscated upon entry into Hong Kong because the country of origin did not include the required CITES permits. This provides evidence that some countries are not adhering to requirements under CITES and oceanic whitetip fins continue to be traded without the proper documentation certifying that the trade is not negatively affecting the species' status. Therefore, we reaffirm our conclusion in the proposed rule (see 81 FR 96320) regarding the adequacy of U.S. regulatory mechanisms in the context of the species' global range.

*Comment 10:* We received a similar comment from the Hawaii Longline Association (HLA) that emphasized the negligible effect of the Hawaii-based longline fisheries on the global population of the oceanic whitetip shark due to adequate regulatory mechanisms. The commenter stated that Hawaii-based longline fisheries do not engage in finning or targeting of oceanic whitetip sharks, they incidentally catch very few oceanic whitetip sharks relative to foreign fisheries, and almost all incidentally caught individuals are released alive. Specifically, the commenter pointed out that from 2005-2016, the oceanic whitetip shark only comprised 0.16 percent of all species landed in shallow-set and deep-set longline fisheries combined. Additionally, the commenter noted that in recent years, the percentage of oceanic whitetip sharks released alive is high, ranging from 91-96 percent in the shallow-set fishery, and from 78-82 percent in the deep-set fishery. They also noted that Hawaii-based longline fisheries use a variety of practices to reduce potential adverse effects on the species. Finally, the commenter warned of

potential unintended conservation consequences that could result from additional regulations placed on the Hawaii-based longline fisheries as a result of a threatened listing of the oceanic whitetip shark. The commenters asserted that the extensive regulatory system that the Hawaii-based longline fisheries are managed under can create a shift in fishing effort to the very species we are trying to protect by foreign fisheries that are much less regulated (if at all).

We received comments from the Western and Central Pacific Regional Fishery Management Council (Council) along the same lines as comments from HLA, noting that the impact of the Hawaii and American Samoa longline fisheries on the oceanic whitetip shark population is likely limited relative to overall impacts occurring throughout the rest of the species' range. The Council emphasized that the combination of state and federal regulations to prohibit shark finning has likely resulted in increased amounts of oceanic whitetip sharks released alive and asserted that the stabilizing CPUE trend for the Hawaii-based PLL fishery might be attributable to the high proportion of oceanic whitetip sharks released alive over the last 15 years. Additionally, the Council noted that the Hawaii and American Samoa fisheries are operating with gear configurations recommended to reduce shark bycatch (*e.g.*, use of circle hooks and non-use of shark lines), which further reduce the fisheries' impact on the status of the oceanic whitetip shark.

*Response:* We acknowledge the information provided by HLA and the Council regarding the impact of the Hawaii and American Samoa longline fisheries on the global oceanic whitetip shark population and largely agree with their comments. We explained in the proposed rule that although the Hawaii-based PLL fishery currently catches oceanic whitetip sharks as bycatch, the majority of individuals are released alive in this fishery and the number of individuals kept has shown a declining trend. In fact, the comment letter from HLA provided the same exact statistics

that we discussed in the proposed rule regarding the percentage of oceanic whitetip sharks released alive in the shallow-set and deep-set fisheries (*i.e.*, 91-96 percent and 78-82 percent, respectively). We agree that due to the extensive regulatory measures the Hawaii and American Samoa longline fisheries operate under, and the large proportion of individuals released alive, these fisheries may be less of a threat to the oceanic whitetip shark when compared to foreign industrial fisheries. However, while we agree that U.S. fisheries are not likely posing a significant threat to the species relative to foreign industrial fisheries, levels of implementation and enforcement of management measures by other fleets are likely variable across the region. As such, and as noted above in a previous comment response, given the depleted state of the oceanic whitetip population and significant level of fishing mortality the species experiences in this part of its range, less-than-full implementation across the Western and Central Pacific Ocean (WCPO) will likely undermine the benefits of any adequately implemented and enforced management measures in U.S. fisheries. Therefore, in addition to the response we gave to *Comment 9* above regarding the adequacy of U.S. regulatory mechanisms in context of the species' global range, we reiterate our conclusion from the proposed rule regarding the status of oceanic whitetip sharks across the Western and Central Pacific region. Given the ongoing impacts to the species from significant fishing pressure across the WCPO as a whole, (with the majority of effort concentrated in the species' core tropical habitat area), including significant declines in CPUE, biomass, and size indices, combined with the species' relatively low-moderate productivity, we conclude that overutilization has been and continues to be an ongoing threat contributing to the extinction risk of the oceanic whitetip shark across the region (see 81 FR 96315).

With regard to unintended conservation consequences resulting from a threatened listing of the oceanic whitetip shark (*i.e.*, a shift in fishing effort for the species by unregulated foreign industrial fisheries), we can only consider the best available scientific and commercial information regarding the biological status of the species when determining whether it meets the definition of threatened or endangered under the ESA. Therefore, we are unable to consider hypothetical ramifications of protective regulations that the commenter believes may result from listing a species. However, it should be noted that any decision to extend protective regulations to the species via a 4(d) regulation that would potentially affect U.S. fisheries will be addressed in a separate rule-making process with opportunity for public comment and input.

*Comment 11:* We received a comment letter from the Panama Aquatic Resources Authority within the Panama Ministry of the Environment with some new information regarding shark landings in Panama. The commenter explained that sharks are not reported at the species level in fisheries landing reports; therefore, there is no species-specific information regarding the oceanic whitetip shark in catch reports collected by the Authority. The commenter also reaffirmed information reported in the status review report and proposed rule regarding the significant decline in oceanic whitetip shark catches in the eastern Pacific purse seine fishery, which led to the Inter-American Tropical Tuna Commission's (IATTC) resolution on the conservation of the species. The comment then provided landings data for sharks in the Port of Vacamontes, and noted that sharks are caught under various types of licenses and combinations of licenses, which indicates that shark fishing in Panama is a combination of directed and incidental catch by both longliners (bottom and surface) and trawls. The commenter also included information regarding artisanal and industrial fishing fleets, noting that the oceanic whitetip shark likely has the most interaction with the longline fishery; however, there is no way



to corroborate this information with the landings data from the Panama Aquatic Resources Authority. The commenter concluded that although there are no landings data for oceanic whitetip shark in Panama, this does not necessarily mean the species is not caught. Nonetheless, the commenter agreed that the available information on the species' status in the region suggests that the species warrants protection.

*Response:* We appreciate the information provided to us by the Panama Aquatic Resources Authority regarding shark fishing and landings data from Panamanian waters, and we have incorporated this information into our status review report for the oceanic whitetip shark. However, the information provided was very limited, and, as the commenter points out, species-specific information for oceanic whitetips in Panama is lacking. We agree with the commenter that although there is no species-specific catch or landings data, the oceanic whitetip likely interacts with the industrial longline fishery in these waters. Overall, because of the depleted status of the species in this region, any additional mortality in Panamanian waters due to bycatch in longlines supports our determination that overutilization is an ongoing threat to the species.

*Comment 12:* We received a report from the organization Fins Attached (Arauz 2017) stating that existing management measures and regulations in the Eastern Pacific (*e.g.*, Resolutions passed by the IATTC and various national laws in Costa Rica) are inadequate for oceanic whitetip sharks. The report gave several examples from Costa Rica where existing regulations are failing to achieve their objectives, including a 5 percent fin-to-body weight ratio, the IATTC's Resolution C-11-10 on the Conservation of Oceanic Whitetip Sharks (which prohibits Members and Cooperating non-Members (CPCs) from retaining or landing any part or whole oceanic white tip carcass in fisheries covered by the Antigua Convention), and Costa Rica's ban on the use of fish aggregating devices (FADs).

*Response:* We appreciate the additional information provided in the Fins Attached report and have incorporated this information into our status review report for the oceanic whitetip shark. We agree with the commenter that existing regulatory mechanisms in the eastern Pacific are likely inadequate to halt or reverse population declines of the species in this portion of its range. As explained in the status review report and proposed rule, the IATTC's Resolution C-11-10 is not likely adequate to prevent capture and mortality in the main fishery that catches oceanic whitetip sharks in this region (*i.e.*, the tropical tuna purse seine fishery). Therefore, because of the species' depleted status in the eastern Pacific and the ongoing fishing pressure from both purse seine and longline fisheries, we concluded that the retention prohibition for oceanic whitetip sharks in the eastern Pacific is not likely adequate in terms of effectively mitigating for the threat of overutilization in this region. The evidence provided of other inadequate regulations in this region further supports our conclusion that overutilization of oceanic whitetip shark in the Eastern Pacific is an ongoing, unabated threat contributing to the species' threatened status.

*Comment 13:* We received a comment letter from the Ministry of Foreign Affairs of Saint Kitts and Nevis, confirming that oceanic whitetip sharks are not targeted in the waters of St. Kitts and Nevis.

*Response:* We acknowledge the letter and information provided by the government of St. Kitts and Nevis. Although it is useful to know that oceanic whitetip sharks are not targeted in the waters of St. Kitts and Nevis, this information does not alter our determination regarding the species' listing status, as the main issue for the oceanic whitetip shark is incidental bycatch-related mortality and not targeted fishing.

*Comment 14:* We received a comment letter from an international conservation organization that expressed support for the proposed threatened listing for the oceanic whitetip

shark, and concern for the species' low genetic diversity and its potential impact on the species' viability in the future. The commenter identified the African cheetah and northern elephant seal as examples of species in which severe genetic and population bottlenecks, respectively, occurred and led to low genetic variation in the seal and physiological impairments (*e.g.*, decreased fecundity, high infant mortality and increased sensitivity to diseases) in the cheetah. The commenter urged us to continue to monitor the oceanic whitetip shark for any change in status, with particular concern for potential population or genetic bottlenecks that may result in increased inbreeding and subsequent impacts on the species' population viability in the future.

*Response:* We agree with the commenter that the oceanic whitetip shark has relatively low genetic diversity compared to several other circumtropical sharks. As we described in the proposed rule, the oceanic whitetip sharks' relatively low mitochondrial DNA genetic diversity raises potential concern for the future genetic health of the species, particularly in concert with steep global declines in abundance. Because only 5-7 generations of oceanic whitetip sharks have passed since the onset of industrial fishing (and hence, the intense exploitation of the species), the low genetic diversity observed in Ruck (2016) and Camargo *et al.* (2016) likely reflect historical levels, rather than current levels that would reflect the species' significant population declines (Ruck 2016). Thus, we agree with the commenter that genetic bottlenecks may be a cause for concern in the foreseeable future, since a species with already relatively low genetic diversity undergoing significant levels of exploitation may experience increased risk in terms of reduced fitness, evolutionary adaptability, and potential extirpations (Camargo *et al.*, 2016). In terms of monitoring, once a species is listed under the ESA, we are required to conduct 5-year reviews to determine whether there has been any change in the species' status since the final listing rule went into effect. At that time, we can assess whether any new genetic

information has become available that would indicate whether the species' extinction risk has increased due to any population or genetic bottlenecks. Additionally, any interested person can petition us to change the species' status, at which time we would evaluate any new information submitted as part of the petition.

#### *Comments outside the Scope of the Proposed Listing Determination*

We received numerous comments regarding actions that fall outside the scope of this rulemaking. Below are brief explanations to note the comments were received and explain why they are not considered relevant to the content of the proposed rule.

*Comment 15:* We received multiple comments regarding the designation of critical habitat for the oceanic whitetip shark in U.S. waters. One commenter urged NMFS to propose designated critical habitat for the oceanic whitetip shark in waters off the continental U.S., Puerto Rico, the U.S. Virgin Islands, Hawaii and the Pacific Trust Territories to the maximum extent prudent and determinable.

*Response:* We appreciate the submission of these comments regarding critical habitat. NMFS is required to designate critical habitat at the time of final rule publication, unless we determine that critical habitat is undeterminable at that time. We discuss our determination that critical habitat is not currently determinable for the oceanic whitetip shark in the *Critical Habitat* section below.

*Comment 16:* We received several comments related to ESA 4(d) rule making, which was discussed in the *Protective Regulations Under Section 4(d) of the ESA* section of the proposed rule. One commenter requested that NMFS not apply the ESA section 9 take prohibitions to licensed Hawaii-based commercial longline fishing vessels, as these prohibitions would not be necessary and advisable for the conservation of the species given that the Hawaii longline

fisheries have a negligible impact on the oceanic whitetip shark relative to foreign industrialized fisheries. In contrast, another commenter requested that NMFS use its authority under ESA section 4(d) to extend the section 9(a) take prohibitions, particularly because “take” by fisheries was identified as a main threat to the oceanic whitetip shark in the status review and proposed rule, and thus take prohibitions would be necessary and advisable for the conservation of the species.

*Response:* The comments described above did not provide substantive information to help inform the final listing determination for the oceanic whitetip shark. For threatened species, the take prohibitions under section 9 of the ESA do not automatically apply, as they do for endangered species. Additionally, NMFS is not required to issue a 4(d) rule for threatened species in conjunction with a final ESA listing. We will do so only if we determine it is necessary and advisable for the conservation of the species. Issuance of a 4(d) rule would be done in a separate rulemaking process that would include specific opportunities for public input. As such, the comments above are noted but not responded to further in this final rule.

### **Summary of Changes from the Proposed Listing Rule**

We did not receive, nor did we find, data or references that presented substantial new information to change our proposed listing determination. We did, however, make several revisions to the status review report (Young *et al.*, 2017) to incorporate, as appropriate, relevant information that we received in response to our request for public comments or identified ourselves. Specifically, we updated the status review to include information regarding fisheries data and regulations from two countries that border the eastern Pacific (Costa Rica and Panama), which largely supports our determination that population declines as a result of overutilization and inadequate regulations in this region are contributing to the species’

threatened status globally. We also revised the discussion of U.S. regulatory mechanisms in the status review report to include relevant time/area and seasonal closures to longline fishing gear along the East Coast of the United States. In addition, we identified a couple of new publications with relevant information regarding the life history of the oceanic whitetip shark from the Western and Central Pacific and Indian Oceans (D'Alberto *et al.*, 2017 and Varghese *et al.*, 2016, respectively). Specifically, these publications provide new information regarding age, growth and maturity for the species, which we incorporated into the status review report. We also identified a new paper regarding the inadequacy of fisheries regulations in Brazil (Fiedler *et al.*, 2017), which further supports our determination that overutilization and inadequate regulations are ongoing threats to the species in the South Atlantic. Finally, we revised the discussion of the essential fish habitat (EFH) designation for the oceanic whitetip shark in U.S. waters of the Northwest Atlantic, because NMFS amended the designation in this region in 2017. We thoroughly considered the additional information we received and gathered; however, the inclusion of this new information did not alter the outcome of our risk assessment of the species.

### **Status Review**

We appointed a biologist in the Office of Protected Resources Endangered Species Conservation Division to undertake a scientific review of the life history and ecology, distribution, abundance, and threats to the oceanic whitetip shark. Next, we convened a team of biologists and shark experts (the ERA team) to conduct an extinction risk analysis for the species, using the information in the scientific review. The ERA team was comprised of a natural resource management specialist from NMFS Office of Protected Resources, a fishery management specialist from NMFS' Highly Migratory Species Management Division, and four

research fishery biologists from NMFS' Southeast, Northeast, Southwest, and Pacific Island Fisheries Science Centers. The ERA team had expertise in shark biology and ecology, population dynamics, highly migratory species management, and stock assessment science. The status review report presents the ERA team's professional judgment of the extinction risk facing the oceanic whitetip shark but makes no recommendation as to the listing status of the species. The final status review report of the oceanic whitetip shark (Young *et al.*, 2017) compiles the best available information on the status of the species as required by the ESA and assesses the current and future extinction risk for the species, focusing primarily on threats related to the five statutory factors set forth in section 4(a)(1) of the ESA. The status review report is available electronically at <http://www.nmfs.noaa.gov/pr/species/fish/oceanic-whitetip-shark.html>.

The status review report was subjected to independent peer review as required by the Office of Management and Budget Final Information Quality Bulletin for Peer Review (M-05-03; December 16, 2004). The status review report was peer reviewed by five independent specialists selected from the academic and scientific community, with expertise in shark biology, conservation, and management, and specific knowledge of oceanic whitetip sharks. The peer reviewers were asked to evaluate the adequacy, appropriateness, and application of data used in the status review as well as the findings made in the "Assessment of Extinction Risk" section of the report. All peer reviewer comments were addressed prior to finalizing the status review report.

We subsequently reviewed the status review report, its cited references, and peer review comments, and believe the status review report, upon which the proposed rule and this final rule are based, provides the best available scientific and commercial information on the oceanic whitetip shark. Much of the information discussed in the proposed rule and below on oceanic

whitetip shark biology, distribution, abundance, threats, and extinction risk is attributable to the status review report. However, we have independently applied the statutory provisions of the ESA, including evaluation of the factors set forth in section 4(a)(1)(A)-(E), our regulations regarding listing determinations, and our DPS policy in making this final listing determination.

### **ESA Section 4(a)(1) Factors Affecting the Oceanic Whitetip Shark**

As stated previously and as discussed in the proposed rule (81 FR 96304; December 29, 2016), we considered whether any one or a combination of the five threat factors specified in section 4(a)(1) of the ESA is contributing to the extinction risk of the oceanic whitetip shark. Several commenters provided additional information related to threats, such as forms of overutilization, including bycatch-related fisheries mortality and the fin trade, as well as inadequate regulatory mechanisms. The information provided was consistent with or reinforced information in the status review report and proposed rule, and thus, did not change our conclusions regarding any of the section 4(a)(1) factors or their interactions. Therefore, we incorporate and affirm herein all information, discussion, and conclusions regarding the factors affecting the oceanic whitetip shark from the final status review report (Young *et al.*, 2017) and the proposed rule (81 FR 96304; December 29, 2016).

### **Extinction Risk**

As discussed previously, the status review evaluated the demographic risks to the oceanic whitetip shark according to four categories - abundance and trends, population growth/productivity, spatial structure/connectivity, and genetic diversity. As a concluding step, after considering all of the available information regarding demographic and other threats to the species, we rated the species' extinction risk according to a qualitative scale (high, moderate, and low risk). Although we did update our status review to incorporate the most recent life history



information for the oceanic whitetip from two additional studies regarding age, growth and age of maturity, none of the comments or information we received on the proposed rule changed the outcome of our extinction risk evaluation for the species. As such, our conclusions regarding extinction risk for the oceanic whitetip shark remains the same. Therefore, we incorporate and affirm herein all information, discussion, and conclusions on the extinction risk of the oceanic whitetip shark in the final status review report (Young *et al.*, 2017) and proposed rule (81 FR 96304; December 29, 2016).

### **Protective Efforts**

In addition to regulatory measures (*e.g.*, fishing and finning regulations, sanctuary designations, etc.), we considered other efforts being made to protect the oceanic whitetip shark. We considered whether such protective efforts altered the conclusions of the extinction risk analysis for the species; however, none of the information we received on the proposed rule affected our conclusions regarding conservation efforts to protect the oceanic whitetip. Therefore, we incorporate and affirm herein all information, discussion, and conclusions on the extinction risk of the oceanic whitetip shark in the final status review report (Young *et al.*, 2017) and proposed rule (81 FR 96304; December 29, 2016).

### **Final Listing Determination**

Based on the best available scientific and commercial information, we conclude that the oceanic whitetip shark is not presently in danger of extinction but is likely to become so in the foreseeable future throughout all or a significant portion of its range. While the oceanic whitetip shark was historically one of the most abundant and ubiquitous shark species in warm tropical and sub-tropical seas around the world (Mather and Day 1954, Backus *et al.*, 1956, Strasburg 1958), the best available scientific and commercial information suggests the species has

experienced significant historical and ongoing abundance declines in all three ocean basins (*i.e.*, globally) due to overutilization from fishing pressure and inadequate regulatory mechanisms to protect the species. Estimates of abundance decline range from 50-88 percent across the Atlantic Ocean (Northwest Atlantic, Gulf of Mexico, Southwest Atlantic; Baum and Meyers 2004, Cortés 2007, Driggers *et al.*, 2011, Barretto *et al.*, 2015, ICMBio 2014, Santana *et al.*, 2004); 80-96 percent across the Pacific Ocean basin (Hall and Roman 2013, Rice and Harley 2012, Rice *et al.*, 2015, Clark *et al.*, 2012, Brodziak *et al.*, 2013); and variable declines across the Indian Ocean, (IOTC 2015, Yokawa and Semba 2012, Ramos-Cartelle *et al.*, 2012, IOTC 2011, Anderson *et al.*, 2011). Due to the species' preferred vertical and horizontal habitat in the upper-mixed layer of warm, tropical and sub-tropical waters, the oceanic whitetip shark is extremely susceptible to incidental capture in both longline and purse seine fisheries throughout its range (Rice *et al.*, 2015; Cortes *et al.*, 2012, Murua *et al.*, 2012), and thus experiences substantial levels of bycatch-related fishing mortality from these fisheries. Additionally, the oceanic whitetip shark is a preferred species in the international fin market for its large, morphologically distinct fins (CITES 2013, Vannuccini 1999), which incentivizes the retention and/or finning of the species. Although there has been some decline in the shark fin trade in recent years (Dent and Clarke 2015), we anticipate ongoing threats of fishing pressure and related mortality to continue, as the species is still regularly caught as bycatch in global fisheries and incidents of illegal finning and trafficking of oceanic whitetip fins have occurred recently despite CITES protections (Young *et al.*, 2017, AFCD unpublished data). The oceanic whitetip shark is rendered more vulnerable to fishing pressure due its life history characteristics, including relatively slow growth, late age of maturity, and low fecundity due to its presumed biennial reproductive cycle, which limit the species' capacity to recover. Further, the species' low genetic diversity in concert with steep

global abundance declines and ongoing threats of overutilization may pose a viable risk to the species in the foreseeable future. Finally, despite the increasing number of regulations for the conservation of the species, which we acknowledge may help to slow population declines to some degree, we determined that existing regulatory mechanisms are largely inadequate for addressing the most important threat of overutilization throughout a large portion of the species' range.

We conclude that the oceanic whitetip shark is not presently in danger of extinction for a number of reasons. First, the species is broadly distributed over a large geographic range and does not seem to have been extirpated in any region, even in areas where there is heavy harvest bycatch and utilization of the species' high-value fins. Given that local extirpations are often a typical precursor to range-wide extinction events, we consider this to be an indication (among others) that the species is not presently in danger of extinction. There also appears to be a potential for relative stability in population sizes 5 to 10 years at the post-decline depressed state, as evidenced by the potential stabilization of two populations (*e.g.*, NW Atlantic and Hawaii) at a diminished abundance, which suggests that this species is potentially capable of persisting at a reduced population size. Although these populations represent very small portions of the species' overall range, given that both of these populations are managed under strict fishing regulations in U.S. waters, we anticipate these stabilizing trends to continue in the near-term. We also conclude that the overall reduction of the fin trade and the marked increase in species-specific regulatory mechanisms in numerous fisheries throughout the species' range should help to reduce fisheries-related mortality and slow (but not necessarily halt) population declines to some degree, thus providing a temporal buffer in terms of the species' extinction risk. Given the foregoing reasons, we cannot conclude that the oceanic whitetip shark is presently in danger of extinction

throughout all or a significant portion of its range. Therefore, based on the best available scientific and commercial information, as summarized here, in our proposed rule (81 FR 64110; September 19, 2016), and in the final status review report (Young *et al.*, 2017), and after consideration of protective efforts, we find that the oceanic whitetip shark (*Carcharhinus longimanus*) is not presently in danger of extinction throughout all or a significant portion of its range, but is likely to become so in the foreseeable future (*i.e.*, approximately 30 years). As such, we find that this species meets the definition of a threatened species under the ESA and list it as such.

### **Effects of Listing**

Conservation measures provided for species listed as endangered or threatened under the ESA include the development and implementation of recovery plans (16 U.S.C. 1533(f)); designation of critical habitat, if prudent and determinable (16 U.S.C. 1533(a)(3)(A)); and a requirement that Federal agencies consult with NMFS under section 7 of the ESA to ensure their actions are not likely to jeopardize the species or result in adverse modification or destruction of designated critical habitat (16 U.S.C. 1536). For endangered species, protections also include prohibitions related to “take” and trade (16 U.S.C. 1538). Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (16 U.S.C. 1532(19)). These prohibitions do not apply to species listed as threatened unless protective regulations are issued under section 4(d) of the ESA (16 U.S.C. 1533(d)), leaving it to the Secretary’s discretion whether, and to what extent, to extend the ESA’s prohibitions to the species. Section 4(d) protective regulations may prohibit, with respect to a threatened species, some or all of the acts which section 9(a) of the ESA prohibits with respect to endangered species. Recognition of the species’ imperiled status through listing may also

promote conservation actions by Federal and state agencies, foreign entities, private groups, and individuals.

### *Identifying Section 7 Consultation Requirements*

Section 7(a)(2) (16 U.S.C. 1536(a)(2)) of the ESA and NMFS/FWS regulations require Federal agencies to confer with us on actions likely to jeopardize the continued existence of species proposed for listing, or that result in the destruction or adverse modification of proposed critical habitat. Once a species is listed as threatened or endangered, section 7(a)(2) requires Federal agencies to ensure that any actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of the species. If critical habitat is designated, section 7(a)(2) also requires Federal agencies to ensure that they do not fund, authorize, or carry out any actions that are likely to destroy or adversely modify that habitat. Our section 7 regulations require the responsible Federal agency to initiate formal consultation if a Federal action may affect a listed species or its critical habitat (50 CFR 402.14(a)). Examples of Federal actions that may affect the oceanic whitetip shark include, but are not limited to: alternative energy projects, discharge of pollution from point sources, non-point source pollution, contaminated waste and plastic disposal, dredging, pile-driving, development of water quality standards, vessel traffic, military activities, and fisheries management practices.

### *Critical Habitat*

Critical habitat is defined in section 3 of the ESA (16 U.S.C. 1532(5)) as: (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features (a) essential to the conservation of the species and (b) that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a species at the time

it is listed if such areas are determined to be essential for the conservation of the species.

“Conservation” means the use of all methods and procedures needed to bring the species to the point at which listing under the ESA is no longer necessary. Section 4(a)(3)(a) of the ESA requires that, to the extent practicable and determinable, critical habitat be designated concurrently with the listing of a species. Designation of critical habitat must be based on the best scientific data available and must take into consideration the economic, national security, and other relevant impacts of specifying any particular area as critical habitat.

In our proposal to list the oceanic whitetip shark, we requested information on the identification of specific features and areas in U.S. waters that may meet the definition of critical habitat for the oceanic whitetip shark (81 FR 96326; December 29, 2016). We have reviewed the comments provided and the best available scientific information. We conclude that critical habitat is not determinable at this time for the following reasons: (1) Sufficient information is not currently available to assess the impacts of designation; and (2) sufficient information is not currently available regarding the physical and biological features essential to conservation. We will continue to evaluate potential critical habitat for the oceanic whitetip shark, and we intend to consider critical habitat for this species in a separate action.

#### *ESA Section 9 Take Prohibitions*

Because we are listing the oceanic whitetip shark as threatened, the prohibitions under section 9 of the ESA will not automatically apply to this species. As described below, ESA section 4(d) leaves it to the Secretary’s discretion whether, and to what extent, to extend the section 9(a) prohibitions to threatened species, and authorizes us to issue regulations that are deemed necessary and advisable to provide for the conservation of the species.

#### *Protective Regulations Under Section 4(d) of the ESA*

As stated above, NMFS has flexibility under section 4(d) to tailor protective regulations based on the needs of and threats to the species. Section 4(d) protective regulations may prohibit, with respect to threatened species, some or all of the acts which section 9(a) of the ESA prohibits with respect to endangered species. We are not proposing such regulations at this time, but may consider potential protective regulations pursuant to section 4(d) for the oceanic whitetip in a future rulemaking.

### **Peer Review**

In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review establishing a minimum peer review standard. We solicited peer review comments on the draft status review report from five scientists with expertise on sharks in general and specific knowledge regarding the oceanic whitetip in particular. We received and reviewed comments from these scientists, and, prior to publication of the proposed rule, their comments were incorporated into the draft status review report (Young *et al.*, 2016), which was then made available for public comment. Peer reviewer comments on the status review are available at [http://www.cio.noaa.gov/services\\_programs/prplans/ID345.html](http://www.cio.noaa.gov/services_programs/prplans/ID345.html).

### **References**

A complete list of the references used is available upon request (see **ADDRESSES**).

### **Information Solicited**

We request interested persons to submit relevant information related to the identification of critical habitat and essential physical or biological features for this species, as well as economic or other relevant impacts of designation of critical habitat for the oceanic whitetip shark. Details about the types of information we are seeking can be found in the proposed rule (81 FR 96327; December 29, 2016). We solicit information from the public, other concerned

governmental agencies, the scientific community, industry, or any other interested party as soon as possible but no later than [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (see **ADDRESSES**).

## **Classification**

### *National Environmental Policy Act*

Section 4(b)(1)(A) of the **ESA** restricts the information that may be considered when assessing species for listing and sets the basis upon which listing determinations must be made. Based on the requirements in section 4(b)(1)(A) of the **ESA** and the opinion in *Pacific Legal Foundation v. Andrus*, 657 F. 2d 829 (6<sup>th</sup> Cir. 1981), we have concluded that **ESA** listing actions are not subject to the environmental assessment requirements of the National Environmental Policy Act (NEPA).

### *Executive Order 12866, Regulatory Flexibility Act*

As noted in the Conference Report on the 1982 amendments to the **ESA**, economic impacts cannot be considered when assessing the status of a species. Therefore, the economic analysis requirements of the Regulatory Flexibility Act are not applicable to the listing process. In addition, this final rule is exempt from review under Executive Order 12866.

### *Paperwork Reduction Act*

This final rule does not contain a collection-of-information requirement for the purposes of the Paperwork Reduction Act.

### *Executive Order 13132, Federalism*

In accordance with E.O. 13132, we determined that this final rule does not have significant federalism effects and that a federalism assessment is not required.



**List of Subjects in 50 CFR Part 223**

Endangered and threatened species, Exports, Transportation.

Dated: January 24, 2018.

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Samuel D Rauch, III,

Deputy Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 223 is amended as follows:

**PART 223—THREATENED MARINE AND ANADROMOUS SPECIES**

1. The authority citation for part 223 continues to read as follows:

**Authority:** 16 U.S.C. 1531 1543; subpart B, § 223.201-202 also issued under 16 U.S.C. 1361 *et seq.*; 16 U.S.C. 5503(d) for § 223.206(d)(9).

2. In § 223.102, amend the table in paragraph (e) by adding an entry for “Shark, oceanic whitetip” under “Fishes” in alphabetical order, by common name, to read as follows:

**§ 223.102 Enumeration of threatened marine and anadromous species.**

\* \* \* \* \*

(e) \* \* \*

Species <sup>1</sup>			Citation(s) for listing determination(s)	Critical habitat	ESA rules
Common name	Scientific name	Description of listed entity			
* * * * *					
<b>Fishes</b>					

*****					
Shark, oceanic whitetip	<i>Carcharhinuss longimanus</i>	Entire species	83 FR [Insert <b>FEDERAL REGISTER</b> page where the document begins], [Insert date of publication in the <b>FEDERAL REGISTER]</b>	NA	NA
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<sup>1</sup> Species includes taxonomic species, subspecies, distinct population segments (DPSs) (for a policy statement, see 61 FR 4722, February 7, 1996), and evolutionarily significant units (ESUs) (for a policy statement, see 56 FR 58612, November 20, 1991).

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