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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223 and 224

[Docket No. 150909839-7369-02]

RIN 0648-XE184

Endangered and Threatened Wildlife and Plants; Final Rule to List 6 Foreign

Species of Elasmobranchs Under the Endangered Species Act

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and

Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: We, NMFS, issue a final rule to list six foreign marine elasmobranch

species under the Endangered Species Act (ESA). These six species are the daggernose

shark (*Isogomphodon oxyrhynchus*), Brazilian guitarfish (*Rhinobatos horkelii)*, striped

smoothhound shark (*Mustelus fasciatus*), narrownose smoothhound shark (*Mustelus

schmitti*), spiny angelshark (*Squatina guggenheim*), and Argentine angelshark (*Squatina

argentina*). We are publishing this final rule to implement our final determination to list

the daggernose shark, Brazilian guitarfish, striped smoothhound shark, spiny angelshark

and Argentine angelshark as endangered species under the ESA, and the narrownose

smoothhound shark as a threatened species under the ESA. We have reviewed the status

of these six species, including efforts being made to protect these species, and considered

public comments submitted on the proposed rule as well as new information received

since publication of the proposed rule. We have made our final determinations based on

the best scientific and commercial data available. We will not designate critical habitat for any of these species because the geographical areas occupied by these species are entirely outside U.S. jurisdiction, and we have not identified any unoccupied areas within U.S. jurisdiction that are essential to the conservation of any of these species.

DATES: This final rule is effective [*insert date 30 days after date of publication in the FEDERAL REGISTER*].

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

FOR FURTHER INFORMATION CONTACT: Maggie Miller, NMFS, Office of Protected Resources (OPR), (301) 427-8403. Copies of the petition, status review reports, **Federal Register** notices, and the list of references are available on our website at *http://www.nmfs.noaa.gov/pr/species/petition81.htm*.

SUPPLEMENTARY INFORMATION:

Background

On July 15, 2013, we received a petition from WildEarth Guardians to list 81 marine species or subpopulations as threatened or endangered under the ESA. This petition included species from many different taxonomic groups, and we prepared our 90-day findings in batches by taxonomic group. We found that the petitioned actions may be warranted for 24 of the species and 3 of the subpopulations and announced the initiation of status reviews for each of the 24 species and 3 subpopulations (78 FR 63941, October 25, 2013; 78 FR 66675, November 6, 2013; 78 FR 69376, November 19, 2013; 79 FR 9880, February 21, 2014; and 79 FR 10104, February 24, 2014). On December 7, 2015, we published a proposed rule to list the daggernose shark, Brazilian guitarfish, striped

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smoothhound shark, and Argentine angelshark as endangered species under the ESA, and the narrownose smoothhound shark and spiny angelshark as threatened species under the ESA (80 FR 76067). We requested public comment on information in the status reviews and proposed rule, and the comment period was open through February 5, 2016. This final rule provides a discussion of the information we received during and after the public comment period and our final determination on the petition to list these six foreign marine elasmobranchs under the ESA. The status of the findings and relevant **Federal Register** notices for the other 18 species and 3 subpopulations can be found on our website at *http://www.nmfs.noaa.gov/pr/species/petition81.htm.*

Listing Species Under the Endangered Species Act

We are responsible for determining whether species are 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."

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 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, 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 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 making a listing determination, we first determine whether a petitioned species meets the ESA definition of a "species." Next, using the best available information gathered during the status review for the species, we assess the extinction risk of the species. In our extinction risk assessment, we considered the best available information to evaluate the level of risk faced by each of the six species. For each extinction risk analysis, we evaluated the species' demographic risks, such as low abundance and productivity, and threats to the species including those related to the factors specified by the ESA section 4(a)(1)(A)-(E), and then synthesized this information to estimate the extinction risk of each species.

Because species-specific information (such as current abundance) is sparse, qualitative "reference levels" of risk were used to describe extinction risk. The definitions of the qualitative "reference levels" of extinction risk - "Low Risk," "Moderate Risk," and "High Risk" -were as described here. A species is at "Low Risk" of extinction if it exhibits a trajectory indicating that it is unlikely to be at a moderate level of extinction risk in the foreseeable future (see description of "Moderate Risk" below). A species may be at low risk of extinction due to its present demographics (i.e., stable or increasing trends in abundance/population growth, spatial structure and connectivity, and/or diversity) with projected threats likely to have insignificant impacts on these demographic trends. "Moderate Risk" - a species is at moderate risk of extinction if it exhibits a trajectory indicating that it will more likely than not be at a high level of extinction risk in the foreseeable future (see description of "High Risk" below). A species may be at moderate risk of extinction due to its present demographics (i.e., declining trends in abundance/population growth, spatial structure and connectivity, and/or

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diversity and resilience) and/or projected threats and its likely response to those threats. "High Risk" - a species is at high risk of extinction when it is at or near a level of abundance, spatial structure and connectivity, and/or diversity that place its persistence in question. The demographics of the species may be strongly influenced by stochastic or depensatory processes. Similarly, a species may be at high risk of extinction if it faces clear and present threats (e.g., confinement to a small geographic area; imminent destruction, modification, or curtailment of its habitat; or disease epidemic) that are likely to create such imminent demographic risks.

After completion of the extinction risk analysis, we then assess efforts being made to protect the species to determine if these conservation efforts are adequate to mitigate the existing threats. 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 to protect the species. Finally, taking into account the species' extinction risk, threats, and any protective efforts identified from the above assessment, we determine if the species meets the definition of "endangered species" or "threatened species."

Summary of Comments

In response to our request for public comments on the proposed rule, we received information and/or comments from three parties. One commenter agreed with the listing and provided no new or substantive data or information relevant to the listing of these six species. We also directly solicited comments from the foreign ambassadors of countries where the six elasmobranch species occur and received a response from the Embassy of the Argentine Republic. Summaries of the substantive comments received from both the

public comment period and the Embassy of the Argentine Republic, and our responses, are provided below by topic and species.

Comments on ESA Section 4(a)(1) Factors

Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

Daggernose Shark

Comment 1: One commenter noted that we should look more closely at the threat of habitat loss for the daggernose shark, and, in particular, increasing threats to mangrove habitat as a result of rising sea levels due to climate change, increasing human populations in coastal areas, and increasing mariculture activities near mangroves. The commenter suggested that we consider the extent to which these threats may harm the species, both now and in the foreseeable future, and the extent to which this threat is, or may become, operative in portions of the species' range, even if this threat has been neutralized to some degree in other parts of the species' range.

Response: As noted in the proposed rule (80 FR 76068; December 7, 2015), we considered the information in the status review report (Casselberry and Carlson 2015a), information submitted by the public, as well as information we compiled separately to assess the extinction risk of the daggernose shark. While the status review presented data on mangrove forest declines, we did not find evidence that this was a significant threat to the species. As noted in the status review, daggernose sharks are found in shallow waters along mangrove-lined coasts, but their reliance specifically on the presence of mangroves within these areas is unknown. Rather, the status review notes that daggernose sharks are most abundant in estuarine and river mouth areas, preferring low lying and indented coastlines, and are strongly associated with rocky or muddy bottoms and highly turbid

waters. There is no indication that mangroves are an integral feature of the species' habitat or that the species has an obligate relationship with mangroves. As such, we do not find that available information indicates that the decline in mangrove forests in portions of the species' range is a threat that significantly contributes to the species' risk of extinction.

Comment 2: One commenter stated that it is likely that there has been a large range contraction for some of the proposed shark species. The commenter noted that, based on Barreto et al. (2015) (which has now been published as Barreto et al. 2016), several shark species, including the daggernose shark, may be close to extinction in Brazilian waters. The commenter also cited Willems et al. (2015) as evidence that daggernose sharks may have been extirpated from the waters of Guyana as well, resulting in a significant combined range contraction. The commenter noted that this may be indicative of additional extirpations as Guyana does not represent the northernmost extreme of the species' range. Citing Willems et al. (2015), the commenter stated that daggernose sharks were caught off Guyana in the 1960s but were not observed in a 2015 study, indicating that they may no longer be present there, or that they have at least been reduced to the point of rarity. The commenter asserted that such range contractions are concerning and may indicate that additional range contractions have happened in the other range countries of the daggernose shark where information is lacking.

Response: Neither of the papers cited by the commenter (Barreto et al. 2015 or Willems et al. 2015) provided any new information on the distribution or extinction risk of the daggernose shark. Barreto et al. (2015) referenced the Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio) assessment of daggernose shark (ICMBio

2014) as support for its statement that the species may be close to extirpation in Brazil. This assessment did not provide any information regarding evidence of a range contraction for the species, nor did it provide new information that was not already reviewed, considered, or cited in the proposed rule. The other paper, Willems et al. (2015), describes a study where researchers conducted monthly trawl sampling of 15 locations off the coast of Suriname from February 2012 – April 2013 to characterize the demersal fish fauna on the inner continental shelf. The authors noted that daggernose sharks were not observed in the samples but had previously been caught off Guyana in the 1960s, and hypothesized that fishing activity may have led to local extirpations, presumably off Suriname (where the study took place). There was no data or information in the Willems et al. (2015) study to indicate that daggernose sharks are no longer present off Guyana.

We acknowledge that overutilization is the primary threat to the daggernose shark, contributing to its present high risk of extinction; however, we do not find that the information provided by the commenter indicates that the species is also at risk of a significant range contraction. Overall, there is a severe lack of information on the species' historical and current distribution, with only scarce records of the species throughout Suriname, Guyana, and Trinidad and Tobago. However, the species is mobile (as demonstrated by its seasonal migrations), and while it is uncertain whether local populations have been fished to extirpation, there is no information to indicate that the species presently suffers from a curtailment of its range.

Brazilian Guitarfish

Comment 3: One commenter disagreed with our conclusion that habitat

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destruction or modification is not an operative threat to the Brazilian guitarfish, and

suggested we consider the impacts of trawling activities on Brazilian guitarfish habitat.

The commenter pointed out a peer reviewer comment on the status review (Casselberry

and Carlson 2015b) that said "[i]n this document is cited that there is no specific

information available on how trawling has affected the Brazilian guitarfish's habitat.

However, knowing that they feed mainly on benthic community, we can assume the

trawling may affect the food chain in which *R. horkelii* is inserted." The commenter

asserted that the peer reviewer made an important common sense point that applies to all

species that rely on benthic habitats that are damaged by trawling, and that this type of

damage to the species' habitat will inevitably harm the species. The commenter

suggested we consider this damage as an additional source of harm to the species, despite

the fact that it may be difficult to quantify. The commenter then noted that this benthic

habitat threats discussion applies to all species that are reliant on benthic habitats that are,

or may be, impacted by trawlers, including the striped smoothhound shark, narrownose

smoothhound shark, Argentine angelshark and spiny angelshark.

 Response: While trawling activities affect the benthic community and may

potentially affect the food chain for *R. horkelii* and the other elasmobranch benthic

feeders, we have no information to indicate that this is presently or historically the case,

or contributing to the extinction risk of any of the species. Additionally, we note that

broad or general information, or the identification of factors that could negatively impact

a species, do not indicate that listing is necessarily warranted. We look for information

indicating that not only is the particular species exposed to a factor, but that the species is

responding to or reasonably likely to respond to that factor in a negative fashion; then we

assess the potential significance of that negative response. While we reviewed and considered the information from the status review and information collected prior to the proposed rule on habitat destruction or modification as a potential threat, we found no information to indicate that this factor is contributing significantly to the species' risk of extinction. Additionally, neither the information provided by the commenter, nor information in our files, indicates that trawling has altered the benthic habitat in such a way that it is leading to declines in food resources for the Brazilian guitarfish or any of the other species considered in this final rule. As such, our conclusion that the information does not indicate that habitat destruction or modification is an operative threat on these species remains the same.

Narrownose Smoothhound Shark

Comment 4: One commenter noted that narrownose smoothhounds have exhibited elevated levels of mercury and cadmium in their tissue and cited to the status review for the species (Casselberry and Carlson 2015c). The commenter asserted that these trace metals bioaccumulate up the food chain from pollutant sources in the species' habitat and can cause a variety of harm to higher trophic level species, like the narrownose smoothhound, and provided Gelsleichter and Walker (2010) as a reference. The commenter concluded that the presence of these pollutants in the narrownose smoothhound's habitat, and their resultant bioaccumulation and biomagnification in the species, is an additional habitat-related threat to the species' continued existence.

Response: As the status review (Casselberry and Carlson 2015c) notes, the study that found elevated levels of mercury and cadmium in narrownose smoothhound shark tissues in Argentina (Marcovecchi et al. 1991) did not provide any information on the

impact of these metals on the survival of the individual sharks. Additionally, we found no

information on the impact of toxin and metal bioaccumulation specifically in narrownose

smoothhound populations. In fact, there is no information on the lethal concentration

limits of toxins or metals in narrownose smoothhound sharks, or evidence to suggest that

current concentrations of environmental pollutants are causing detrimental physiological

effects to the point where the species may be at an increased risk of extinction. As such,

at this time, the best available information does not indicate that the present

bioaccumulation rates and concentrations of environmental pollutants in the tissues of

narrownose smoothhound sharks are threats significantly contributing to the species' risk

of extinction throughout its range, now or in the foreseeable future.

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

General Comments Applicable to Multiple Species

Comment 5: One commenter provided general information on the threat of

overfishing of sharks and rays worldwide. Citing an analysis by Davidson et al. (2015),

the commenter noted that global landings of sharks and rays have declined by

approximately 20 percent, which the authors attribute to population declines rather than

fishery management measures. The commenter also specifically highlighted the increase

in landings by Argentina (5-10 percent) and Brazil (1-5 percent) from 2003 to 2011, and

the failure of these countries to meet all of the sustainable fishing objectives set out in

their respective Food and Agriculture Organization of the United Nations (FAO) National

Plans of Action for the conservation of sharks (hereafter referred to as FAO NPOA-

sharks) as evidence that current regulatory mechanisms in these range states are

inadequate and that overfishing will continue to cause the proposed species to decline

further.

Response: We reviewed the Davidson et al. (2015) paper and found that while it gives a broad overview of the trend in global shark landings, and suggests that overfishing, rather than improved management, explains the global declines observed in shark and ray landings since 2003, it does not provide any new or substantive species-specific information. In assessing threats, we look for information indicating that not only is a particular species exposed to a factor, but also that the species is responding to or reasonably likely to respond to that factor in a negative fashion in order to assess the potential significance of that factor to a particular species. We previously considered the FAO landings data (upon which the Davidson et al. (2015) paper is based) and examined the management and adequacy of existing regulatory measure as it relates to each of the proposed species' extinction risks (not just sharks and rays, in general), with this discussion provided in our proposed rule. Additionally, based on new information received since the publication of the proposed rule, we have revised this discussion specifically for the narrownose smoothhound and spiny angelshark, which can be found below in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk**.

Daggernose Shark

Comment 6: One commenter, referencing Barreto et al. (2015), stated that monitoring of fishing in countries, including Brazil, has been inconsistent. The commenter provides the following quote from Barreto et al. (2015): "Nowadays, there are 750 longliners with permission to catch specifically *P. glauca*, *I. oxyrhinchus* and *C. falciformis* in Brazilian waters. For comparison, in our database, over more than 30 years,

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about 200 vessels reported data." The commenter asserts that this information indicates a large increase over historical numbers in vessels with permission to catch daggernose sharks.

Response: The commenter provides a footnote to their statement that the reference to *I. oxyrhinchus* in the Barreto et al. (2015) quote could be referring to the daggernose shark (*Isogomphodon oxyrhynchus*) or the shortfin mako shark (*Isurus oxyrinchus*), as the spelling used was not consistent with either species' Latin name. However, we disagree with the commenter and note that given Barreto et al.'s (2015) discussion and use of *I. oxyrhinchus* throughout their paper as referring to the shortfin mako shark, the quote is clearly referencing the number of longliners that are permitted to catch blue sharks, shortfin mako sharks, and silky sharks in Brazilian waters.

In the footnote, the commenter additionally provides a website link to indicate that some Brazilian fishing licenses specifically allow for catch of daggernose sharks (*http://sinpesq.mpa.gov.br/rgp-publico/web/index.php/frota/detalhe/num_frota/1.02.001*); however, we were unable to access this webpage to verify the information. We note that the species is listed in Annex I of Brazil's endangered species list ("Lista de Espécies da Fauna Brasileira Ameaçadas de Extinção"), which prohibits the capture of the species except for scientific purposes, and, therefore, fishing licenses allowing the capture of the species for commercial or recreational purposes is unlikely. Additionally, as discussed in the proposed rule, the species is most susceptible to being caught in the artisanal gillnet fisheries, given their depth and distribution. As such, the impact of an overall increase in Brazilian longliners does not change our conclusion regarding the extinction risk of the species.

Striped Smoothhound Shark

Comment 7: Citing the status review for the striped smoothhound shark
(Casselberry and Carlson 2015d), one commenter noted that striped smoothhound shark
biomass is concentrated in a very small area of coastline in southern Rio Grande do Sul
(indicating that this is an important nursery area for the species). The commenter asserted
that the concentration of the species in this highly limited area of abundance appears to
be due to the population declines that the species has already experienced and referenced
the decline in neonate production between 1981 and 2005 (Casselberry and Carlson
2015d). The commenter concluded that this makes the species vulnerable to population-
level effects from impacts occurring in a relatively limited area. The commenter
suggested that we consider the extent to which this highly concentrated area of
abundance elevates the species' extinction risk.

Response: The commenter provided no new information. We considered the
above information, including the decline in neonate production, which is discussed in
detail in the *Historical and Current Distribution and Population Abundance*,
Demographic Risk Analysis and *Risk of Extinction* sections of the proposed rule, with the
findings contributing to our assessment of the species as endangered.

Narrownose Smoothhound Shark

Comment 8: One commenter disagreed with our characterization of some
information related to overutilization of the narrownose smoothhound shark in Uruguay.
The commenter asserted that an abundance decline of the species is the only plausible
explanation for the large decline in narrownose smoothhound catch in Uruguay (over 85
percent from 1999-2013), particularly since there has not been a decrease in fishing

effort. The commenter asserted: "Where a market for the species still exists, as it does in neighboring Argentina, fishermen will not simply ignore the species" and that "Though effort information does not exist, the cause of this decline in catch is clear – it is caused by a corresponding, and likely very large, decline in narrownose smoothhound population numbers in these waters." The commenter emphasized that speculation on an alternative explanation for the decrease in landings of narrownose smoothhound shark in Uruguay is unfounded.

Response: With the exception of the Barreto et al. (2015) study, the commenter does not provide any new information to consider, besides their opinion, in regards to the cause of the decline in landings of the species. Based on a review of the reference provided in the comment (i.e., Barreto et al. 2015), we do not agree with the commenter that the information provided implies any trend in fishing effort specific to narrownose smoothhounds in Uruguay. We also note that updated data for narrownose smoothhound reported to the FAO showed an increase in Uruguayan reported landings from 194 t in 2013 to 663 t in 2014. However, since publication of the proposed rule, we have received new data showing trends in landings, catch-per-unit-effort (CPUE), and biomass of the narrownose smoothhound in the Argentine-Uruguayan Common Fishing Zone (AUCFZ), and have revised the discussion concerning the threats to the species and its current extinction risk. This new discussion can be found below in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk.**

Comment 9: One commenter provided new information regarding the post-release survivorship of narrownose smoothhound sharks based on a study that evaluated the survivorship of elasmobranchs captured by bottom trawlers (Chiaramonte et al. undated).

The commenter stated that in addition to retention of targeted and bycaught individuals, this new study provides evidence that narrownose smoothhounds respond poorly to capture and likely face very high post-release mortality when caught by bottom trawl gear.

Response: Based on the information in Chiaramonte et al. (undated), we agree with the commenter that *M. schmitti* likely has poor survivorship after being caught by trawl gear. While the post-release survival experiment was based on only two individuals (both dead after 15-30 minutes in a holding tank on the trawl vessel), 55 percent of the 52 narrownose smoothhounds captured were described as being "not in good condition" (i.e., either immobile or dead). However, we note that only juveniles were assessed in the study and, therefore, the survivorship of larger adults in trawl gear remains unknown. In terms of the impact on extinction risk, we find that this new information does not change our assessment of the species being at a moderate risk of extinction. We note that the species is threatened with overutilization by commercial and artisanal fisheries, and because it is commercially sought after throughout its range, we consider the likelihood of the species being discarded (alive or dead) to be very low.

Comment 10: One commenter referenced a study (Fields et al. 2015) that assessed species composition from a collection of 72 processed shark fins and found that one fin, from a United States shark fin soup sample, belonged to the narrownose smoothhound shark. The commenter concluded that the findings indicated that not only is the species exploited for the shark fin trade, but that it is also the subject of international trade, at least some of which implicates the United States specifically.

Response: We reviewed the Fields et al. (2015) study, and while one shark fin was

genetically identified as *M. schmitti*, we found no other information to suggest that the species is actively being targeted for the international shark fin trade. Additionally, the authors of the study note that the samples were "not collected in a systematic or random manner and thus do not provide any information on the overall species composition of the trade" in the sampling regions. Although fins of *M. schmitti* may enter international trade, the available data do not indicate that this species is a large component of the shark fin trade or that this utilization of the shark is significantly contributing to the species' extinction risk.

Comment 11: One commenter cited to the FAO capture production statistics referenced in Davidson et al. (2015) as evidence of the global exploitation and population decline of the narrownose smoothhound, and noted that the species is still heavily fished in Uruguay and along the Uruguay/Argentina border. Using Jaureguizar et al. (2014) and Ligrone et al. (2014) as support, the commenter asserted that the species is still targeted and experiencing heavy fishing pressure, particularly during its reproductive period, leading the commenter to conclude that the narrownose smoothhound shark fishery is highly unsustainable.

Response: As mentioned in the proposed rule, we also considered the landings data reported to the FAO for *M. schmitti*, noting that landings were on a declining trend since the mid-2000s, down to 194 t in 2013; however, due to the absence of effort information, we noted that the cause of the decline was not entirely clear. For example, from 2002 to 2010, *Mustelus* spp. catch limits were imposed in the AUCFZ, and starting in 2011, catch limits specifically for narrownose smoothhound were established (which could affect landings data). The most recent FAO data for 2014 actually show over a 3-

fold increase in landings for Uruguay from 2013, up to 663 t.

We reviewed the Jaureguizar et al. (2014) study and found that while it provides information on the composition of small-scale gillnet fishery catch from two neighboring fishing communities in Argentina, and notes the likely landing of *M. schmitti* during its spring migration for reproduction purposes, the study's main objective was to examine seasonal fishing effort for different species over the course of a single year. We also reviewed the Ligrone et al. (2014) paper, which surveyed 21 artisanal fishermen operating from La Paloma and Cabo Polonio ports and found that *Mustelus* spp. represented 40 percent of the catch. The sharks were caught during shark fishing, which occurred mostly between April and October around the ports of La Paloma and 12 nautical miles (nmi) from Cabo Polonio port. While these studies confirm that fishing for narrownose smoothhound sharks occurs, the information from these studies does not provide an indication of the present status of the shark, which could indicate the sustainability of these artisanal fishing operations.

However, we agree with the commenter that overutilization of narrownose smoothhound is a threat to the species, and we stated this in the proposed rule: "The primary threat to the narrownose smoothhound is overutilization in commercial and artisanal fisheries as the species is intensely fished throughout its entire range, including within its nursery grounds." We considered the available fisheries data as well as the trends in the species' demographic factors to make our extinction risk determination and do not find that the information provided by the commenter changes our conclusion. We note that since publication of the proposed rule, we have also received new data showing trends in landings, CPUE, and biomass of the narrownose smoothhound in the AUCFZ,

and have revised the discussion concerning the threats to the species and its current

extinction risk. This new discussion can be found below in the sections **Summary of**

Factors Affecting the Six Species and **Extinction Risk.**

Comment 12: One commenter provided another possible explanation for the

decline in *M. schmitti* catches in the AUCFZ since 2010 (besides reduced fishing pressure

and adherence to catch regulations), suggesting that the total allowable catch quotas were

set too high and, therefore, do not actually restrict catch in any meaningful way. The

commenter stated that inadequate quotas, compounded by pervasive inadequate

enforcement, render the regulatory measures wholly inadequate to conserve the species.

Response: The commenters provided no new information that was not already

considered in the proposed rule. However, since publication of the proposed rule, we

have received new data showing trends in landings, CPUE, and biomass of the

narrownose smoothhound in the AUCFZ, and have revised the discussion concerning the

threats to the species and its current extinction risk. This new discussion can be found

below in the sections **Summary of Factors Affecting the Six Species** and **Extinction**

Risk.

Spiny Angelshark

Comment 13: One commenter suggested that we should consider whether the

survey data for *S. guggenheim* is recent enough that it still accurately accounts for the

species' abundance at present, and whether impacts suffered since the conclusion of the

survey are taken into account. The commenter cited Jaureguizar et al. (2014) to show that

the highest CPUE of *S. guggenheim* occurs during its reproductive period and claimed

that this unsustainable practice will increase overutilization pressure on the species and

cause very fast declines, even where the species may be relatively numerous.

Response: The commenter did not provide any recent survey data for *S. guggenheim* for us to consider. We reviewed the Jaureguizar et al. (2014) study and while it provides information on the composition of small-scale gillnet fishery catch from two neighboring fishing communities at the southern boundary of the Río de la Plata, we do not find that it makes any generalizations as to the CPUE of the species throughout its range. Rather, it notes that in relation to the other seasonal catch in these fishing communities, *S. guggenheim* has the highest CPUE during the autumn, when the species moves into nearshore waters for reproductive purposes.

We also note that since publication of the proposed rule, we have received new data showing trends in landings, CPUE, and biomass of the spiny angelshark within the AUCFZ that leads us to conclude that the species is at a higher risk of extinction than what was stated in the proposed rule. We have subsequently revised the discussion concerning threats to the species and its current extinction risk. This new discussion can be found below in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk.**

Comment 14: One commenter, citing Ligrone et al. (2014), noted that the Uruguayan artisanal fleet, which in 2007 recorded a total of 726 vessels for Río de la Plata Estuary and the Atlantic coast, operates on a multispecies basis, with angelsharks (*Squatina* spp.) being one of the main species caught, representing 11 percent of the catch. Additionally, the commenter, quoting Ligrone et al (2014), stated that the impacts of these Uruguayan artisanal fisheries on the species may be exacerbated as they "share their main targeted species sequentially, and often spatially" with the industrial fisheries.

Response: We reviewed the Ligrone et al. (2014) paper and note that the authors are not describing the practices of the 726 vessels mentioned above, but rather are specifically describing the artisanal fisheries operating off the Uruguayan Atlantic coast. According to the authors, 82 artisanal fishing vessels are registered and fish on a multi-species basis, operating between the coast and 15 nmi offshore. While *Squatina* spp. represented 11 percent of the catch, the authors do not provide actual catch numbers or trends in effort over multiple years that may provide additional information as to the status of the species. In the proposed rule, we considered the impact of both industrial and artisanal fisheries on spiny angelsharks, noting that these fisheries primarily operate in depths that "cover the entire depth range of the spiny angelshark" (80 FR 76095) and, therefore, fish all life stages of the species (80 FR 76099).

However, as noted previously, since publication of the proposed rule, we have received new data showing trends in landings, CPUE, and biomass of the spiny angelshark within the AUCFZ that leads us to conclude that the species is at a higher risk of extinction than what was stated in the proposed rule. We have subsequently revised the discussion concerning threats to the species and its current extinction risk. This new discussion can be found below in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk.**

Disease or Predation

Narrownose Smoothhound Shark

Comment 15: One commenter disagreed with our conclusion that neither disease nor predation were operative threats on the species, and argued that this determination is inconsistent with the information presented in the status review. The commenter pointed

to information in the status review (Casselberry and Carlson 2015c) describing a survey off the coast of Brazil that found four individuals (4.21 percent of the surveyed population) with Hifalomicose (a fungal infection that causes muscle necrosis with hyphal penetration into the cartilage). The commenter quoted from the status review: "All infected individuals displayed necrosis on their snout and an additional infection from the yeast, *Fusarium solani*. The ulcers from the necrosis turn greenish and result in major bleeding, which leads to death. This infection can cause widespread infestations because the fungus is easily transmitted and has a fast life cycle." The commenter argued that this information indicates disease as a fairly serious threat to the species, and urged us to assess this threat when making our final listing determination for the species.

Response: We acknowledge that the information in the status review confirms some incidence of fungal infection in the narrownose smoothhound; however, the information in the status review is based on a single study with data that is over 20 years old. Additionally, the commenter did not provide any new information regarding how fungal infections are having ongoing negative population-level effects on the species. Therefore, without any new information provided by the commenter, we maintain our previous conclusion in the proposed rule that disease is not likely a significant contributing factor to the species' extinction risk.

Comment 16: One commenter disagreed with our determination that predation is not an operative threat to the narrownose smoothhound, and argued that our determination is inconsistent with information presented in the status review for the species. The commenter pointed to the status review (Casselberry and Carlson 2015c), which determined that narrownose smoothhounds are an important prey item for large

sharks, including the broadnose sevengill shark (*Notorynchus cepedianus*), the copper

shark (*Carcharhinus brachyurus*), and the sand tiger shark (*Carcharias taurus*). The

commenter contends that although predation by a native predator would typically not

cause the extinction of a prey species under natural conditions, *M. schmitti* populations

are already depleted and are subject to additional threats. As a result, any additional

mortality will exacerbate the threats that they are already subjected to. The commenter

concluded that predation by other shark species is causing cumulative and synergistic

impacts to narrownose smoothhounds that are exacerbating the other threats that they are

facing.

Response: We acknowledge that the information from the status review confirms

that narrownose smoothhounds are a prey item of various shark species, and we

considered this information in the proposed rule; however, the commenter provided no

new information regarding predation rates of *M. schmitti* or how predation is having

negative population-level effects on the species. Thus, the statement from the commenter

that predation is causing cumulative and synergistic impacts to the species is speculative.

Without any new information provided by the commenter, we maintain our previous

conclusion in the proposed rule that predation is not likely a significant contributing

factor to the species' extinction risk throughout its range.

 Spiny Angelshark

Comment 17: The same commenter from *Comment 16* also disagreed with our

determination that predation is not an operative threat to the spiny angelshark, and argued

that our determination is inconsistent with information presented in the status review for

the species. The commenter pointed to the status review (Casselberry and Carlson

2015e), which determined that small spiny angelsharks are infrequently cannibalized by large male spiny angelsharks and eaten by sand tiger sharks, copper sharks, and broadnose sevengill sharks. The commenter contends that although predation by a native predator would typically not cause the extinction of a prey species under natural conditions, spiny angelshark populations are already depleted and are subject to additional threats. As a result, any additional mortality will exacerbate the threats that they are already subjected to. The commenter concluded that predation by other shark species is causing cumulative and synergistic impacts to spiny angelsharks that are exacerbating the other threats that they are facing.

Response: We acknowledge that the information from the status review confirms that spiny angelsharks are a prey item of various shark species, and we considered this information in the proposed rule; however, the commenter provided no new information regarding predation rates of spiny angelsharks or how predation is having negative population-level effects on the species. Thus, the statement from the commenter that predation is causing cumulative and synergistic impacts to the species is speculative. The status review notes that predation of spiny angelsharks by tiger and broadnose sevengill sharks has only been documented in "low frequencies," suggesting that spiny angelsharks may not be a preferred prey item of these species. Without any new information provided by the commenter, we maintain our previous conclusion in the proposed rule that predation is not likely a significant contributing factor to the species' extinction risk throughout its range.

Argentine Angelshark

Comment 18: Similar to *Comments 16* and *17* above, the same commenter also

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disagreed with our determination that predation is not an operative threat to the Argentine angelshark, and argued that our determination is inconsistent with information presented in the status review for the species. The commenter pointed to the status review (Casselberry and Carlson 2015f), which said: "studies of South American sea lion (*Otaria flavescens*) diet in Uruguay found that they consume Argentine angelsharks, particularly in Cabo Polonio." The commenter contends that although predation by a native predator would typically not cause the extinction of a prey species under natural conditions, Argentine angelshark populations are already depleted and subjected to additional threats. As a result, any additional mortality will exacerbate the threats that they are already subjected to. The commenter concluded that predation by this sea lion species is causing cumulative and synergistic impacts to Argentine angelsharks that are exacerbating the other threats that they are facing.

Response: We acknowledge that the information from the status review confirms that Argentine angelsharks are a prey item of the South American sea lion, and we considered this information in the proposed rule; however, the commenter provided no new information regarding predation rates of Argentine angelsharks elsewhere throughout its range or how predation is having negative population-level effects on the species. Thus, the statement from the commenter that predation by South American sea lions is causing cumulative and synergistic impacts to the species is speculative. Therefore, based on only one study from the status review (Szteren 2006), which found predation of Argentine angelsharks in only one of four study areas in Uruguay (Cabo Polonio), we maintain our previous conclusion in the proposed rule that predation is not likely a significant contributing factor to the species' extinction risk throughout its range.

Inadequacy of Existing Regulatory Mechanisms

General Comments Applicable to Multiple Species

Comment 19: One commenter asserted that the references to Argentina's FAO NPOA-sharks was only mentioned tangentially and incompletely. The commenter asserts that the results of the plan are published and communicated to the relevant multilateral FAO forums who are satisfied with the achievements thus far. In terms of monitoring and implementation of the FAO NPOA-sharks, the commenter noted that the Technical Advisory Group (TAG), which monitors and reviews the plan, filed a proposed update, which was approved by the Federal Fisheries Council, the body responsible for the establishment of the national fisheries policy in Argentina.

Response: We have reviewed the most recent documents related to Argentina's FAO NPOA-sharks mentioned by the commenter. The update to the FAO NPOA-sharks was approved in 2015 (ACTA CF No. 42/2015) and specifically revised the objectives and actions set forth in Chapter IV of the 2009 plan. We also reviewed the proceedings from the TAG workshop held to review and update the FAO NPOA-sharks (TAG 2015), and while it provided progress on the actions and goals outlined in Argentina's FAO NPOA-sharks, it did not provide any information specific to informing the status of any of the proposed species, or evidence of the adequacy of these actions in protecting these species. In one section of the report, it documents the number of *M. schmitti* and angelshark individuals found at two ports during sampling by El Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP) from 2013-2015; however, without additional information on sampling design or methods, we have no way of interpreting the results. Based on the proposed goals and actions, and progress towards these goals, it

is clear that gaps in knowledge about many of the chondrichthyan species in Argentine

waters exist, but that these gaps will hopefully be filled in the foreseeable future.

However, at this time, this information does not change our conclusions regarding the

status of any of the proposed species. In fact, the workshop report notes that one of the

actions in the FAO NPOA-sharks is to establish criteria to categorize the conservation

status of the different species of chondrichthyans in the Argentine Sea, with the first

application of this to the priority species listed in the FAO NPOA-sharks, including

Squatina spp. and *M. schmitti*. However, it was noted that no progress has been made on

this action, but that a plan to figure out the allocation of funds for this action was

suggested in 2016.

Comment 20: One commenter provided a list of research surveys from which the

results were used to evaluate the closure areas that have been established for *M. schmitti*

and *S. guggenheim* in waters of Argentina and the AUCFZ. Additionally, the commenter

provided a list of Argentina's regulations pertinent to fisheries operating in the "El

Rincón" area as well as regulations pertaining to recreational fishermen.

Response: In terms of the list of research surveys, we were not provided the actual

data or results from these surveys (only the year of the survey, type, area of operation,

season, month, and number of sets were provided) and, thus, we could not evaluate the

relevance of these surveys to informing our determination of the status of either the

narrownose smoothhound or spiny angelshark. While we acknowledge that Argentina is

actively working on the implementation of its FAO NPOA-sharks, and currently

regulates its fisheries through a number of management measures, including closure areas

to protect chondrichthyans, the adequacy of these measures in controlling the threat of

overutilization to the proposed species is still uncertain. It is not clear, from the information provided by the commenter, if these regulations have improved the status of any of the proposed species. Based on the best available information for the species found in Argentinean waters, including population data, demographic risks, and current exploitation rates, it appears that they face either moderate or high risks of extinction. Further discussion of the data informing this extinction risk analysis can be found in the proposed rule as well as the **Summary of Factors Affecting the Six Species** and **Extinction Risk** sections of this final determination.

Comment 21: One commenter stated that total permitted catches in Argentine waters and the AUCFZ are set both nationally and within the framework of the Comisión Técnica Mixta del Frente Marítimo (CTMFM), respectively. The commenter further noted that catch limits are based on the advice from the TAG, which uses information from research surveys and fishery statistics to develop stock assessment models and propose management options using a precautionary approach. The commenter references a list of research surveys conducted since 2006 that they assert was not considered in the proposed rule.

Response: We note that the TAG considers the available data, including the referenced research surveys, when it develops stock assessment models and provides advice to the CTMFM. At the time of the proposed rule, we did not have access to the latest documents from the TAG or CTMFM (or the results from the referenced research surveys). However, since publication of the proposed rule, we have received new data from the CTMFM, including recent TAG reports and stock assessment models that show trends in landings, CPUE, and biomass of the narrownose smoothhound and spiny

angelshark in the AUCFZ, and have revised the discussion concerning the threats to these species and their current extinction risk. This new discussion can be found below in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk.**

Comment 22: One commenter stated that the proposed rule did not consider the CTMFM Resolution No. 10/2000, which prohibits vessels over 28 meters (m) in length from operating in the coastal area to the isobath 50 m deep within the AUCFZ. The commenter asserted that this resolution has had a positive impact on reducing fishing effort for the proposed species in the AUCFZ.

Response: While we agree that this prohibition has likely reduced fishing effort on the species within the AUCFZ somewhat, the extent of the reduction largely depends on the species. For example, this prohibition would have no effect on fishing effort for *S. argentina*, whose depth ranges from 100 m to 400 m. For *S. guggenheim*, Hozbor and Pérez (2016) note that the fleet comprised of boats 18-25 m in length, which would not fall under this prohibition, mostly operate in the depth stratum where *S. guggenheim* would occur, and were responsible for over 50 percent of the landings of the species from 2000-2015. The narrownose smoothhound shark, *M. schmitti*, is found in up to 120 m depths in Argentina, and, therefore, may still be subject to fishery-related mortality by these larger vessels. Based on new information received since publication of the proposed rule on the trends in landings, CPUE, and biomass of narrownose smoothhounds and spiny angelsharks in the AUCFZ, and the adequacy of existing regulatory measures, we have since re-evaluated the extinction risk of both species (see sections **Summary of Factors Affecting the Six Species** and **Extinction Risk**). Based on the results, we do not find that the above prohibition has likely reduced mortality on either of these species to

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the point where they would not warrant listing under the ESA.

Comment 23: One commenter noted that the Argentine industrial fleet operates satellite monitoring systems that report the position of each vessel every hour. The commenter elaborated that the global positioning information of the fleet is published on the website of the Ministry and is updated every 12 hours, demonstrating absolute transparency and also the effective control of closed areas. Additionally, the commenter notes that this information is integrated in a way that allows the issuance of legal catch documents, which are requested by exporters to be presented to customs authorities.

Response: While we thank the commenter for this information, we do not find that it changes our conclusions regarding the threats to the proposed species, or their respective overall risks of extinction.

Comment 24: One commenter, citing Bornatowski et al. (2014), Barreto et al. (2015), Amaral and Jablonski (2005), and Ricardo-Pezzuto and Mastella-Beninca (2015), asserted Brazilian regulatory measures are inadequate to protect any of the proposed species. Specifically, the commenter states that monitoring of both commercial and artisanal fisheries in Brazilian waters is insufficient due to a lack of monitoring capacity and data. Furthermore, the commenter asserted that instead of making serious efforts to improve protections for sharks and decrease overfishing, Brazil has taken several actions that will have the opposite effects, including ending its observer program and creating favorable conditions to allow fishing fleets to expand in the area. The commenter claims that protected areas are insufficient in number and extent, and that management plans have not been implemented or are lacking altogether for some of these areas, with attempts at shark protections met with strong opposition from the fishing industry.

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Additionally, the commenter mentioned that trawling licenses in Brazil allow their holders to catch and retain dozens of species, both target and non-target, with the fleets authorized to catch many species that are not in their licenses. Citing the narrownose smoothhound status review (Casselberry and Carlson 2015c), the commenter noted that at least one population of narrownose smoothhounds may have been extirpated in Brazil as a result of overfishing and concluded that overfishing in this country has the ability to extirpate other populations as well.

Response: We agree with the commenter that overutilization and inadequate existing regulatory measures are threats to the proposed species within Brazilian waters. These threats have been thoroughly considered and discussed in the proposed rule and have led to our listing determinations. We reviewed the papers mentioned by the commenter and find that these papers do not present new information specific to any of the proposed species that was not already considered or would change our prior conclusions regarding threats to these species.

Comment 25: One commenter agreed with our evaluation of the adequacy of existing regulatory measures in Uruguay. The commenter, citing Barreto et al. (2015), stated that there is a general scarcity of fishing statistics from Uruguay and that the lack of information and effective regulation in the face of exploitation has caused elasmobranchs to decline in Uruguayan waters. The commenter asserted that protections for the proposed species in Uruguay are likely to be inadequate until conservation is prioritized as a political matter and the protections in Uruguay's FAO NPOA-sharks are strengthened. The commenter concluded that all of the proposed shark species that are present in Uruguayan waters are thus threatened by inadequate regulatory measures.

Response: We thank the commenter for the comment and note that a thorough discussion and analysis of the adequacy of existing regulatory measures in Uruguay and the other portions of the proposed species' ranges can be found in the proposed rule as well as in the **Summary of Factors Affecting the Six Species** and **Extinction Risk** sections of this final rule.

Comment 26: The same commenter from *Comment 25* agreed with our evaluation of the inadequacy of Argentina's existing regulatory measures, asserting that Argentina's catch records are inaccurate and that any regulatory mechanisms based on those figures are therefore unreliable. The commenter cited a study done by Villasante et al. (2015), which reconstructed total marine fisheries removals in Argentina's Exclusive Economic Zone from 1950 – 2010 to provide estimates of unreported components of fisheries catch in various sectors. Villasante et al. (2015) found that reconstructed catch was 55 percent higher than FAO reported landings. The commenter asserted protections for the proposed species in Argentina are likely to be inadequate until conservation is prioritized as a political matter and the protections in Argentina's FAO NPOA-sharks are strengthened.

Response: We thank the commenter for the comment and note that a thorough discussion and analysis of the adequacy of existing regulatory measures in Argentina and the other portions of the proposed species' range can be found in the proposed rule as well as in the **Summary of Factors Affecting the Six Species** and **Extinction Risk** sections of this final rule.

Comment 27: One commenter disagreed with the statement from the proposed rule (80 FR 76091; December 7, 2015) that cited McCormack et al. (2007) as evidence that total allowable catch limits, minimum sizes, and annual quotas for elasmobranchs are

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largely ignored and poorly enforced in Argentina. The commenter stated that in

Argentina, there has been progress in the last 15 years in the study of these species, in

optimizing data collection, and in personnel training to conduct research, but also for the

control and monitoring of landings and adherence to management measures. The

commenter stated these efforts have increased since the implementation of Argentina's

FAO NPOA-sharks in 2009. The commenter also noted that total allowable catches

(TACs) in Argentina are not theoretical but established by the authorities on the basis of

the best scientific advice and are monitored and enforced by authorities of Argentina and

the CTMFM.

Response: While we agree with the commenter that efforts to conserve sharks

have increased in Argentina since 2009, and find that the information provided by the

commenter suggest current management measures are enforced by authorities of

Argentina and the CTMFM, we note that the existing regulatory measures, including

TACs, may not be adequate to prevent further declines in the the proposed species. Based

on new information received since publication of the proposed rule, including data

showing trends in landings, CPUE, and biomass of narrownose smoothhounds and spiny

angelsharks in the AUCFZ, as well as information regarding TACs for these species and

the adequacy of existing regulatory measures, we have since re-evaluated the extinction

risk of both species. This discussion can be found in the sections **Summary of Factors**

Affecting the Six Species and **Extinction Risk** below.

Comment 28: One commenter asserted that another major regulation that was not

considered in the proposed rule was the implementation of a maximum allowance of

landed chondrichthyes per fishing trip in Argentina. The commenter noted that presently,

the CTMFM (Resolution 09/2013) and the Federal Fisheries Council of Argentina have

implemented regulations that state that landings of rays and sharks may not be more than

30 percent of the total landings per trip. The landings of chondrichthyes may not be more

than 50 percent of the total landings per trip. The commenter referenced a paper by

Monsalvo et al. (2016) to indicate an adherence to this regulation by the Argentine fleet

and asserted that the implementation of the management action, together with other

chondrichthyan-specific regulations (including bans and TACs), have reduced fishing

pressure on *M. schmitti* and *S. guggenheim*. The commenter concluded that it is wrong to

assume that the decline in catches of these two species unfailingly indicates a decrease in

abundance, but rather is due to the implementation of stringent management measures

that were established with the explicit aim of reducing catches through reduction of effort

directed on these species.

   Response: As mentioned previously, based on new data we received since

publication of the proposed rule that shows trends in landings, CPUE, and biomass of the

narrownose smoothhound and spiny angelshark in the AUCFZ, we have re-evaluated our

extinction risk analyses for these two species. We note that the models upon which the

new information is based took into account the impacts of management measures,

including Resolution 09/2013, in estimating biomass and abundance trends (see Cortés et

al. 2016a and 2016b). Based on this new information, we agree with the commenter that

management measures may have slowed the decline in the abundance of these two

species (by reducing fishing effort and restricting catches); however, we find that existing

regulatory measures are not adequate to prevent further declines in the species. We direct

the commenter to our discussion of threats and evaluation of the extinction risk of these

two species in the sections **Summary of Factors Affecting the Six Species** and

Extinction Risk below.

Comment 29: One commenter noted that we did not identify *Squatina* spp. as one

of the priority species in Argentina's FAO NPOA-sharks.

Response: We thank the commenter for this information and acknowledge that

Argentina's FAO NPOA-sharks does include *Squatina* spp. in the list of priority species

that are commercially exploited in Argentine waters.

Comment 30: One commenter asserted that Argentinean and Uruguayan fishing

authorities are not serious about protecting angelsharks. The commenter pointed to the

practice of setting catch limits by the CTMFM. Specifically, the commenter noted that

the CTMFM set a catch limit of 2,600 tons in 2012 for *Squatina* spp. within the AUCFZ.

This catch limit was met, and in response to this, an additional reserve of 400 tons was

proposed in 2013 in the event that the 2,600-ton limit was reached again. The commenter

noted that this was followed by a 10 percent increase that could be added to the 2,600-ton

limit if the limit was reached in 2014 and 2015. The commenter asserted that this

malleability of the catch limit begs the question of why have a limit at all if the

government's response is to raise the limit once it is reached.

Response: We note that the commenter provides only opinion regarding the

effectiveness of the CTMFM catch limits on the status of the species. Since publication

of the proposed rule, we have received new information on the adequacy and

effectiveness of the CTMFM imposed catch limits for *M. schmitti* and *S. guggenheim* and

have re-evaluated the extinction risks of these two species. This discussion can be found

in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk**

below.

Narrownose Smoothhound Shark

Comment 31: One commenter mentioned a tagging mark-recapture program for narrownose smoothound sharks, which was carried out jointly with artisanal fishermen in the southern region of the Province of Buenos Aires. The commenter notes that the results of this activity are presented in Pérez et al. (2014).

Response: While we find that tagging work will be useful in contributing valuable data for *M. schmitti* within Argentine waters, the paper referenced only provides results from a preliminary study that analyzed the problems currently associated with mark-recapture studies in Argentina, which the authors of the study state is a country with practically no experience in this technique. The paper discusses the outreach involved in the reporting process and issues with the lack of precision in recapture positions. However, after reviewing the paper, we do not find that the information provided changes any of our conclusions regarding the status of the narrownose smoothhound.

Comment 32: One commenter stated that we did not include the "best available information" in relation to the status of *M. schmitti*. The commenter recommended that we check the CTMFM website for recent information, including stock assessments and regulatory measures, related to the status of this species.

Response: Prior to publication of the proposed rule, we considered the publicly available information from the CTMFM website when we evaluated the status of *M. schmitti*. We have since been in correspondence with the CTMFM and received new data showing trends in landings, CPUE, and biomass of the narrownose smoothhound and have revised the discussion concerning the threats to this species and its current

extinction risk. This new discussion can be found below in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk.**

Striped Smoothhound

Comment 33: One commenter, citing Tinidade-Santos and Freire (2015), stated that Brazilian fisheries managers rely, in part, on minimum landing sizes based on fishes' sizes at first maturity for managing fisheries, and that minimum landing size is the only fishery control used for 48 species in Brazil. The commenter quoted a section from Tinidade-Santos and Freire (2015), which noted that the current minimum landing size for *M. fasciatus* in Brazil would not allow it to reproduce at least once in its lifetime. The commenter states that removing individuals before they have reproduced risks imminent population collapse and that Brazil's failure to adequately limit catch of immature individuals is another threat to the elasmobranchs in its waters.

Response: We agree that fishing for *M. fasciatus* before it has reached maturity has serious implications for its long-term survival. In the proposed rule, we note that the constant fishing pressure on *M. fasciatus* in Brazil's coastal commercial and artisanal fisheries affects the recruitment of juvenile sharks into the population and has contributed to significant declines in neonate and juvenile populations. We specifically state, "Thus, the intense fishing effort by the commercial and artisanal fisheries on the Plataforma Sul appear to be negatively affecting the reproductive capacity and growth of the population throughout its range," with this information contributing to our determination to list the species as endangered throughout its range. As the commenter provides no additional information on any of the other proposed species, our conclusions regarding threats to these species in Brazilian waters remain the same.

Spiny Angelshark

Comment 34: One commenter highlighted the statement in the proposed rule regarding the declining catch of *S. guggenheim* in Santa Catarina, Brazil: "in 2004, landings of *S. guggenheim* along with *S. occulta* were prohibited and, as such, the decline in landings data after 2004 may be a reflection of this prohibition" (80 FR 76098; December 7, 2015). The commenter asserted that the decline in catch is more likely indicative of further population decline or decreased reporting as fisheries regulations are commonly ignored in Brazil and the observed large declines are not consistent with even negligible compliance with fisheries regulations.

Response: The commenter does not provide any new information to consider, besides their opinion, in regards to the cause of the decline in landings of the species. We note in the proposed rule that the best available information indicates *S. guggenheim* has undergone substantial population declines in Brazilian waters, "with evidence of negative population growth rates that led to significant decreases in the overall abundance of the species to the point where catch rates and observations of spiny angelsharks are extremely low" (80 FR 76098). We also concluded that the fishing effort (both by trawl and gillnet fleets) is high and poorly regulated, with the present level of fishing effort by the artisanal and industrial fisheries on Brazil's continental shelf likely to lead to further declines in the spiny angelshark population. A comprehensive discussion of the threats to *S. guggenheim* within Brazilian waters may be found in the proposed rule.

Comment 35: One commenter advised us to not place much weight on the protective ability of seasonal fishing bans in Uruguay that are designed to protect other species, but that may also provide some protection to the spiny angelshark based on

overlap with the species' habitat. The commenter asserted that these regulations do not cover the entire habitat of the species and could be amended at any time irrespective of the status of the spiny angelshark, as they are based on protecting other species.

Response: While the commenter is correct that the seasonal bans do not cover the entire spiny angelshark habitat, the commenter provided only opinion and speculation regarding the effectiveness or adequacy of these seasonal fishing bans in Uruguay in relation to protections for the spiny angelshark. Since publication of the proposed rule, we have received new information on the adequacy of existing regulatory measures to protect *S. guggenheim* from threats and have re-evaluated the extinction risk of this species. This discussion can be found in the sections **Summary of Factors Affecting the Six Species** and **Extinction Risk** below.

Argentine Angelshark

Comment 36: The same commenter from *Comment 32* above also stated that we did not include the "best available information" in relation to the status of *S. argentina* and recommended the CTMFM website for more information.

Response: Prior to publication of the proposed rule, we considered the publicly available information from the CTMFM website when we evaluated the status of *S. argentina*. Since the publication of the proposed rule, we have not received any new information regarding the status of this species, or found any newly available information on the CTMFM website, nor does the commenter provide any new data to consider. As such, we maintain our previous conclusion in the proposed rule that the Argentine angelshark is presently at a high risk of extinction throughout all of its range.

Comments on Demographic Risks to the Species

Brazilian Guitarfish

Comment 37: One commenter asserted that a study by De-Franco et al. (2012) appears to have additional Brazilian guitarfish decline data that we did not consider in our proposed rule, and suggested that we should consider this information in our final listing decision for the species.

Response: We reviewed and considered the De-Franco et al. (2012) study in our proposed listing determination for the Brazilian guitarfish. In fact, we cited this study to support our conclusion that regulatory mechanisms are likely inadequate for the species in Brazil, which, in turn, supported our proposal to list the species as endangered. Upon re-reviewing De-Franco et al. (2012), we note that Miranda and Vooren (2003) is cited as evidence that *R. horkelii* populations declined by approximately 85 percent in the state of Rio Grande do Sul between 1985 and 1997. Our proposed rule discussed this information in detail in the *Overutilization for Commercial, Recreational, Scientific, or Educational Purposes* section where we stated that "Based on the CPUE trends, abundance of *R. horkelli* on the Plataforma Sul in depths of 20 m–200 m is estimated to have decreased by about 85 percent between 1975 and 1999 (Vooren *et al*. 2005a)" (80 FR 76077; December 7, 2015). Therefore, we disagree with the commenter that we did not consider the Brazilian guitarfish decline data provided in De-Franco et al. (2012), as that information was covered in detail in the proposed rule and contributed to our proposed endangered listing determination for the Brazilian guitarfish.

Narrownose Smoothhound

Comment 38: One commenter stated that our analysis of productivity as a demographic threat to the narrownose smoothhound is flawed. The commenter noted that

although we determined that the narrownose smoothhound has a "relatively high intrinsic rate of increase," the commenter asserted that the species still has a low rate of increase that will make it more susceptible to decline and less able to recover from overexploitation than an r-selected species. The commenter believes that this information should elevate the threat that overfishing poses to the species.

Response: While we agree with the commenter that the narrownose smoothhound ultimately has a low intrinsic rate of increase compared to "r-selected" species, we still maintain that there is a gradient of productivity levels among shark species that help determine the level of exploitation that can be sustainable. As described in the proposed rule, *M. schmitti* is able to withstand higher levels of exploitation than other shark species, with sustainable exploitation rates equivalent to an annual removal rate of about 10 percent of the population (Cortés 2007). With no new information provided by the commenter, we find that there is no evidence that the species' productivity is leading to depensatory processes that would elevate its extinction risk; therefore, while low productivity inherently increases its risk, we have no evidence to suggest that it is currently placing the species in danger of extinction.

Spiny Angelshark

Comment 39: One commenter suggested that we should consider the extent to which the spiny angelshark populations are genetically isolated, and the extent to which this increases their extinction risk by reducing redundancy and reducing the ability of the species to decrease the effects of removals through migration.

Response: The commenter provides no new information on the genetics or population structure of the species. As mentioned in the proposed rule, we considered the

demographic factors of abundance, growth rate and productivity, spatial structure and

connectivity, and diversity, which reflect concepts that are well-founded in conservation

biology and that individually and collectively provide strong indicators of extinction risk.

We note that the species faces significant demographic risks, including extremely low

fecundity, declining population growth rate, and limited connectivity. As the commenter

did not provide any new genetic or population structure data to consider in our

demographic analysis, our discussion regarding the species' demographic risks

specifically from spatial structure and connectivity and diversity remains the same.

However, we have since revised our extinction risk analysis for the species based on new

information received since the publication of the proposed rule, and this discussion can

be found in the section **Extinction Risk** below.

Argentine Angelshark

Comment 40: One commenter asserted that the relative rarity of the Argentine

angelshark represents an additional threat to the species as it ". . . may not have the

redundancy necessary to mediate against overutilization." The commenter then cited to

the proposed rule and stated: "This is exacerbated by the fact that the species appears

unable to move between populations, indicating that reductions will likely not be

mediated by migrating individuals and that extirpations are therefore more likely."

Response: We considered the relative rarity of the Argentine angelshark as well as

its spatial structure and connectivity in the *Demographic Risk Analysis - Abundance* and

Spatial Structure/Connectivity sections of the proposed rule. These factors were also

discussed and considered in the *Risk of Extinction* section of the proposed rule and

contributed to the proposed endangered listing for the Argentine angelshark. As stated in

the proposed rule, we note that given the species' restricted range and present rarity throughout its range, combined with its limited movement and dispersal between populations and low reproductive output, *S. argentina* is likely strongly influenced by stochastic or depensatory processes. This vulnerability is further exacerbated by the present threats of overutilization and inadequacy of existing regulatory measures that are and will continue to significantly contribute to the decline of the existing populations (based on the species' demographic risks), compromising the species' long-term viability. Therefore, without any new information from the commenter, we disagree that the species' relative rarity should be re-evaluated as a separate threat to the species, as it was already thoroughly evaluated in the proposed rule.

Comments Outside of the Scope of the Proposed Rule

Comment 41: One commenter noted that the proposed species have not been included in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) appendices, and, as such, efforts should be made in this multilateral forum before listing under the ESA. In this regard, the commenter noted that the United States should consider the impacts of the proposal on developing countries, including any restrictions on commercial exports, and consult with the countries where these species occur.

Response: Under the ESA, we are required to determine whether a species is endangered or threatened 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. We cannot consider economic impacts when making listing determinations. In addition, the

standards for listing species in the CITES appendices are separate from the standards for listing species under the ESA. While we work with the U.S. Fish & Wildlife Service (USFWS) to carry out the provisions of CITES, providing guidance and scientific support on marine issues and participating fully in the implementation of CITES for species under our jurisdiction, the listing of species on the CITES appendices is not a prerequisite for listing under the ESA. Furthermore, ESA listing will not restrict export of the six species from their range countries. Section 9(a)(1) restricts, among other things, only import into and export from the United States by persons subject to U.S. jurisdiction. It does not regulate import into or export from other countries. In terms of consulting with foreign nations where the proposed species occur, and as required by ESA Section 4(b)(5)(B), we gave notice of and directly solicited comments on our proposal from the foreign ambassadors of each country in which the six species are believed to occur. We received a response only from the Embassy of the Argentine Republic.

Comment 42: One commenter requested that we amend the proposal to use the double nomenclature "Islas Malvinas" and "Falkland Islands" in our reference to the Falkland Islands within the 12-month finding for the graytail skate (*Bathyraja griseocauda*) (80 FR 76067; December 7, 2015), noting the dispute between the government of Argentina and the United Kingdom concerning the sovereignty over the archipelago.

Response: We acknowledge the double nomenclature, but find an amendment to change the 12-month finding text for a species not included in this final rule to be unnecessary as no official regulation, nor regulatory text, containing the incomplete

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nomenclature was implemented or published in our U.S. Code of Federal Regulations as a result of the 12-month finding.

Summary of Changes from the Proposed Listing Rule

Based on public comments and new information received since the publication of the proposed listing rule, we made the changes listed below.

1.   We re-evaluated threats to the species and the extinction risk of the narrownose smoothhound shark based on new information and have determined that the species remains at a moderate risk of extinction.

2.   We re-evaluated threats to the species and the extinction risk of the spiny angelshark based on new information and have determined that the species is presently at a high risk of extinction.

3.   We also revised the common names of the proposed *Squatina* species to reflect "angelsharks" as a single word (in the proposed rule, we referred to them as "angel sharks"). We find that either spelling is acceptable; however, because we have previously listed three other "angelshark" species under the ESA (81 FR 50394; August 1, 2016), in order to be consistent, we are following the same naming convention for the angelshark species addressed in this final rule.

A summary of the new information received since the publication of the proposed rule as it relates to the status of the narrownose smoothhound and spiny angelshark is presented in the remainder of this document, along with our re-evaluation of the extinction risk of these two species based on this new information and our final listing determinations for all six elasmobranch species. None of the information received since publication of the proposed rule causes us to reconsider our previous findings for the

other four elasmobranch species as reflected in the proposed rule. Thus, all of the information contained in the status review reports and proposed rule for the daggernose shark, Brazilian guitarfish, striped smoothhound shark, and Argentine angelshark is reaffirmed in this final action.

Species Determinations

We did not receive any new information related to taxonomic status of any of the six elasmobranch species. Therefore, based on the best available scientific and commercial information described in the proposed rule (80 FR 7606, December 7, 2015) and included in the status review reports (Casselberry and Carlson 2015 a-f), we find that the daggernose shark (*I. oxyrhynchus*), Brazilian guitarfish (*R. horkelii*), striped smoothhound shark (*M. fasciatus*), narrownose smoothhound shark (*M. schmitti*), spiny angelshark (*S. guggenheim*), and Argentine angelshark (*S. argentina*) are taxonomically-distinct species, meeting the definition of "species" pursuant to section 3 of the ESA, and are eligible for listing under the ESA.

Summary of Factors Affecting the Six Species

Next we consider whether any one or a combination of the five factors specified in section 4(a)(1) of the ESA contribute to the extinction risk of these species and result in the species meeting the definition of "endangered species" or "threatened species." The comments that we received on the proposed rule provided information that was either already considered in our analysis or was not substantial or relevant, and, therefore, did not change our analysis of or conclusions regarding any of the section 4(a)(1) factors or their interactions for the daggernose shark (*I. oxyrhynchus*), Brazilian guitarfish (*R. horkelii*), striped smoothhound shark (*M. fasciatus*), and Argentine angelshark (*S.*

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argentina). Therefore, all of the information, discussion, and conclusions on the summary of factors affecting these four elasmobranch species contained in the status review reports and proposed rule is reaffirmed in this final action.

For the narrownose smoothhound and spiny angelshark, below we provide a summary and analysis of the new information received since publication of the proposed rule (and not already discussed in the response to public comments) on the threats to these two species.

Narrownose smoothhound

As noted in the proposed rule, the narrownose smoothhound is the most abundant and widely distributed triakid (houndshark) in the Argentine Sea (Van der Molen and Caille 2001). In Argentina, *M. schmitti* is considered the most important elasmobranch in Argentine fisheries, making up 9-12 percent of the total landings from coastal fleets (Galíndez *et al.* 2010), and is the most heavily exploited shark species in artisanal fisheries. Cortés et al. (2016a) note that the shark is generally found in greater abundance in the estuarine systems of El Rincón and the Río de la Plata, where it is mainly captured by the Argentine multi-species coastal fleet. In Uruguay, the species is the target of the artisanal gillnet fishery and incidentally caught by the artisanal and industrial trawl fleets operating in the Atlantic Ocean, including within the AUCFZ.

In terms of factors affecting the status of the narrownose smoothhound, the proposed rule concluded that the main threat to this species is overutilization for commercial purposes, with current regulatory measures inadequate to protect the species from further overutilization. The proposed rule provided data on the decline in both the CPUE and biomass of the species throughout its range due to fishing pressure.

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Additionally, the proposed rule noted a decrease in the estimated mean size and size at maturity of narrownose smoothhounds off the coast of Argentina since the 1970s, providing further evidence of the overexploitation of the species.

Since publication of the proposed rule, we received updated and new information related to the trends in landings, CPUE, and biomass of the narrownose smoothhound specifically in the AUCFZ (i.e., Río de la Plata and Maritime Front). As the proposed rule notes, the AUCFZ is the area where current fisheries information indicates narrownose smoothhounds may likely be most abundant but also heavily targeted. The available data at the time of the proposed rule showed that landings of the species in the AUFCZ decreased in recent years, from 4,480 t in 2010 to 2,921 t in 2014 (CTMFM 2015). Although annual catch limits for *M. schmitti* have been implemented in the AUCFZ by the CTMFM since 2002, the proposed rule noted that "Due to a lack of abundance data since 2003, it is unclear whether the catch limits for *Mustelus* spp. have positively affected the population . . . though it is worth noting that since 2010, catches of *M. schmitti* in the AUFCZ have been below the total allowable levels and on a decline (CTMFM 2015)." Based on new information received from the CTMFM, biomass of the species in 2016 is estimated to be around 53 to 64 percent of virgin (i.e., 1983) biomass (CTMFM 2016). These values are based on three models from Cortés et al. (2016a) that incorporated indices of abundance estimated from INIDEP research surveys and Argentine commercial fleet data and annual landings data of *M. schmitti* by Uruguayan and Argentinean vessels in the AUCFZ. While all models showed a general decline in biomass since the late 1980s, in recent years, biomass has appeared to stabilize and even increase (Cortés et al. 2016a). Since 2013, when management measures were

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implemented in the AUCFZ that set maximum catch limits per trip for sharks, rays, and

chondrichthyans (see Resol. CFP 04/2013 and Resol. CTMFM 09/2013), biomass of *M.

schmittti* declined by less than 1 percent in two of the models examined, and increased by

2.6 percent in the third model. However, based on our interpretation of the available

information, we find that annual catch limits specifically for *M. schmitti* are currently set

too high. For each model, Cortés et al. (2016a) provide an estimate of the "replacement

capture" for each year, which the authors define as the catch value that would produce

stable biomass from time *t* to time *t* +1. Since 2012, when the CTMFM began setting

species-specific total permissible catch limits for narrownose smoothhound, these catch

limits have always been higher than the replacement capture estimates. Most recently, the

2016 annual catch limit set by the CTMFM was 3,500 t despite replacement capture

estimates that range from 2,568 t to 3,163 t. As such, these annual catch limits appear

inadequate to ensure stable biomass numbers for *M. schmitti* into the future. Yet, as

mentioned above, the models in Cortés et al. (2016a) depict stable and increasing

biomass trends for the species. These trends are likely explained by the fact that actual

landings of the species have been close to and even below the replacement capture

estimates since 2012, and while these landings figures may potentially indicate a decrease

in the overall abundance of the species and, therefore, catchability of the species,

modeled CPUE trends suggest otherwise, showing a slight decrease since the mid-2000s

and no trend (or stable trend) in recent years (Cortés et al. 2016a). However, the authors

caution that considering the susceptibility of the species to exploitation, the previous

overexploitation of the species, and the uncertainty of the data available for the models,

management of the species should be established using a highly precautionary approach

(Cortés et al. 2016a).

Additionally, while the proposed rule noted a chronological decrease in the estimated size of maturity of narrownose smoothhounds in the AUCFZ and El Rincon regions, indicative of overutilization of the species, new information suggests that average maturity size may either vary by site or has potentially increased again in recent years. Specifically, the proposed rule reported maturity estimates of 60 centimeters (cm) and 62 cm total length (TL) for males and females, respectively, in 1978 and noted that by 1998, maturity estimates had decreased to 57.6 cm TL for males and 59.9 cm for females (80 FR 76087; December 7, 2015). Based on individuals caught in 2004, Cortes (2007) found the length at 50 percent maturity (LT50) for females to be only 56 cm TL. However, de Silveira et al. (2015) collected samples of narrownose smoothhounds from artisanal fisheries in La Paloma (Rocha) during the years 2014 and 2015 and determined that LT50 for males was 60.2 cm TL (n = 431) and for females it was 61 cm TL (n = 280), estimates that match those that were recorded from over three decades ago. Given this new information, along with the indication of a potentially stable population, we find that the threat of overutilization within the AUCFZ may have been overstated in the proposed rule.

In terms of other threats, the proposed rule noted the inadequacy of existing regulatory mechanisms to control overexploitation of the species throughout large portions of its range, including within the AUCFZ. However, the proposed rule mentioned measures in the AUCFZ that were likely effective in protecting the narrownose smoothhound, including a prohibition of demersal trawling in a section known to be an important area for chondrichthyan reproduction (referred to as statistical

rectangle 3656) and additional area closures to trawling gear in other portions of the AUCFZ, like within the Río de la Plata (where historical estimates of narrownose smoothhound were as high as 44 t/nmi^2; Cousseau et al. 1998), in order to protect whitemouth croaker (*Micropogonias furnieri)* and juvenile hake from overexploitation by the fisheries.

Since publication of the proposed rule, we received new information regarding the likely effectiveness of the prohibition in 3656 as it pertains to the protection of narrownose smoothhound. For clarification, the boundaries of 3656 are defined as follows: A) to the north by the parallel 36ºS and its intersection with the outer limit of the Rio de la Plata; B) to the south, by the parallel 37°S; C) to the west, by the outer limit of the Argentine territorial sea; D) to the east, by the meridian 56º00' W. Specifically, Colonello and Massa (2016) analyzed data from coastal research surveys conducted between 2011 and 2015 to examine the spatial distribution and relative abundance, including life history stages, of a number of shark and ray species within and around the 3656 closure. The surveys covered coastal areas of Buenos Aires and Uruguay up to 50 m depths. Results confirmed the presence of both sexes and all life history stages of *M. schmitti* within the 3656 rectangle (Colonello and Massa 2016). In the spring surveys (conducted in November and December), sets frequently showed high densities of narrownose smoothhound (greater than 2 t/mn^2 (tonnes per square nautical mile)), including within the 3656 closure (Colonello and Massa 2016). The authors note that the highest concentrations of adult males and adult non-pregnant and pregnant females in the spring surveys were observed in shallow areas, supporting the assumption these areas are used for reproductive purposes (Colonello and Massa 2016). However, as the most

coastal zone of the 3656 rectangle is controlled by the Province of Buenos Aires

(Argentine territorial waters), the authors stress the need to ensure the full synchronicity

of the closure of both the 3656 area and the Provincial part of the rectangle. This is

particularly important since the Colonello and Massa (2016) data show that during the

months when this does not occur (i.e., November and December), there is a redistribution

of fishing effort specifically within the open Provincial coastal areas of 3656 (and in

neighboring areas next to the closed areas of 3656) (Colonello and Massa 2016). Thus,

while we find that the 3656 closure is adequate in providing a high degree of protection

from fishery-related mortality for the narrownose smoothhound during important

reproductive events, we note that the species is capable of moving in and out of this

closure area and that all life history stages are found outside of the closure area and,

therefore, juveniles and reproducing adults are still susceptible to being caught by fishing

vessels. Additionally, when the Provincial area is also open, this significantly decreases

the overall effectiveness of the closure in protecting sensitive life history stages of

species from fishery-related mortality.

As we have no new information on threats to the species outside of the AUCFZ,

our conclusions from the proposed rule regarding threats to the species within

Argentinean and Uruguayan waters outside of the AUCFZ, and Brazilian waters, remains

the same.

Spiny Angelshark

As noted in the proposed rule, spiny angelsharks are found from Brazil to

Argentina. Throughout its range, the species is heavily fished by commercial and

artisanal fishermen; however, according to Cortés et al. (2006b), more than 80 percent of

the landings of *S. guggenheim* correspond to catches between 34° S and 42° S latitudes, at depths less than 50 m. In Argentina, the spiny angelshark is commercially exploited in local fisheries that occur in the San Matías Gulf (Perier et al. 2011), which comprises around 10 percent of its range. The species is also commercially exploited by the fisheries operating in the AUFCZ, which overlaps with areas of higher concentration of the species (Jaureguizar et al. 2006; Colonello et al. 2007; Massa and Hozbor 2008; Vögler et al. 2008) and comprises around 25 percent of the species' range. In Uruguay, spiny angelsharks are captured by industrial trawling fleets in coastal and offshore waters (Vögler et al. 2008), and in southern Brazil, spiny angelsharks have been heavily fished by industrial trawlers and gillnet fleets for the past few decades (Haimovici 1998; Vögler et al. 2008).

In terms of factors affecting the status of the spiny angelshark, the proposed rule concluded that the main threat to this species is overutilization for commercial purposes. The proposed rule provided data on the decline of the species in Brazil, noting that the impact of heavy fishing pressure on the species by trawlers and gillnet fleets since the 1980s resulted in an 85 percent decline in the abundance of the *S. guggenheim* population. Fishing mortality rates exceeded population growth rates, with an annual rate of population decline of 16 percent in the mid-1990s. In Argentina, the proposed rule cited CPUE data that showed population declines of up to 58 percent in the late 1990s, but reported a lack of recent abundance estimates or trends throughout the rest of the species range, particularly in the AUCFZ.

Since publication of the proposed rule, we received updated and new information related to the trends in landings, CPUE, and biomass of the spiny angelshark specifically

in the AUCFZ. As the proposed rule notes, the AUCFZ comprises around one quarter of the species' range and is where survey data suggest the species is likely at highest concentration. The available data at the time of the proposed rule showed that landings of the species in the AUFCZ decreased in recent years, from 3,763 t in 2010 to below 2,300 t in 2014 (CTMFM 2015). These catch levels are similar to those reported in the 1990s in Argentine waters, which resulted in declines of up to 58 percent in the species' abundance. Beginning in 2012, annual maximum permitted catch limits for all *Squatina* spp. (of which the large majority are *S. guggenheim*) have been implemented in the AUCFZ by the CTMFM; however, these limits have never been met since 2013. The proposed rule concluded that " . . . without effort information, it is unclear whether these regulations and the corresponding decreases in landings can be attributed to adequate control of the exploitation of the species or rather reflects [*sic*] the lower abundance of the species from declining populations, or more likely a combination of the two scenarios" (80 FR 76097).

Based on new information received from the CTMFM, biomass of the species in 2016 is estimated to be around 46 percent of optimum biomass for the species (CTMFM 2016). This value is based on two models from Cortés et al. (2016b) that incorporated indices of abundance estimated from INIDEP research surveys and annual landings data of angelsharks by Uruguayan and Argentinean vessels in the AUCFZ. The fishing mortality rate of *S. guggenheim* in 2016 was estimated to be 65 percent higher than the fishing mortality rate at maximum sustainable yield (Cortés et al. 2016b). Based on the estimates of biomass since the early 1980s, *S. guggenheim* biomass has declined by 77 to 81 percent (depending on the model) (Cortés et al. 2016b). Since 2013, when

management measures were implemented in the AUCFZ that set maximum catch limits per trip for sharks, rays, and chondrichthyans (see Resol. CFP 04/2013 and Resol. CTMFM 09/2013), *S. guggenheim* biomass has declined by 14 percent (Cortés et al. 2016b). Additionally, abundance has been on a declining trend since the early 2000s (Cortés et al. 2016b). Likely a major contributing factor to these declines is the fact that landings of the species have been higher than estimated replacement captures since 2002 (Cortés et al. 2016b). Also, since 2012, when the CTMFM began setting total permissible catch limits for angelsharks, these maximum catch limits have always been higher than the replacement capture estimates. In fact, most recently, the 2016 annual catch limit set by the CTMFM was 2,600 t despite modeled replacement capture estimates of 1,761 t and 1,765 t (Cortés et al. 2016b). Given the clearly unsustainable fishing levels and inadequacy of existing regulatory measures, the decline in the biomass and the abundance of the species is likely to continue to occur.

In addition to the biomass and fishing mortality estimates, we received new information regarding the likely effectiveness of the AUCFZ prohibition in 3656 as it pertains to the protection of spiny angelsharks. The Colonello and Massa (2016) study, which was mentioned above in the narrownose smoothhound discussion, also examined the spatial distribution and relative abundance, including life history stages, of the spiny angelshark within and around the 3656 closure. Results confirmed the presence of both sexes and all life history stages of *S. guggenheim* within the 3656 rectangle; however, the sets that frequently showed the highest densities of spiny angelsharks (greater than 2 t/mn^2) occurred north of 36° S latitude, within the Río de la Plata estuary and territorial waters of Uruguay (Colonello and Massa 2016).

In contrast, based on landings data from the Argentine commercial fleet, Hozbor and Pérez (2016) suggest that the distribution of the species may be concentrated in and around 3656. Using official fisheries statistics from the Argentine commercial fleet between 2000 and 2015, Hozbor and Pérez (2016) found that the fleet of boats 18-25 m in length mostly operated in the depth stratum where *S. guggenheim* would occur, whereas the boats <18 m had a more limited area of operation, and the boats >25 m fished in depths greater than 50 m and south of 38°S latitude, and, therefore, would likely only catch *S. argentina*. Not surprisingly, the authors found that the fleet of 18-25 m boats represented, on average, about 52 percent of the annual total catch of *S. guggenheim* over the time period (Hozbor and Pérez 2016). Using the fishery reports from this fleet, the authors examined the distribution of landings of *S. guggenheim* by statistical rectangle (for example, statistical rectangle 3655 is a rectangle defined by lines drawn from 36° S latitude to 37° S latitude and 55° W longitude to 56° W longitude). The results showed that the landings from 2000-2015 were greatest in rectangles 3655, 3756, and 3656 (which is the closure area); however, since the 3656 closure has been in effect, landings have decreased in 3656 and increased in the neighboring rectangles including 3556, 3655, and 3756 (Hozbor and Pérez 2016). Additionally, the rectangle covering the Río de la Plata estuary (3555) also showed an increase in landings in recent years to the point where landings from this rectangle are around the same magnitude as those in 3655 and 3756 (Hozbor and Pérez 2016). In other words, similar to the findings from the Colonello and Massa (2016), the data from Hozbor and Pérez (2016) also suggest a potential redistribution of fishing effort around the closed area (3656). For spiny angelsharks, however, this may portend even greater declines in the species as the

Colonello and Massa (2016) observed higher abundance of the species north of 36°S

latitude, including in the Río de la Plata estuary, where the data from Hozbor and Pérez

(2016) indicate a recent increasing trend in landings of the species, likely due to the

redistribution of fishing effort as a result of the 3656 closure. As such, we do not find that

existing regulatory measures in the AUCFZ, including the 3656 closure, are adequately

decreasing the threat of overutilization to the point where the species is no longer at risk

of declines.

In Uruguay, the proposed rule provided angelshark landings data by Uruguayan

fleets operating in the AUCFZ. The proposed rule noted that the proportion of Uruguayan

landings compared to Argentinian landings increased to 18.4 percent of the total by 2014

(80 FR 76071; December 7, 2015), as did the number of angelshark landings attributed to

Uruguayan vessels (from 26 t in 2012 to 142 t and 158 t in 2013 and 2014, respectively)

(80 FR 76095; December 7, 2015). The proposed rule further concluded that this

information indicated "a potential increasing trend in the exploitation of the spiny

angelshark by Uruguayan fishing vessels" (80 FR 76095). However, based on recent

landings data from the Dirección Nacional de Recursos Acuáticos (DINARA) presented

to the CTMFM, the Uruguayan proportion may have been overstated in the proposed

rule. In 2014, landings for *Squatina* spp. in the AUCFZ was 158 t by Uruguayan vessels;

however, this comprised only 6.9 percent of the total landings of angelsharks from the

treaty area. In 2015, Uruguayan vessels landed 104 t of *Squatina* spp., comprising only

4.4 percent of the total. However, it is worth noting that fishing effort of Uruguayan

vessels tends to be concentrated in the Río de la Plata estuary area and the Uruguayan

coast north of 36° S latitude, where, as mentioned above, higher abundance of the species

is observed.

Additionally, as noted in the proposed rule, *Squatina* spp. are also targeted and caught as bycatch in Uruguayan waters by artisanal longliners and gillnetters. New information on the catch of the species by artisanal fishing vessels was provided in Ligrone et al. (2014) who surveyed 21 artisanal fishermen operating in Uruguay between 2006 and 2009. Ligrone et al. (2014) found that *Squatina* spp. comprised 11 percent of the total landing weight, with angelsharks mainly caught by large mesh fishing between October and February and concentrated near the ports of La Paloma or Cabo Polonio. While there is a ban on trawling from the coast of Uruguay to 7 nmi offshore, we could find no similar prohibition for other types of gear.

In Brazilian waters, no new information was found on threats to the species, therefore, our conclusions from the proposed rule remain the same.

Extinction Risk

As stated previously, the information received from public comments on the proposed rule was either already considered in our analysis or was not substantial or relevant, and, therefore none of the information affected our extinction risk evaluations of the daggernose shark (*I. oxyrhynchus*), Brazilian guitarfish (*R. horkelii)*, striped smoothhound shark (*M. fasciatus*), and Argentine angelshark (*S. argentina*). Therefore, all of the information contained in the status review reports and proposed rule on the extinction risk of these four elasmobranch species is reaffirmed in this final action. Below, we provide a discussion of how the new information received since publication of the final rule has affected our extinction risk analyses for narrownose smoothhound and spiny angelshark.

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Narrownose Smoothhound Shark

We find that the best available information, including the information from the proposed rule as well as the new information received, indicates that *M. schmitti* currently faces a moderate risk of extinction. While there is conflicting evidence regarding the previously reported chronological decline in mean size of maturity, and recent evidence that the declining trend in the AUCFZ population of narrownose smoothhounds has slowed or potentially halted, we note that regulatory measures are not currently adequate to protect the species from overutilization. While landings of the species within the AUCFZ have remained close to or below replacement capture estimates in recent years, the annual catch limits have consistently been set too high, and, if met by fishermen, would result in a continual decline in the species through the foreseeable future.

Additionally, current closures to protect the population of the species within the AUCFZ may not be adequate to significantly decrease its overall risk of extinction, particularly when the Provincial section of the 3656 closure is open to fishing. As was demonstrated in the study by Colonello and Massa (2016), the highest concentrations of juveniles and reproductively active adults were observed in shallow areas, including within the Provincial section of 3656, during the spring surveys in November and December, a time when fishing is allowed within the Provincial area. Also, the redistribution of fishing effort during the closure to neighboring areas, including the Provincial area, suggests that fishermen are likely targeting the species as it moves out of the closure, thus decreasing the effectiveness of the closure in protecting the species during important reproductive events.

Overall, while we find that there is still considerable uncertainty regarding the species' current abundance throughout its entire range, the best available information indicates that the species has likely experienced population declines of significant magnitude since the 1980s due to overutilization, including a 36-47 percent decline in biomass within the AUCFZ and an 85 percent decline in abundance in waters off Brazil, with the possible extirpation of a local breeding population. The species continues to be heavily exploited throughout its range, both targeted and caught as bycatch, and we find that existing regulatory measures are inadequate to prevent further declines in the species throughout the foreseeable future.

Spiny Angelshark

We find that the best available information, including the information from the proposed rule as well as the new information received, indicates that *S. guggenheim* currently faces a high risk of extinction. The primary threat to *S. guggenheim* is overutilization in artisanal and commercial fisheries. In Argentina, *S. guggenheim* biomass has declined by 77 to 81 percent since the 1980s and, despite management measures that include annual catch limits and trawling prohibitions, biomass continues to decline. Additionally, abundance has been on a declining trend since the early 2000s, with current fishing mortality rates 65 percent higher than what would attain maximum sustainable yield. Existing regulatory mechanisms are likely inadequate to prevent further declines in the abundance of the species, considering that annual catch limits are currently set too high to achieve a stable biomass and the 3656 closure does not appear to coincide with the areas of highest *S. guggenheim* density within the AUCFZ. Additionally, a result of the 3656 closure has been a redistribution of fishing effort into

areas of the AUCFZ where *S. guggenheim* occurs more frequently, thereby increasing the number of fishery-related mortalities for the species (as demonstrated by recent landings data). While the proposed rule stated that "While the Brazilian populations have experienced substantial declines and remain at risk from overutilization by fisheries, the same cannot be concluded with certainty for the populations farther south in the species' range" (80 FR 76099; December 7, 2015) we find this no longer to be accurate. Based on the new information above, we find that the species is experiencing substantial declines and remains at risk from overutilization by fisheries throughout its range. Given the significant demographic risks to the species (e.g., extremely low fecundity, declining population growth rate, and limited connectivity), we find that the continued decline in the species' abundance as a result of overutilization, with evidence of continued and heavy fishing pressure on the species throughout its entire range, and the inadequacy of existing regulatory measures to protect the species from this threat, are significantly compromising the long-term viability of the species and placing its persistence into question.

Protective Efforts

Finally, we considered conservation efforts to protect each species and evaluated whether these conservation efforts are adequate to mitigate the existing threats to the point where extinction risk is significantly lowered and the species' status is improved. None of the comments we received since publication of the proposed rule provided any new, relevant or substantial information regarding conservation efforts to protect the six elasmobranch species. Thus, all of the information, discussion, and conclusions on the protective efforts for the six elasmobranch species contained in the status review reports

and proposed rule are reaffirmed in this final action.

Final Determination

We have reviewed the best available scientific and commercial information, including the petition, the information in the status review reports (Casselbury and Carlson 2015 a-f), the comments of peer reviewers, public comments, and information that has become available since the publication of the proposed rule (80 FR 76067; December 7, 2015). Based on the best available scientific and commercial information, and after considering efforts being made to protect each of these species, we find that the daggernose shark, Brazilian guitarfish, striped smoothhound shark, spiny angelshark, and Argentine angelshark are in danger of extinction throughout their respective ranges. We have also determined that the narrownose smoothhound is not currently in danger of extinction, but likely to become so in the foreseeable future throughout its range.

As none of the information received since publication of the proposed rule provided any new, relevant or substantial information that changed our analyses or conclusions that led to our determinations for the daggernose shark, Brazilian guitarfish, striped smoothhound shark, and Argentine angelshark, the determinations in the proposed rule for these species (80 FR 76067; December 7, 2015) are reaffirmed in this final rule. For the spiny angelshark and narrownose smoothhound shark, we provide a summary of our final listing determinations for these species based on the new information considered and analyzed in this final rule as well as information discussed in the proposed rule (80 FR 76067; December 7, 2015).

We have determined that the spiny angelshark is presently in danger of extinction from threats of overutilization and the inadequacy of existing regulatory mechanisms (see

the discussion and analysis within this final rule as well as the proposed rule for further information). Factors supporting this conclusion include: (1) significantly reduced abundance and biomass (e.g. declines in CPUE of up to 58 percent in Argentina, biomass declines of 77-81 percent in the AUCFZ, and 85 percent decline in Brazilian populations); (2) declining population trends (e.g., in the AUCFZ, abundance has been on a declining trend since the early 2000s, with current fishing mortality rates 65 percent higher than what would attain maximum sustainable yield; in Brazil, annual rate of population decline was estimated at 16 percent in the mid-1990s); (3) high susceptibility to overfishing and vulnerability to depletion given the species' present demographic risks (e.g., extremely low fecundity, low abundance and declining population trends, and limited connectivity); (4) heavily fished both historically and currently, with fleets that operate year-round, including during the sharks' reproductive season migrations, hence capturing all life stages of spiny angelsharks and contributing to the decline and overutilization of the species throughout its range; and (5) current regulations that are inadequate to protect the species from further overutilization throughout its range (e.g., annual catch limits that are currently set too high to achieve a stable biomass and fishery area closures that do not appear to coincide with the areas of highest *S. guggenheim* density).

The spiny angelshark has suffered significant population declines throughout its range due to overutilization in industrial and artisanal fisheries. The decline and subsequent rarity of the spiny angelshark in an area that comprises around half of its range (i.e., off Brazil), combined with the declines in biomass of up to 81 percent in the AUCFZ, its significant demographic risks, and evidence of continued and heavy fishing

pressure on the species throughout its range, make the spiny angelshark particularly susceptible to increased local extirpations and place it at immediate risk of extinction from environmental and anthropogenic perturbations or catastrophic events. Additionally, with no indication that abundance trends have stabilized or reversed in recent years, and evidence that existing regulatory measures are inadequate to alter this trend, this species will continue to suffer from fishery-related mortality throughout its range and remain in danger of extinction. Therefore, we are listing the spiny angelshark as endangered under the ESA.

We have determined that the narrownose smoothhound shark is not presently in danger of extinction throughout its range, but likely to become so in the foreseeable future from threats of overutilization and the inadequacy of existing regulatory mechanisms (see the discussion and analysis within this final rule as well as the proposed rule for further information). Factors supporting this conclusion include: (1) moderate declines in abundance (e.g., most abundant houndshark in the Argentine Sea yet declines in biomass of 36 - 47 percent in AUCFZ, 85 percent decline in a Brazilian winter migrant population and potential extirpation of local population); (2) potential stabilization of biomass in AUCFZ (based on recent stock assessment data); (3) moderate susceptibility to overfishing and vulnerability to depletion given the species' present demographic risks (e.g., relatively high intrinsic rate of population increase and ability to withstand moderate levels of exploitation of up to 10 percent of the total population); (4) heavily exploited throughout its range (considered the most important elasmobranch in Argentine fisheries, making up 9-12 percent of the total landings from coastal fleets; target of artisanal gillnet fisheries); (5) decreases in average size of landed sharks (observed by the

late 1990s and early 2000s); and (6) current regulations that are inadequate to protect the species from overutilization and further decline throughout its range (e.g., annual catch limits that are currently set too high to achieve a stable biomass and fishery area closures that may not protect the species from fishery-related mortality).

The species has experienced population declines of varying magnitude throughout its range. Although the species' relatively high intrinsic rate of population increase and ability to withstand moderate levels of exploitation up to 10 percent of the total population provides the narrownose smoothhound shark with some protection from extinction, and is likely the reason why the species remains the most abundant houndshark in the Argentine Sea, the decreases in populations (particularly off Brazil) and average size of the species suggest it is being exploited at a level exceeding what it can sustain. While biomass may currently be stable in the AUCFZ, this does not appear to be a result of adequate existing regulatory measures as annual catch limits have consistently been set too high in the fishery. In fact, if these catch limits are actually met by fishermen, it would result in a continual decline in the species through the future. Therefore, while the species is not presently in danger of extinction, we find that it is likely to become so within the foreseeable future as it has already suffered declines in abundance from historical overutilization, continues to be heavily exploited throughout its range, and lacks adequate protection from these threats. Therefore, we are listing the narrownose smoothhound shark as threatened under the ESA.

Because we find that all six species are either in danger of extinction or likely to become so within the foreseeable future throughout all of their ranges, there is no need to evaluate any of the species' status in any portion of their range.

Effects of Listing

Conservation measures provided for species listed as endangered or threatened under the ESA include recovery actions (16 U.S.C. 1533(f)); Federal agency requirements to 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 critical habitat should it be designated (16 U.S.C. 1536); designation of critical habitat if prudent and determinable (16 U.S.C. 1533(a)(3)(A)); and prohibitions on taking and certain other activities (16 U.S.C. 1538, 1533(d)). In addition, recognition of the species' imperiled status through listing promotes 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/USFWS regulations (50 CFR part 402) require Federal agencies to consult with us to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. It is unlikely that the listing of these species under the ESA will increase the number of section 7 consultations because these species occur entirely outside of the United States and are unlikely to be affected by Federal actions.

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

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considerations or protection; and (2) specific areas outside the geographical area occupied by a species at the time it is listed upon a determination that such areas are essential for the conservation of the species. Section 4(a)(3)(A) of the ESA (16 U.S.C. 1533(a)(3)(A)) requires that, to the extent prudent and determinable, critical habitat be designated concurrently with the listing of a species. However, critical habitat shall not be designated in foreign countries or other areas outside U.S. jurisdiction (50 CFR 424.12(g)).

The best available scientific and commercial data as discussed above identify the geographical areas occupied by *I. oxyrhynchus*, *R. horkelii*, *M. fasciatus*, *M. schmitti*, *S. guggenheim*, and *S. argentina* as being entirely outside U.S. jurisdiction, so we cannot designate occupied critical habitat for these species. We can designate critical habitat in areas in the United States that are unoccupied by the species if the area(s) are determined to be essential for the conservation of the species. The best available scientific and commercial information on these species does not indicate that U.S. waters provide any specific essential biological function for any of these species. Therefore, based on the best available information, we do not intend to designate critical habitat for *I. oxyrhynchus*, *R. horkelii*, *M. fasciatus*, *M. schmitti*, *S. guggenheim*, and *S. argentina*.

ESA Section 9 and 4(d) Prohibitions

Because we are listing *I. oxyrhynchus*, *R. horkelii*, *M. fasciatus*, *S. guggenheim*, and *S. argentina* as endangered, all of the prohibitions of section 9(a)(1) of the ESA will apply to these species. These include prohibitions against the import and export of any endangered species; the sale and offering for sale of such species in interstate or foreign commerce; the delivery, receipt, carriage, transport, or shipment of such species in

interstate or foreign commerce and in the course of a commercial activity; and the "take" of these species within the U.S., within the U.S. territorial seas, or on the high seas. 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." These prohibitions apply to all persons subject to the jurisdiction of the United States.

In the case of threatened species, ESA section 4(d) requires the Secretary to issue regulations deemed necessary and advisable for the conservation of the species. We have evaluated the needs of and threats to the narrownose smoothhound shark and have determined that protective regulations pursuant to section 4(d) are not currently necessary and advisable for the conservation of the species. The main threats identified for the species are overutilization and inadequate existing regulatory mechanisms. The threat of overutilization is primarily a result of heavy fishing pressure by foreign industrial, commercial and artisanal fisheries. Because the narrownose smoothhound occurs entirely outside of the United States, is not targeted or caught by U.S. fishermen, or threatened by commercial trade with the United States, extending the section 9(a) prohibitions to this species will not result in added conservation benefits or species protection. Therefore, we do not intend to issue section 4(d) regulations for the narrownose smoothhound shark.

Identification of Those Activities That Would Constitute a Violation of Section 9 of the ESA

On July 1, 1994, NMFS and FWS published a policy (59 FR 34272) that requires us to identify, to the maximum extent practicable at the time a species is listed, those activities that would or would not likely constitute a violation of section 9 of the ESA.

The intent of this policy is to increase public awareness of the effects of this listing on proposed and ongoing activities within the species' ranges. Activities that we believe could (subject to the exemptions set forth in 16 U.S.C. 1539) result in a violation of section 9 prohibitions for the five endangered species include, but are not limited to, the following:

(1) Possessing, delivering, transporting, or shipping any individual, part (dead or alive), or product taken in violation of section 9(a)(1);

(2) Delivering, receiving, carrying, transporting, or shipping in interstate or foreign commerce any individual, part, or product in the course of a commercial activity;

(3) Selling or offering for sale in interstate or foreign commerce any individual, part, or product except antique articles at least 100 years old; and

(4) Importing or exporting these species or any part or product of these species. We emphasize that whether a violation results from a particular activity is entirely dependent upon the facts and circumstances of each incident. Further, an activity not listed may in fact constitute or result in a violation.

Identification of Those Activities That Would Not Likely Constitute a Violation of Section 9 of the ESA

Although the determination of whether any given activity constitutes a violation is fact dependent, we consider the following actions, depending on the circumstances, as being unlikely to violate the prohibitions in ESA section 9: (1) Take authorized by, and carried out in accordance with the terms and conditions of, an ESA section 10(a)(1)(A) permit issued by NMFS for purposes of scientific research or the enhancement of the propagation or survival of the species; and (2) continued possession of parts and products

that were in possession at the time of listing. Such parts and products may be non-commercially exported or imported; however the importer or exporter must be able to provide evidence to show that the parts or products meet the criteria of ESA section 9(b)(1) (i.e., held in a controlled environment at the time of listing, in a non-commercial activity).

References

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

Classification

National Environmental Policy Act

The 1982 amendments to the ESA, in section 4(b)(1)(A), restrict the information that may be considered when assessing species for listing. Based on this limitation of criteria for a listing decision and the opinion in *Pacific Legal Foundation* v. *Andrus*, 657 F.2d 829 (6th Cir. 1981), NMFS has 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, and Paperwork Reduction 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. 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

50 CFR Part 223

Endangered and threatened species, Exports, Imports, Transportation.

50 CFR Part 224

Endangered and threatened species.

Dated: May 4, 2017.

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Alan D. Risenhoover,

Acting Deputy Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR parts 223 and 224 are 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 a new entry for "Shark, narrownose smoothhound" in alphabetical order by common name under the "Fishes" table subheading to read as follows:

§ 223.102 Enumeration of threatened marine and anadromous species.

* * * * *

(e) The threatened species under the jurisdiction of the Secretary of Commerce are:

Species[1]			Citation(s) for listing Determination(s)	Critical Habitat	ESA rules
Common name	Scientific name	Description of listed entity			
******					
Fishes					
*******					
Shark, narrownose smoothhound	*Mustelus schmitti*	Entire species	*[Insert **FEDERAL REGISTER** page where the document begins],[Insert date of publication]*	NA	NA.
*******					

[1]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).

PART 224—ENDANGERED MARINE AND ANADROMOUS SPECIES

3. The authority citation for part 224 continues to read as follows:

Authority: 16 U.S.C. 1531-1543 and 16 U.S.C 1361 *et seq.*

4. In § 224.101, paragraph (h), amend the table by adding new entries for five species in alphabetical order by common name under the "Fishes" table subheading to read as follows:

§ 224.101 Enumeration of endangered marine and anadromous species.

* * * * *

(h) The endangered species under the jurisdiction of the Secretary of Commerce are:

Species[1]			Citation(s) for listing Determination(s)	Critical Habitat	ESA rules
Common name	Scientific name	Description of listed entity			
*******					
Fishes					
Angelshark, Argentine	*Squatina argentina*	Entire species	*[Insert **FEDERAL REGISTER** page where the document begins],[Insert date of publication]*	NA	NA.
*******					
Angelshark, spiny	*Squatina guggenheim*	Entire species	*[Insert **FEDERAL REGISTER** page where the document begins],[Insert date of publication]*	NA	NA.
*******					
Guitarfish, Brazilian	*Rhinobatos horkelii*	Entire species	*[Insert **FEDERAL REGISTER** page where the*	NA	NA.

			document begins],[Insert date of publication]		
*******					
Shark, daggernose	*Isogomphodon oxyrhynchus*	Entire species	*[Insert **FEDERAL REGISTER** page where the document begins],[Insert date of publication]*	NA	NA.
*******					
Shark, striped smoothhound	*Mustelus fasciatus*	Entire species	*[Insert **FEDERAL REGISTER** page where the document begins],[Insert date of publication]*	NA	NA.
*******					

[1]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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