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PROPOSAL FOR THE UPLISTING OF OCEANIC WHITETIP SHARK *CARCHARHINUS LONGIMANUS* FROM ANNEX III TO ANNEX II OF THE SPAW PROTOCOL

Proposal for the uplisting of Oceanic whitetip shark *Carcharhinus longimanus* from Annex III to Annex II of the Protocol concerning Specially Protected Areas and Wildlife (SPAW Protocol)

From IUCN redlist website https://www.iucnredlist.org/species/39374/2911619

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I. Nomination Requirements and Justification

1. Requirements regarding species nomination are set forth in Specially Protected Areas and Wildlife (SPAW) Protocol Articles 11, 19, and guidelines and criteria adopted by the Parties pursuant to Article 21. The specific criteria for nomination are defined in Guidelines for listing species on the SPAW protocol (COP3 (2004). Procedure for species.ENG).

2. The procedures to amend the annexes, contained in Article 11(4), state that "any Party may nominate an endangered or threatened species of flora or fauna for inclusion in or deletion from these annexes," and that, after review and evaluation by the Scientific and Technical Advisory Committee, the Parties shall review the nominations, supporting documentation and the reports of the Scientific and Technical Advisory Committee and shall consider the species for listing. Such a nomination is to be made in accordance with guidelines and criteria adopted by the Parties pursuant to Article 21. As such, this nomination addresses the 2014 "Revised criteria for the listing of species in the Annexes of the Protocol Concerning SPAW and Procedure for the submission and approval of nominations of species for inclusion in, or deletion from Annexes I, II and III." Finally, Article 19(3) lists the type of information that should be included, to the extent possible, in reports relevant to protected species.

3. Article 1 of the SPAW Protocol defines Annex II as "the annex to the Protocol containing the agreed list of species of marine and coastal fauna that fall within the category defined in Article 1 and that require the protection measures indicated in Article 11(1)(b). The annex may include terrestrial species as provided for in Article 1(c)(ii)." Further, Article 11 of the Protocol specifies that "each Party shall, in cooperation with other Parties, formulate, adopt and implement plans for the management and use of such species…"

4. Listing of species can be justified based on a variety of criteria set out in the Revised criteria for the listing of species in the Annexes of the SPAW Protocol, in particular:

- *Criterion #1. For the purpose of the species proposed for all three annexes, the scientific evaluation of the threatened or endangered status of the proposed species is to be based on the following factors: size of populations, evidence of decline, restrictions on its range of distribution, degree of population fragmentation, biology and behaviour of the species, as well as other aspects of population dynamics, other conditions clearly increasing the vulnerability of the species, and the importance of the species to the maintenance of fragile or vulnerable ecosystems and habitats.*
- *Criterion #2. When evaluation of the factors enumerated above clearly indicates that a species is threatened or endangered, the lack of full scientific certainty about the exact status of the species is not to prevent the listing of the species on the appropriate annex.*
- *Criterion #4. When compiling a case for adding a species to the Annexes, application of the IUCN criteria in a regional (Caribbean) context will be helpful if sufficient data are available. The evaluation should, in any case, use best available information, and expertise, including traditional ecological knowledge.*
- *Criterion #5. The evaluation of a species is also to be based on whether it is, or is likely to be,*

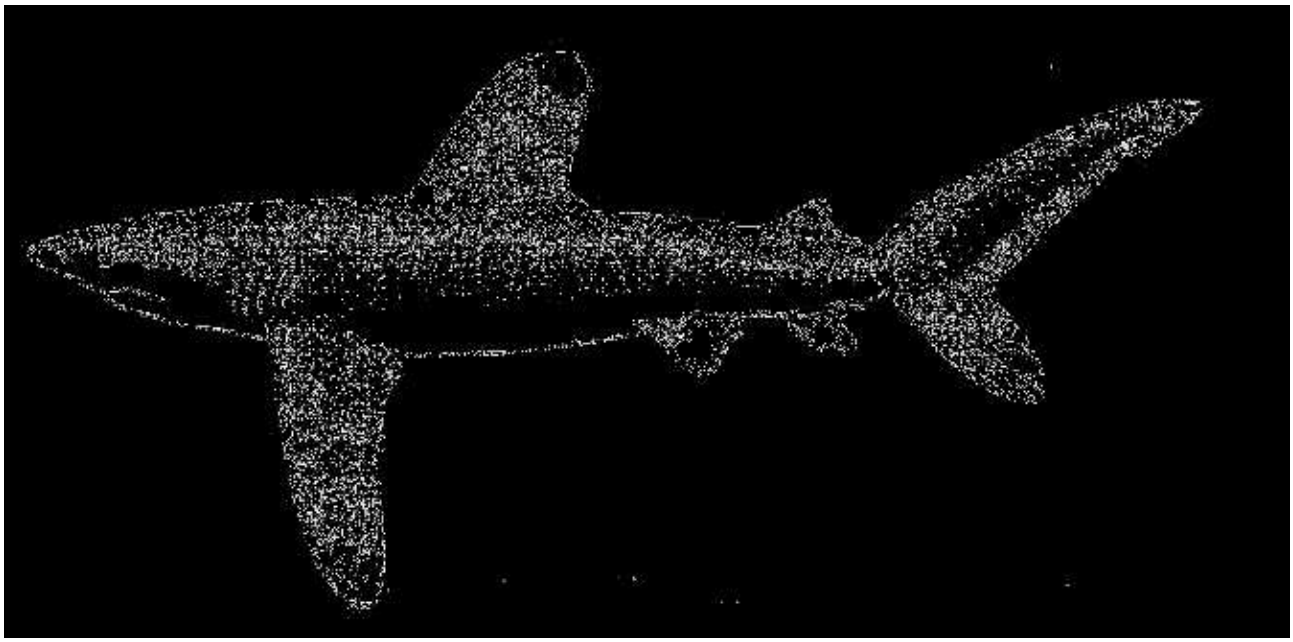
the subject of local or international trade, and whether the international trade of the species under consideration is regulated under CITES or other instruments.

- *Criterion #6. The evaluation of the desirability of listing a species in one of the annexes should be based on the importance and usefulness of regional cooperative efforts on the protection and recovery of the species.*

II. Substantiated Nomination Requirements to Support Inclusion in Annex II

A.Article 19(3) – Information to be included in reports relevant to protected species, to the extent possible

a. Article 19(3)(a) – Scientific and Common Names of the Species



a.1. Scientific and common name of the species

Class : Chondrichthyes, subclass Elasmobranchii

Ordo: Carcharhiniformes

Family :Carcharhinidae

Genus : Manta (Dondorff, 1798)

Genus/species: *Carcharhinus longimanus*

Common name(s)

English: Oceanic whitetip shark

Spanish: Tiburón oceánico de puntas blancas

French: Requin océanique ou longimane

a.2 Biological data

5. *Carcharhinus longimanus* is a large-bodied shark species from the family Carcharhinidae (requiem sharks). This species can reach a maximum size of 325 - 346 cm, with most specimens measuring between 150 and 205 cm (Lessa *et al*., 1999; D'Alberto *et al*., 2016; Joung *et al*., 2016). The size at birth for *C. longimanus* is 55 to 75 cm, with some regional variation (Seki *et al*., 1998). Like many elasmobranch species, *C. longimanus* reaches maturity relatively late (CITES, 2013). Within the southwestern Atlantic Ocean, *C. longimanus* was estimated to have a growth coefficient of 0.075 year-1 for both sexes, and to reach maturity at an age of 6 to 7 years or total length of 180 to 190 cm (Lessa *et al*., 1999). Longevity was estimated to be 25 years. Like other carcharhinid-species, female *C. longimanus* reproduces viviparously.

6. After a gestation period of 12 months, the female produces a litter of 1 to 14 pups (mean: 6). Both Seki *et al*. (1998) and Lessa *et al*. (1999) report a positive correlation between female size and litter size. *C. longimanus* can easily be distinguished from other shark species by its large, rounded fins and the white mottled markings on the tips of the fins. Especially the pectoral fins are long, and paddle-shaped. On the tip of the first dorsal fin, pectoral fins and caudal fins, adults have white mottled markings. Like other large shark species, *C. longimanus* feeds close to the top of the marine food web (trophic level 4.2), occupying a top predator position along with other large pelagic teleost species (Cortés, 1999; Madigan et al., 2015). The species has exhibited site fidelity in the Bahamas where large pelagic teleosts are abundant, potentially for feeding purposes (Madigan *et al*., 2015). However, the availability of large teleost fish is only a theory as to why OWTs aggregate and show site fidelity to this area. It has not been confirmed.

a.3. Habitat

7. *Carcharhinus longimanus* is a circumtropical species and the only true oceanic species within the Carcharhinus-genus, occurring in waters between the 30ºN and 35ºS latitudes (Baum *et al*., 2006; CITES, 2013). Young *et al*. (2018) report *C. longimanus* usually found far offshore in the open sea in waters up to a depth of 200m, although they are known to perform deep dives as a potential foraging strategy (Howey-Jordan et al., 2013). The species occurs mostly in pelagic zones, utilizing shallow habitats from surface waters to a depth of 20 meters. It is considered to be one of the most widespread shark species, ranging across all tropical and subtropical waters (Rigby et al., 2019; Young and Carlson 2020). Within the eastern Atlantic Ocean, *C. longimanus* occurs from northern Portugal to Angola

(including possibly the Mediterranean Sea). In the western Atlantic the species ranges from the United States to Argentina, including the entire Gulf of Mexico and Caribbean Sea. In the Indian Ocean, *C. longimanus* occurs from South Africa to Western Australia, including the entire Red Sea. In the Pacific the species is distributed from China to East Australia. Within the central Pacific the species occurs on all islands (Hawaii, Samoa, Tahiti). Within the eastern Pacific, *C. longimanus* occurs from southern California to Peru (CITES, 2013; Ebert *et al*., 2013) and also be located in the following FAO areas 21, 27, 31, 34, 41, 47, 51, 57, 61, 71, 77, 81 y 87 (Compagno, 1984).

8. Howey-Jordan et al. (2013) and Madigan et al. (2015) found that tagged sharks showed seasonal site fidelity to an area in the Bahamas, but also tended to range along the outer continental shelf north of the Antilles islands of the eastern Caribbean northward to Cape Hatteras, North Carolina. These tagged sharks tended to remain in the epipelagic zone with short dives into the mesopelagic zone. Young *et al.*, (2018) list several tagging studies of Atlantic oceanic whitetip sharks from the Gulf of Mexico, Bahamas and Brazilian longline fleet in the Central Atlantic. Howey-Jordan et al. (2013) and Madigan et al. (2015) found that tagged sharks showed seasonal site fidelity to an area in the Bahamas, but also tended to range along the outer continental shelf north of the Antilles islands of the eastern Caribbean northward to Cape Hatteras, North Carolina. These tagged sharks tended to remain in the epipelagic zone with short dives into the mesopelagic zone. Even though these studies only followed a limited number of animals some observations can be made. The oceanic whitetip has been reported from waters between 15ºC and 28ºC, however the species exhibits a strong preference for the surface mixed layer in water with temperatures above 20°C. It can tolerate colder waters down to 7.75°C for short periods in deep dives into the mesopelagic zone below the thermocline (>200 m), presumably for foraging (Howey-Jordan *et al.* 2013). The low tolerance to lower water temperatures appears to create a barrier between the western Atlantic and Indo-Pacific population. And several individuals tagged off Brazil seemed to show strong site fidelity, as individuals returned to the location they were tagged after traveling thousands of kilometers (Tolotti *et al*. 2015).

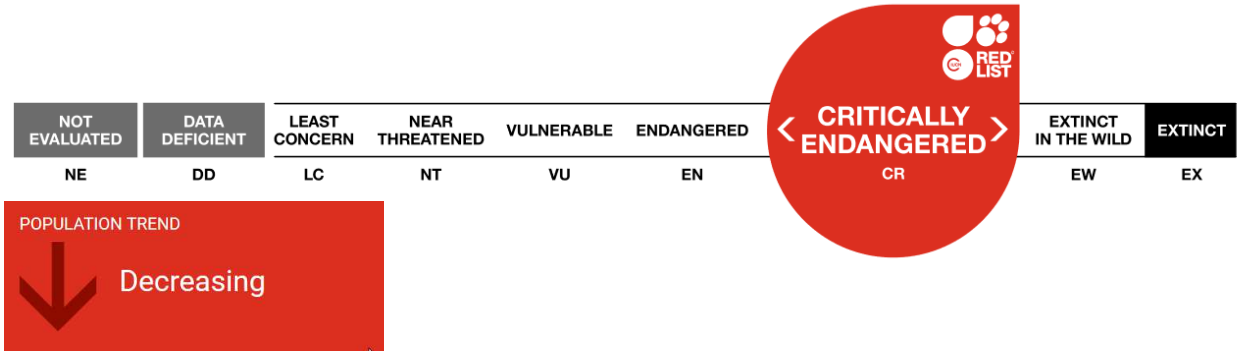
b. Article 19(3)(b) - Estimated Populations of Species and their Geographic Ranges

b.1. Size of Populations

9. The oceanic whitetip shark was characterized historically as one of the most abundant oceanic sharks in tropical seas worldwide (Backus et al. 1956; Compagno 1984). Currently, there is no global population size estimate available for the oceanic whitetip shark nor regional population size estimates; however, numerous lines of evidence indicate that the oceanic whitetip shark has experienced significant population declines throughout a majority of its global range (Young et al. 2018).

b.2. Evidence of Decline

Figure 1. IUCN global status from IUCN redlist website https://www.iucnredlist.org/species/39374/2911619



10. In January 2021 a review paper was published in Nature which analyses the trends in 16 pelagic shark and ray populations over the past 50 years. The authors found clear evidence of decline for all species studied which led them to conclude that the global abundance of oceanic sharks and rays has declined by 71%, the decline is directly linked to an increase in fishing pressure specifically an increase in long line and purse seine fisheries (Pacoureau et al. 2021).

11. Of the species studied the Ocean Whitetip shark displayed the most dramatic decline, with an overall reduction in numbers of 98% since the start of the time series and a decrease of over 75% since the late 1970's. The 2019 IUCN red list update assessed Oceanic White Tip as Critically Endangered globally (Rigby et al., 2019). The United States also assessed its observer data from the Northwest Atlantic and determined that the population was stable. According to Pacoureau et al. (2021), oceanic whitetip are one of the three species that have undergone a severe decrease. The species that was abundant in 1980 is now critically endangered (see figure 2 below).

Figure 2. Increase in extinction risk of oceanic sharks

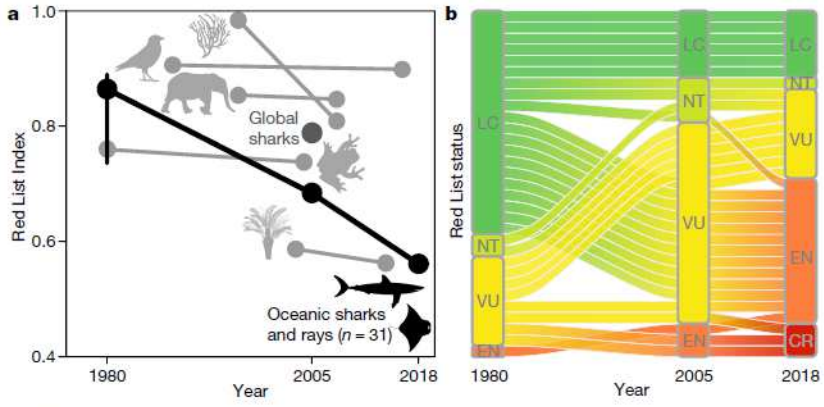


Fig. 3 | Increase in extinction risk of oceanic sharks. a, Global RLI for the 31 oceanic shark species (black line) estimated in 1980, 2005 and 2018, and for mammals, birds, amphibians, reef-forming corals and cycads (in grey), and global chondrichthyans (sharks, rays and chimaeras; point labelled 'Global sharks')[16]. The error bar denotes the uncertainty around the retrospective 1980 IUCN status (see Methods). A RLI value of 1.0 indicates that all species qualify as least concern (that is, not expected to become extinct in the near future), whereas a RLI value of 0 indicates that all species have gone extinct. **b**, Change in the Red List status of oceanic sharks from 1980 to 2018. CR, critically endangered; EN, endangered; VU, vulnerable; NT, near threatened; LC, least concern.

Source : Pacoureau et al. 2021

12. Additional anecdotal and quantitative information suggests large population declines over several decades (Young et al. 2018) . There are several studies on the abundance trends for a few regions and/or populations of oceanic whitetip sharks. Thus, the following section provides some insight into the

abundance trends of the species. It should be noted that catch records of sharks, especially non-target shark species, are often inaccurate and incomplete. The oceanic whitetip shark is predominantly caught as bycatch and the reporting requirements for bycatch species have changed over time and differ by organization, and have therefore affected the reported catch. -Atlantic Ocean Data on *C. longimanus* from the Atlantic Ocean comes from studies varying on gear or data source.

13. This species was initially described as the most common pelagic shark beyond the continental shelf in the Gulf of Mexico (Bullis, 1961), and throughout the warm-temperate and tropical waters of the Atlantic and Pacific (Strasburg 1958). In the Gulf of Mexico, for example, between 2 and 25 of these sharks were usually observed following the vessel during longline retrieval on the exploratory surveys in the 1950s and their abundance was considered a serious problem because of the high proportion of tuna they damaged (CITES, 2013).

14. According to Baum *et al.* (2003), based on logbook data of the U.S. pelagic longline fleet, *C. longimanus* has experienced a 70 % population decline between 1992 and 2000 within the Northwestern Atlantic Ocean and Gulf of Mexico. Based on the same dataset, Cortés *et al*. (2008) estimated a decline of 57 % for this species from 1992 to 2005 (as cited by CITES, 2013). The results of inferences based on logbook data has been subject of debate (Burgess *et al*., 2005; Baum *et al*., 2005), as a change of fishing methods and practices could cause a bias in this data.

15. Young et al. (2018) provides an extensive review of available literature on the state of the global oceanic whitetip shark population as part of a Status Review to assess whether the species warranted listing under the U.S. Endangered Species Act. They summarized that: "Overall, evidence (both quantitative and qualitative) suggests that while the oceanic whitetip shark was once considered to be one of the most abundant and commonly encountered pelagic shark species wherever it occurred, this oceanic species has likely undergone population abundance declines of varying magnitudes throughout its global range. Where more robust information is available, declines in oceanic whitetip shark abundance range from 86% to greater than 90% in some areas of the Pacific Ocean (with declines observed across the entire basin), and between 57%-88% in the Atlantic and Gulf of Mexico. Although information from the Indian Ocean is highly uncertain and much less reliable, the best available information points to varying magnitudes of decline, with the species becoming rare across the basin over the last 20 years. The only population that may have stabilized, based on standardized CPUE observer data, is in the Northwest Atlantic since 2000 and in the Gulf of Mexico/Caribbean since the late 1990s (Cortés et al., 2007) coinciding with the first Federal Fishery Management Plan for Sharks in the United States and subsequent regulations that included trip limits and quotas. "

c. Article 19(3)(c) - Status of Legal Protection, with Reference to Relevant National Legislation or Regulation

c.3. Colombia

16. Through Resolution 1743 of 2017, among other actions, the exercise of industrial fishing directed at chondrichthyans is prohibited throughout the territory, allowing a percentage of incidental capture of up to 35%. Likewise, the prohibition of the use of steel wires in longlines and not to make modifications of baits or to use other unspecified methods that are aimed for attracting cartilaginous fish to the fishing operation.

17. The Ocean white-tip shark is included in the list of threatened species of Colombia (Resolution 1912 of 2017) as a Vulnerable species.

c.8. Kingdom of the Netherlands

18. Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters

c.9. Republic of France

19. Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters

20. No species of shark or ray is protected under the Environmental Code in Guadeloupe and Saint-Martin. Only management measures for sea fishing exist at the local level, as presented below.

a. Recreational fishing

   It is regulated by decree 971-2019-08-20-003 regulating the exercise of recreational sea fishing in Guadeloupe and Saint-Martin. Fishing for sharks and rays of all species is prohibited at all times and in all places.

b. Professional fishing

   Professional sea fishing is governed by order 2002/1249 / PREF / SGAR / MAP of August 19, 2002 regulating coastal sea fishing in the waters of the Department of Guadeloupe (pj2). This decree also applies to St-Martin, which was still a municipality of Guadeloupe in 2002. This text does not provide for any specific measure for Elasmobranchs.

c. 10 United States of America

21. The United States manages the commercial and recreational harvest of sharks, including oceanic whitetip. Through its extensive regulations (e.g., permits, minimum sizes, quotas), the United States primarily coordinates the management of highly migratory species (HMS) fisheries in Federal waters (domestic) and the high seas (international), while individual states establish regulations for HMS in state waters. Under the Shark Conservation Act of 2010, the United States requires, with one exception, for all sharks to be landed with their fins naturally attached (81 FR 42285, June 29, 2016). Additionally, a number of U.S. states prohibit the sale or trade of shark fins (Somma, pers. comm.).

22. In 2018, the United States listed the oceanic white tip shark as a threatened species under the U.S. Endangered Species Act (ESA). The United States is developing a recovery plan for this species and has developed a recovery outline to guide recovery efforts until a recovery plan is developed (NOAA, 2018).

23. In addition, as a result of being listed as a threatened species under the ESA, all federal agencies must ensure that any action they authorize, fund, or carryout does not jeopardize the continued existence of the oceanic whitetip shark. Federal agencies, including the National Marine Fisheries Service (NMFS), consult with NMFS on their activities including on the development and approval of Fishery Management Plans. As a result of these consultations, measures have been implemented in pelagic longline fisheries to reduce interactions with, and bycatch of, oceanic whitetip sharks.

24. The United States has implemented domestic measures consistent with CITES to regulate trade for oceanic whitetip sharks. Any export from or import into the United States must be accompanied by the appropriate CITES documentation.

25. In addition, the United States has domestic regulations to implement all of the ICCAT provisions in ICCAT fisheries (50 CFR 635, August 29, 2011). In 2011, NMFS published final regulations to implement decisions of ICCAT (i.e., Recommendation 10-07 for the conservation of oceanic whitetip sharks), which prohibits retention of oceanic whitetip sharks in the PLL fishery and on recreational (HMS Angling and Charter headboat permit holders) vessels that possess tuna, swordfish, or billfish (76 FR 53652). The implementation of regulations to comply with ICCAT Recommendation 10-07 for the conservation of oceanic whitetip sharks is likely the most influential regulatory mechanism in terms of reducing mortality of oceanic whitetip sharks in the U.S. Atlantic. It should be noted that retention is permitted in authorized gears other than pelagic longlines (e.g., gillnets, bottom longlines); however, landings of oceanic whitetip have not occurred since 2014.

c.15 Additional information

26. According to the fishing regulation, it is prohibited to hold, tranship and / or land this species in European Union waters and on European vessels in ICCAT area. However, it is not a protection status.

c.16 International protection status and fisheries management measures

27. FAO: In 1998 the International Plan of Action for Conservation and Management of Sharks (IPOA Sharks) was agreed for all species of sharks and rays. The IPOA-Sharks is a voluntary international instrument, developed within the framework of the 1995 FAO Code of Conduct for Responsible Fisheries, that guides nations in taking positive action on the conservation and management of sharks and their long-term sustainable use. Its aim is to ensure the conservation and management of sharks and their long-term sustainable use, with emphasis on improving species-specific catch and landings data collection, and the monitoring and management of shark fisheries. The code sets out principles and international standards of behavior for responsible fishing practices to enable effective conservation and management of living aquatic organisms while considering impacts on the ecosystem and biodiversity. The IPOA-Sharks recommends that FAO member states 'should adopt a National Plan of Action for the conservation and management of shark stocks (NPOA- Sharks), if their vessels conduct directed fisheries for sharks or if their vessels regularly catch sharks in nondirected fisheries'. Several range states have developed national action plans: Australia, Brazil, Canada, Egypt, Democratic People's Republic of Korea; Japan; Mexico; New Zeeland; Oman; South Africa; United States, as well as regional action plans: Pacific Island States, the Central American Isthmus (OSPESCA), the EU and the Mediterranean.

28. Regional Fisheries Management Organizations: All relevant RFMO's have developed management measures banning the retention of oceanic white tip shark.

29. CITES: CITES works by subjecting international trade in specimens of selected species to certain controls. All import, export, re-exports and introduction from the sea of species covered by the Convention must be authorized through a permitting system. Each Party to the Convention must designate one or more Management Authorities in charge of administering that permitting system and one or more Scientific Authorities to advise them on the effects of trade on the status of the species. The species covered by CITES are listed in three Appendices, according to the degree of protection they need, the oceanic white tip shark was listed under Appendix II of CITES in 2013. Appendix-II specimens require: an export permit or re-export certificate issued by the Management Authority of the State of export or re-export is required; and an export permit may be issued only if the specimen was legally obtained and if the export will not be detrimental to the survival of the species.

30. CMS: The Sharks MoU listed *C. longimanus* on its Annex 1 in 2018 and this year (2020) CMS listed *C. longimanus* on its Appendix I. "Appendix I comprises migratory species that have been assessed as being in danger of extinction throughout all or a significant portion of their range. The Conference of the Parties has further interpreted the term "endangered" as meaning "facing a very high risk of extinction in the wild in the near future" (Res. 11.33 paragraph 1). Res. 11.33 also defines a general correspondence between the term 'endangered' as defined within CMS and the IUCN Red List Criteria (Version 3.1).

Parties that are a Range State to a migratory species listed in Appendix I shall endeavour to strictly protect them by: prohibiting the taking of such species, with very restricted scope for exceptions; conserving and where appropriate restoring their habitats; preventing, removing or mitigating obstacles to their migration and controlling other factors that might endanger them."

31. The SPAW Protocol: The SPAW protocol of the Cartagena convention is the only cross border legal instrument for species and habitat protection in the wider Caribbean region. Oceanic White tip was added to Annex III of the protocol in March 2017. Species on Annex III may be utilized on a rational and sustainable basis, but parties are obliged to formulate, adopt and implement plans for the management and use of such species, in cooperation with other Parties, this can include:

- the prohibition of all non-selective means of capture, killing, hunting and fishing and of all actions likely to cause local disappearance of a species or serious disturbance of its tranquillity;
- the institution of closed hunting and fishing seasons and of other measures for maintaining their population;
- the regulation of the taking, possession, transport or sale of living or dead species, their eggs, parts or products

32. ICCAT: the International Convention for the Conservation of Atlantic Tunas (ICCAT) is the Regional Fisheries Management Organisation regulation the fisheries for tuna and tuna like species (including sharks) in the SPAW area. Since 2010, ICCAT has had a prohibition on retention, transhipment, storage, and landing of Oceanic White Tip sharks. ICCAT put in place a ban on retaining or selling oceanic whitetip sharks. This measure mandates that any oceanic whitetip shark that is captured while fishing for tuna or other species managed by ICCAT must be released. Section 2 of the ICCAT Convention Area Article 22 - 4. states that retaining on board, transhipping or landing any part or whole carcass of oceanic whitetip sharks (Carcharhinus longimanus) taken in any fishery shall be prohibited.

c.17 IUCN red list status

33. This species is assessed to be critically endangered (CR) in the Northwest and Western Central Atlantic (Kyne, et.al 2012). The decline on the Oceanic White Tip has been well researched, the most recent IUCN assessment for the global population estimates a population decline of over 98%. This decline is mainly due to active overexploitation (Rigby et al., 2019).

d. Article 19(3)(d) - Ecological Interactions with Other Species and Specific Habitat Requirements

34. Although specific studies indicating the consequences of *C. longimanus* removal have not been published, the loss of predatory sharks can have cascading effects throughout marine ecosystems (Meyers *et al*., 2007, Grubbs et al. 2016).

d.1 Migration

35. *C. longimanus* is a large oceanic shark species, with active and strong swimming capabilities. Only a handful of studies provide detailed information on the movements of this species. As part of the Cooperative Shark Tagging Program of the National Marine Fishery Service, 542 *C. longimanus* were tagged from 1962 to 1993. During this period, only 6 individuals were recaptured, moving from the Gulf of Mexico to the Atlantic coast of Florida, from the Lesser Antilles to the central Caribbean Sea and along the equatorial Atlantic Ocean. The longest tracked distance for this species was 1,226 km, and the maximum speed was 17.5 NM/day (32.4 km/day) (Kohler *et al*., 1998). Howey-Jordan *et al*. (2013) tracked 11 *C. longimanus* tagged in the vicinity of Cat Island, Bahamas. During the tracking period of 30 to 245 days, each individual moved 290 to 1,940 km away from the initial tagging site. Four of these individuals moved in a southeastern direction towards the Lesser Antilles, three remained mostly within the exclusive economic zone of the Bahamas, and one individual moved in the northeastern direction for approximately 1,500 km. The majority of these individuals spent the first ± 30 days within the waters of the Bahamas and returned to these waters after ± 150 days. Maximum displacement from initial tagging location occurred from the end of June through September. Backus et al. (1956) indicates that *C. longimanus* possibly leaves the Gulf of Mexico in winter months and will move south as the temperature drops below 21ºC. Relatively little is known of population dynamics of this population, and if only a proportion of the population is migratory. Howey-Jordan *et al*. (2013) report that only part of the tagged animals undertakes long-distance movements, whereas the other part of the 11 tagged animals remained within the vicinity of the Bahamas. Recently in the Colombian Caribbean waters, it was registered in catches from industrial oceanic longline fishing vessels; the data shows an interaction with juvenile individuals that could probably be impacting development areas for the species (Caldas and Correa, 2010).

e. Article 19(3)(e) - Management and Recovery Plans for Endangered and Threatened Species

e.1. Colombia

36. There is the “National Action Plan for the Conservation and Management of Sharks, Rays and Chimeras of Colombia (PAN - Tiburones Colombia)”, as the Policy instrument that establishes the guidelines for the conservation and sustainable management of the species of sharks, rays and chimeras in the marine and continental waters of the country and interact with tourist and cultural activities and the different fisheries on an artisanal and industrial scale. Its objectives include the following:

- Identify and evaluate the threats to the populations of sharks, rays and chimaeras in Colombia, associated with the extraction of individuals from their natural environment and the deterioration or

modification of critical habitats.

- Determine and develop a regulatory and normative framework that allows the proper management and management of sharks, rays and chimeras in Colombia.
- Structure and guide an efficient program for the surveillance and control of fishing or other activities that impact sharks, rays and chimeras of marine and continental waters, by the competent entities.

e.2. Republic of France

37. There are several ongoing projects :

- establishment of the list of species present,
- development of identification sheets on state of knowledge on biology,
- state of fishing activity on these species in Guadeloupe
- sensitization of marine stakeholders (via participatory sciences in particular via a network of observers), including the animation of a network of observers, the ReGuaR network
- identification of coastal nursery areas

38. One of the study projects, based on the use of baited cameras, was part of an international project that resulted in publication in the scientific journal Nature in 2020.

39. The improvement of knowledge on elasmobranchs aims to establish red lists of this group of species, a necessary prerequisite for the implementation of farm management measures at the national or local level. The intentions at the local level being to intervene on fishing regulations when the threat is linked to this activity, otherwise to set up protection under the environmental code when other threats are identified (disturbance of individuals, alteration of habitats…). The CSRPN of Guadeloupe has undertaken an initial analysis of candidate species for protection. The Kap Natirel association has issued recommendations for the management of these species in the Antilles.

40. The challenges of preserving Elasmobranchs in Guadeloupe have also been taken into account since 2017 in the fishery control plan and the preservation of the marine environment with clearly displayed dedicated objectives, on the proposal of the DEAL.

41. In 2017, the sea control services received theoretical training in the challenges of preserving Elasmobranchs and their identification, delivered by the kap Natirel association alongside the DEAL.

e. 3 United States of America

42. In 2018, the United States listed the oceanic whitetip shark as a threatened species under the Endangered Species Act (ESA). Under section 4(f) of the ESA, recovery plans are required to be developed and implemented for threatened and endangered species, unless such a plan would not promote conservation of the species. As noted above, the United States is developing a recovery plan for the oceanic whitetip shark and has already developed a recovery outline to guide recovery actions until the recovery plan is issued (NOAA, 2018).

43. In addition, as a result of being listed as a threatened species under the ESA, all federal agencies must ensure that any action they authorize, fund, or carryout does not jeopardize the continued existence of the oceanic whitetip shark. In order to ensure that, federal agencies, including the National Marine Fisheries Service (NMFS) consults with NMFS on its activities including on the development and approval of Fishery Management Plans. As a result of these consultations, measures have been implemented in pelagic longline fisheries to reduce interactions with, and bycatch of, oceanic whitetip sharks.

44. NMFS is also funding and conducting research to better understand stock structure, identify important habitats and further reduce fisheries interactions.

f. Article 19(3)(g) - Threats to the Protected Species, their Habitats and their Associated Ecosystems, Especially Threats which Originate Outside the Jurisdiction of the Party

45. Sharks and rays are vulnerable to overexploitation due to overfishing and the K-selected life history characteristics of the species (Dulvy *et al*., 2014).

f.1. Harvesting threats

46. Studies show that populations of *C. longimanus* are threatened by overfishing on a global scale (Rigby et al. 2019; Pacoureau et al. 2021). Life history parameters of this species and its specific biology indicate that it is a species with low resilience to fishing and low productivity, with a high catchability due to its preference for surface water and presence in tropical latitudes where tuna fisheries are most active (FAO, 2012). Although oceanic whitetip sharks are not typically a target species in fisheries, the biggest threat to the species is that they are caught incidentally as bycatch in virtually all parts of their range. Due to their foraging strategy, where they mainly hunt in the top 20meter of the water column, they are particularly vulnerable to incidental capture in pelagic longline, purse seine and driftnet fisheries.

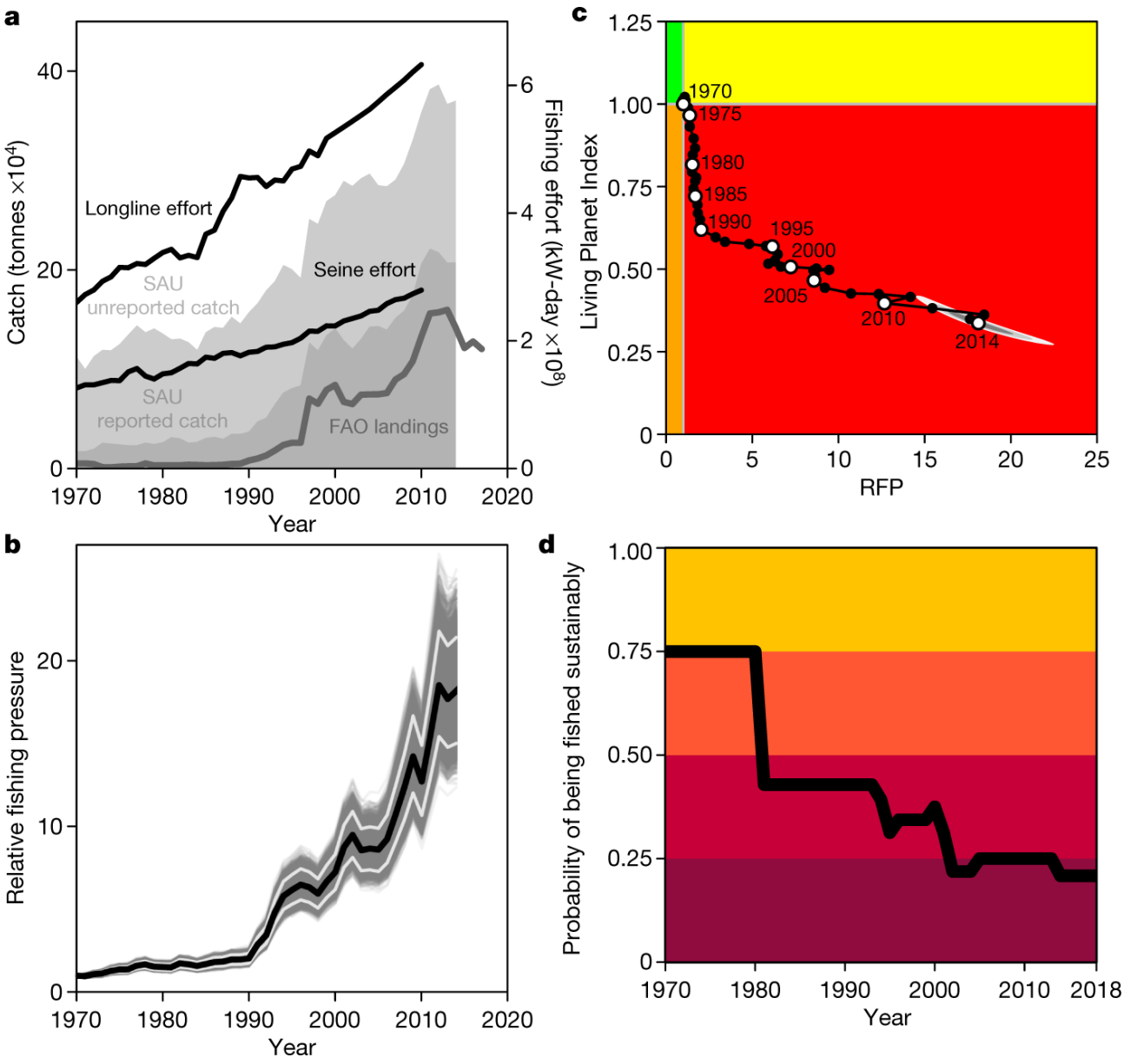
47. During a survey from 1992 to 1997 in the southwestern equatorial Atlantic Ocean (Brazilian exclusive

economic zone), 29% of the total elasmobranch catches were *C. longimanus*. After the blue shark (*Prionace glauca*), *C. longimanus* was the most common species among the elasmobranch catches (Lessa *et al*., 1999). Elasmobranchs constituted 95% of the bycatch in the Spanish swordfish fishery in the Atlantic and Mediterranean Sea in 1999 (Mejuto et al., 2002). *C. longimanus* only made up 0.2% of the total elasmobranch catches (by rounded weight) within this fishery. The species was present in 4.7% of the purse seine sets in the eastern Atlantic Ocean (Santana *et al*., 1998; Bonfil *et al*., 2008). Per 1000 hooks set, Domingo (2004) reports a catch rate of this species of 0.006 sharks in the southern Atlantic and 0.09 sharks off western Africa (as cited in Bonfil *et al*., 2008). Data from the Japanese longline fleet operating in the Atlantic Ocean indicates that *C. longimanus* makes up 0.12% of the bycatch of elasmobranch species (Senba and Nakano, 2005).

48. The Food and Agricultural Organization (FAO) of the United Nations (UN) Global Capture Production dataset gives species specific catch data for *Carcharhinus longimanus*. The database shows a large increase in catches in the late 1990s and a decline after that. However, it should be noted here that even though species specific data is requested by FAO only very few countries provide this data whilst many countries just give a general category (sharks nei) for all shark catches. Furthermore, many nations only report the landings data and disregard the level of discards at sea, so no overview of actual catches level can be given (Rose 1996). This knowledge led researchers to suggest that annual global catch data compiled by the FAO are significantly underestimated for all sharks (Clarke *et al*. 2006b). Gallagher *et al*. (2014) found an at vessel survival percentage of 77,3 % in Atlantic longline fisheries which would put this species in the highest survival category for shark species. It should be noted that post-release mortality was not assessed in this study,so the long-term survival rate is unknown and should be presumed to be lower. Survival in purse seine and drift net fisheries is negligible as the sharks cannot keep swimming after capture and pressure in the net will cause internal damage.

49. According to Pacoureau et al. (2021), extinction risks for oceanic whitetip are directly related to overfishing (see figure 3 below).

Fig. 3: Attributing abundance declines to overfishing.



Source : Pacoureau et al. 2021

a, Global catch data of 14 oceanic sharks and fishing effort of longline and seine gears. FAO, Food and Agriculture Organization of the United Nations; SAU, Sea Around Us project. Longline and seine effort are effective corrected fishing effort[36]. **b**, Fishing pressure (catch) encountered by oceanic sharks relative to the fishing pressure (catch) in 1970 and to their abundance from 1970 to 2014. The black line denotes the mean, the white lines the 95% credible intervals and the grey lines each iteration. **c**, LPI as a function of RFP (n = 14 species) from 1970 (the initial state for which LPI = 1 and RFP = 1) to 2014 for oceanic sharks (n = 18 species). Light-grey, grey and dark-grey polygons denote the 50%, 80% and 95% two-dimensional kernel density estimates of the iterations of LPI versus RFP for the last year (2014). **d**, Proportion over time of oceanic sharks with stock assessments that are at a level of biomass or abundance equal or greater than the levels that would achieve maximum sustainable yield.

50. In 2015 Cortes *et al*. conducted an ecological risk assessment (ERA) for pelagic shark species in the Atlantic they concluded that of the 11 species studied Oceanic Whitetip was the 5th most vulnerable species.

f.2 Habitat destruction

51. The habitat for the oceanic white tip is defined as the water column or attributes to the water column, where cumulative impacts from HMS and non-HMS fishing gears are anticipated to be minimal. However, a better understanding of the specific habitat types and characteristics that influence the abundance of these sharks within those habitats is needed to determine the effects of fishing activities on habitat suitability for oceanic white tip sharks.

f.3 Indirect threat

52. There are no direct studies on climate change effects on oceanic white tip but Young et al. (2018) noted that as this species has a broad geographic range large-scale impact such as global climate change, affecting water temperature, currents and potentially food chain dynamics could have a detrimental effect on the species. The migratory behavior of the species can also be an advantage to mitigate the risks climate change poses to the species as it is less dependent on one discrete geographic area. Several studies have been done on elevated levels of environmental contaminants in sharks, as they as long lived, top-predators build up contaminants in their tissue. A recent study showed that mercury poses elevated health risks to oceanic whitetip sharks and human consumers of this species (Gelsleichter et al. 2020).

f.4 National and international utilization

53. There is very little targeted fishing of oceanic whitetip sharks. Oceanic white tip sharks are caught as bycatch in high seas pelagic fisheries. Space for retaining meat from this species is often limited and reserved for higher-value species such as tunas and swordfish.

54. The main driver for the fishery (directed and bycatch) is the high value of the fins on the international market. This is a strong driver for shark finning (cutting off the fins and discarding the body at sea). Young *et al.* (2018) note that *C. longimanus* is a preferred and highly valuable species in the international shark fin trade in Hong Kong, the largest international fin market (Clarke *et al.* 2006b). A study from Cardeñosa (2018) suggests that oceanic whitetip sharks remain among the top species in the contemporary fin trade, despite CITES listing. The high value of the fins combined with prohibitions on catches is thought to be a driver for Illegal, Unreported and Unregulated Fisheries.

III. Discussion points and recommendations

55. As developed in section 1 of the document, the listing of species is to be justified based on a variety of criteria set out in the Revised criteria for the listing of species in the Annexes of the SPAW Protocol.

56. In particular, regarding the evidence of decline (criterion #1 in the guidelines) "*the scientific evaluation of the threatened or endangered status of the proposed species is to be based on the following factors: size of populations, evidence of decline, restrictions on its range of distribution, degree of population fragmentation, biology and behavior of the species, as well as other aspects of population dynamics, other conditions clearly increasing the vulnerability of the species, and the importance of the species to the maintenance of fragile or vulnerable ecosystems and habitats"*. Criterion #2 states that: *"When evaluation of the factors enumerated above clearly indicates that a species is threatened or endangered, the lack of full scientific certainty about the exact status of the species is not to prevent the listing of the species on the appropriate annex"*. Criterion #4 states the importance of considering the IUCN red list listing for the Caribbean region, criterion #5 the interest of alignment with CITES and other international instruments and criterion #6 the importance and usefulness of regional cooperative efforts on the protection and recovery of the species.

57. *C. longimanus*, once among the most abundant oceanic sharks, has experienced serious declines between 57% and 88% in the Atlantic and Gulf of Mexico (criterion #1). This species is assessed to be critically endangered in the Northwest and Western Central Atlantic (Baum *et al*., 2015, Rigby et al. 2019). The decline on the Oceanic White Tip has been well researched, the most recent IUCN assessment for the global population estimates a population decline of over 98% (criteria #4 et #1). This decline is mainly due to active overexploitation (Rigby et al., 2019).

58. Considering current status and distribution both in the World and in the Wider Caribbean Region, all authors and an almost unanimity (but one) of the WG experts believe that uplisting to Annex II is warranted as all the major criteria to do so are met, and in particular there is substantial evidence of decline (population reduction of 98%) which makes this species at risk of extinction (criterion #1). Management should be focused on strongly reducing threats to these animals and a regional approach is clearly adapted to such highly migratory species (criterion #6). The species is already listed on international agreements and in particular in Annex III of the SPAW protocol which should have helped to drive improvements in national and regional management and facilitate collaboration between states but was clearly not sufficient. Uplisting in Annex II aligns with other international agreement (criterion #5).

59. One expert of the Species WG considers that some criteria for listing in Annex II have not been met and that still more data are needed regarding criterion #1 . She also points out that the population may have stabilized, based on standardized CPUE observer data, in the Northwest Atlantic since 2000 and in the Gulf of Mexico/Caribbean since the late 1990s (ref?). These data are questioned by most experts as they are not consistent with all other data and concern only a small part of the Caribbean Region.

60. In any case all experts emphasize that specific data collection should be done to better improve management for this species. There is still a lack of understanding of the basic data needed to understand the life

history, habitat utilization and migration patterns of this species. Alignment of policy between areas is also needed to improve the effective management of this species. See management recommendations

IV. Conclusion

61. Oceanic Whitetip shark abundance decreased 98% over the past 50 years and is now classified as critically endangered by the IUCN with its trend 'decreasing'. Decline of this species was driven by unregulated overexploitation in fisheries, the species is taken as bycatch in longline and purse seine fisheries. For these reasons, a degree of protective measures has been taken up in international legislative treaties (CITES, CMS, SPAW). In the SPAW area there is already a prohibition on the catches, transhipping and landing of this species for those countries that are party to ICCAT.

62. All authors and almost all experts but one consider that the document brings clearly enough data and evidence to conclude that not only the oceanic whitetip shark meets all the major criteria to be added in Annex II of the SPAW Protocol but that it is crucial to do it. They believe uplisting is necessary to bring national conservation efforts of various Caribbean Nations to the right level. One expert considers that some criteria for listing in Annex II are not met and that the focus should be on the improvement of the species management and the application of requirements of Annex III listing.

V. Annexes

Annex 1. Criteria evaluation for the Oceanic whitetip shark

		Concerns Annexes I, II and III						
Criteria evaluation for Oceanic whitetip shark the under the Annex II								
SPAW Article	**Criterion number**	**Criterion**	**Criterion details**	**Presence of information in the proposal report**	**Information quotes**	**Literature**	**1 is the criteria relevant for this species R/NR 2 is it possible to obtain the information O/NO)**	**If relevant Criteria validation Yes/ No**

21	#1	The scientific evaluation of the threatened or endangered status of the species is to be based on these factors :	Size of population	Y	The oceanic whitetip shark was characterized historically as one of the most abundant oceanic sharks in tropical seas worldwide. Considering the biology of that highly pelagic species, it is almost impossible to gather data to have a global population size estimate available for the oceanic whitetip shark nor regional population size estimates	Backus et al. 1956; Compagno 1984). Young et al. 2018	NO	Y
			Evidence of decline	Y	C. longimanus, once among the most abundant oceanic sharks, has experienced serious declines between 57% and 88% in the Atlantic and Gulf of Mexico. This species is assessed to be critically endangered in the Northwest and Western Central Atlantic (). The decline on the Oceanic White Tip has been well researched, the most recent IUCN assessment for the global population estimates a population decline of over 98%.	Baum et al., 2015, Rigby et al. 2019 Pacoureau et.al; 2021	R	Y
			Restriction on its range of distribution	N			NR	
			Degree of fragmentation population	N			NR	

			Biology	Y	*Carcharhinus longimanus* is a large-bodied shark species from the family Carcharhinidae (requiem sharks). This species can reach a maximum size of 325 - 346 cm, with most specimens measuring between 150 and 205 cm	Lessa *et al*., 1999; D'Alberto *et al*., 2016; Joung *et al*., 2016	R	Y
			Other population dynamics	Y	*C. longimanus* is a large oceanic shark species, with active and strong swimming capabilities. It shows migratory behaviour			
			Conditions increasing the vulnerability of the species/ major threats	Y	C. longimanus mainly inhabits the top 20 meters of the water column, which increases its overlap with ? Evidence of overfishing and by-catch	Rigby et al. 2019	R	Y
			Importance of the species to the maintenance of fragile or vulnerable ecosystems and	Y				

			habitats					
	#2	Precautionary principle (when criteria 1 gives indication that the species is threatened or endangered, the lack of full scientific certainty about the exact status of the species is not to prevent the listing of the species on the appropriate annex)		Y	see criteria 1 and in particular 1b (evidence of decline and		R	Y
	#4	Application of the IUCN criteria in a regional (Caribbean) context will be helpful if sufficient data are available		Y	The IUCN defines the oceanic white tip shark's conservation status as critically endangered and its trend 'decreasing'.	Rigby et al. 2019	R	Y
21	#5	Is the species the subject of local or international trade AND is the international trade regulated under CITES or other instruments ?		Y	The oceanic white tip shark was listed under Appendix II of CITES in 2013. Young et al. (2018) note that C. longimanus is a preferred and highly valuable species in the international shark fin trade in Hong Kong, the largest international fin market (Clarke et al. 2006b). A study from Cardeñosa (2018) suggests that oceanic whitetip sharks remain among the top species in the contemporary fin trade, despite CITES listing.	CITES 2014	R	Y
21	#6	Importance and usefulness of regional and cooperative efforts on the protection and recovery for species		Y	see note dedicated to sharks and rays management		R	Y

21	#7	Endemism of the species (and importance of regional cooperation for its recovery)		N			NR	
21	#8	Listing as a taxonomic unit . Higher taxa (than species) can be utilized in listing when there are reasonable indications that the lower taxa are similarly justified in being listed, or to address problems of misidentification caused by species of similar appearance. In the case of Annex III, higher taxa can also be used to simplify the list.		N			NR	
21	#10	listing as an "appropriate measure to ensure the protection and recovery" of fragile ecosystems/habitats where they occur		N			NR	
11 (a)	#	Presence of the species in another annex of the SPAW Protocol		Y	Already listed in Annex III for regulation - continued decline indicates more stringent measures necessary.		R	Y

11 (4,a) – 19 (3)	#	Information demonstrating the applicability of the appropriate SPAW listing criteria		Y	enough information to justify regulation, and for uplisting for complete protection		R	Y
	#	Does the species benefit from another protection tool ?		Y	Section 2 of the ICCAT Convention Area Article 22 - 4. states that retaining on board, transhipping or landing any part or whole carcass of oceanic whitetip sharks taken in any fishery shall be prohibited. The Sharks MoU listed *C. longimanus* on its Annex 1 in 2018 and this year (2020) CMS listed *C. longimanus* on its Appendix I. It was listed on CMS Annex 1 in 2020 In 2018, the United States listed the oceanic white tip shark as a threatened species under the U.S. Endangered Species Act (ESA). The United States is developing a recovery plan for this species and has developed a recovery outline to guide recovery efforts until a recovery plan is developed.	NOAA, 2018	R	Y

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