CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

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Species specific matters

Maintenance of the Appendices

Amendments to Resolution Conf. 9.24 (Rev. CoP17)

AQUATIC SPECIES LISTED IN THE CITES APPENDICES: PROPOSALS FOR A NEW APPROACH TO THE LISTING OF SHARKS AND RAYS

1. This document has been submitted by Senegal[*].

Document summary

2. Sharks and rays (Class Chondrichthyes) include some of the most threatened marine fish in the world and are the second most threatened vertebrate group on the planet (Dulvy et al 2021). Many of their populations are rapidly declining globally, driven by unmanaged fisheries that often supply products such as fins, meat, gill plates, oil, cartilage, skins and other derivatives that enter international trade. Unlike most other commercially exploited marine species, many sharks and rays grow slowly, mature late, and have few young.

3. CITES can play a key role in reversing that trend by requiring international trade to be sustainable for shark species listed in Appendix II, acting as a complementary trade tool to support fisheries management. Fully realizing this potential however is hampered by most shark species only being added to Appendix II when their populations have declined to a point where relevant fisheries management fora already consider and often adopt strict management measures, e.g., retention bans. This poses challenges for Parties to implement CITES' Appendix II provisions that are difficult to overcome even by the record-breaking investment in supporting tools, and wider capacity building measures over the last decade that accompanied shark listings. This document offers an analysis of the reasons for these failures and suggests options for improving the way in which CITES parties approach the listing of the most vulnerable aquatic species.

4. We present case studies below to illustrate CITES Appendix II listings lagging behind the adoption of fisheries prohibitions by some tuna RFMOs and domestic protections for the same species. This indicates a misalignment between the intent of CITES Appendix II, to ensure that trade is legal, sustainable and documented, and the timing at which those listings are adopted, i.e., when they already meet criteria for prohibitions in regional and domestic fisheries management frameworks, corresponding closer to CITES Appendix I. We outline that more proactive action needed to meet the intent of Appendix II and deliver sustainable trade.

5. The analysis of the case studies reveals that the inflexible interpretation of the CITES listing criteria (CITES Res. Conf. 9.24 (Rev. CoP17)) and, particularly, its Annex V footnote for aquatic species, is the root cause of these problems for this misalignment.

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[*] *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

6. The FAO has made a highly constructive contribution to CITES' review of the listing criteria in the past, highlighting the different management approaches for commercially fished and terrestrial wildlife populations, including the importance of considering stock resilience, and suggesting the use of quantitative criteria for listing commercially exploited aquatic species. However, the original contributions from FAO, and more recent debates on this issue, have acknowledged that these criteria are not applicable to all commercially exploited aquatic species. Indeed, low productivity sharks were identified in FAO's advice to CITES as examples of species for which the listing criteria may not be appropriate. It is also noteworthy that while the Convention uses the broad term "marine species" to establish a separate consultation process with fisheries bodies such as FAO, Annex 5 of CITES Res. Conf. 9.24 (RevCoP17) uses "commercially exploited aquatic species" which is both more narrow (only commercially exploited species) and broader (including freshwater). With the acknowledged limits to the applicability of the footnote in Annex 5, it is surprising that the CITES community has not discussed in greater detail when the use of the footnote is appropriate, and when it may not be, and a more precautionary approach should be applied.

7. This document suggests that Parties reconsider the way in which they have approached the listing of aquatic species on CITES and look again at the intent of the Convention and the CITES listing criteria (CITES Res. Conf. 9.24 (Rev. CoP17)) when considering the listing of vulnerable marine species such as sharks.

8. The following pages provide additional information on the issue, and potential amendments to Conf. 9.24 (Rev. CoP17) in the footnote on aquatic species that, if adopted can begin to address this issue at CITES CoP19 and beyond.

1. Introduction

9. Sharks[1] were first addressed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) at the 9th meeting of the Conference of Parties (CoP9) in 1994. The CoP recognised *inter alia* that shark fisheries were not specifically managed by any multilateral or regional management agreement, many species were unsustainably exploited, and international trade in their parts and derivatives was increasing. Res. Conf. 9.17 on the Status of International Trade in Shark Species called for reviews of their biological and trade status and requested FAO and regional fishery bodies (RFBs) to establish data collection programmes. CoP10 in 1997 agreed that effective implementation of Res. Conf. 9.17 required further activity by Parties, RFBs and FAO. In response to the growing documentation of shark declines, FAO *inter alia* developed the International Plan of Action for the Conservation and Management of Sharks (IPOA–Sharks), which was adopted in 1999. Proposals to CoP11 to list shark species in Appendix II were rejected in 2000, partly because FAO's IPOA–Sharks was intended to address the concerns of the CITES community, including by encouraging shark fishing states to adopt national Shark-plans by 2001.

10. In 2002, at CoP12, CITES Parties noted the significant lack of progress with achieving shark management through the FAO IPOA and that unsustainable international trade was continuing. The CoP adopted Resolution 12.6 on the Conservation and Management of Sharks and listed the first commercially exploited marine fishes, adding the basking shark (*Cetorhinus maximus*) and whale shark (*Rhincodon typus*) to Appendix II. Since then, 44 additional shark species, the source of approximately 25% of the global trade in shark fins (by volume) have been listed within the CITES Appendices. This inclusion is the result of 2/3 or more of the CITES Parties attending and credentialed at a CoP voting to include these species on CITES Appendix I or II. These listings thereby commit all CITES Parties (other than those entering a reservation to the listing) to implement CITES' provisions for these species.

11. However, the path to obtaining the required super majority for adoption has often been contentious, despite coming at a time when the general consensus from the scientific community on the inherent biological vulnerability, and steep global population declines of sharks has become increasingly clear. The past decade of shark listing debates has highlighted a growing divide between some interpretations of the current official CITES "Criteria for Amendment of Appendices I and II" (Res. Conf. 9.14 (Rev. CoP17) and the footnote relevant to commercially exploited aquatic species, the intent of Appendix II of the Convention, and the qualifying decline threshold before an Appendix II listing for shark species is considered appropriate.

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[1] *For the purposes of this document, the term "shark" is taken to include all species of sharks, skates, rays and chimaeras (Class Chondrichthyes), as defined in the United Nations Food and Agriculture Organization (FAO) International Plan of Action for the Conservation and Management of Sharks.*

12. Two FAO Technical Consultations on the suitability of the CITES Criteria for listing commercially exploited aquatic species (2000 and 2001), contributed to CITES' major review of its listing criteria 20 years ago[2], resulting in the adoption of revisions to Resolution Conf. 9.24 at CoP13 in 2004[3]. FAO recognised, *inter alia*, that commercially exploited aquatic species (such as many teleost fishes) were often more productive than terrestrial species and resilient to fisheries, thus higher levels of population declines were more appropriate to trigger CITES listings. However, these Technical Consultations noted that some species with extremely low productivity, for example certain sharks and deepwater species, could fall outside the range described in the guidance and incorporated into the footnote, although this cautionary note has rarely, if ever, been considered by FAO Expert Advisory Panels.

13. In addition to the question of which criteria are appropriate, any quantitative biological criteria, when rigidly applied, pose a challenge when considering the poor availability of species-specific population, fisheries and trade data for heavily depleted species. These constraints and differing interpretations of the criteria (including the aquatic species footnote) have led to disputes as to whether several sharks qualified for listing. Some interpretations of the criteria have also led to a very high bar for data availability relevant to sharks and rays compared with terrestrial species when assessing whether a proposal meets the CITES criteria, although the global majority of shark fisheries are data poor, and the listed species are already categorized as Vulnerable, Endangered, or Critically Endangered by the IUCN Red List, and in some cases retention in fisheries has been prohibited. Indeed, a much higher bar of evidence of decline is required for all marine species than terrestrial ones, independent of the life history or vulnerability of the species. That needs to be addressed.

14. There is nothing in the text of the Convention or the CITES criteria that establishes significantly higher data requirements for marine species listing proposals than for others yet debates prior to and at recent CoP's clearly reveal such an expectation. Rather, the CITES criteria clearly state (Para. 2): "….that, by virtue of the precautionary approach and in case of uncertainty regarding the status of a species or the impact of trade on the conservation of a species, the Parties shall act in the best interest of the conservation of the species concerned and, when considering proposals to amend Appendix I or II, adopt measures that are proportionate to the anticipated risks to the species." These high expectations of data quality and abundance projected in discussions about marine listing proposals by some States and stakeholders seems at odds with the principle of precautionary approach referred to in the criteria and the intent of Appendix II detailed in the Convention Text.

15. This is clearly a serious issue, and interpretations of the CITES listing criteria, particularly for marine species such as sharks that do not exhibit rapid and highly productive life cycles, need to be explored in depth and remedied if political tensions are to be diffused, if shark species and fishing communities are to benefit from CITES Appendix II, and to avoid scenarios where these species are listed too late; i.e. when declines preclude sustainable catch and international trade and the species would more appropriately already be listed in Appendix I.

16. Revision of the CITES guidelines for the listing of marine species is needed urgently, to allow for appropriate management of the global trade in sharks, in line with the intent of the CITES Convention text.

2. Shark and ray listings on CITES

17. The first shark listings in the CITES Appendices were adopted in 2002 at CITES CoP12, with the basking (*Cetorhinus maximus*) and whale (*Rhincodon typus*) sharks included in Appendix II. Pursuant to Article XV, paragraph 2b) the CITES Secretariat consulted relevant inter-governmental bodies having a function in relation to those marine species, including the United Nations Food and Agriculture Organization (FAO), which at that time had not yet established its Expert Advisory Panel (hereafter the 'Panel') and thus did not provide an assessment[4] of this and previous unsuccessful listing proposals. The FAO Panel was established to provide analysis of proposals to amend the Appendices for commercially exploited aquatic species that have been submitted by CITES Parties from CoP13 onwards; FAO does not assist Parties in developing proposals or in assessing whether or not a species might qualify for inclusion on the CITES Appendices before a proposal is developed. The Panel is FAO's way to respond to the statutory consultation by the

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[2] *See FAO's text proposal discussed at CoP12 (https://cites.org/sites/default/files/eng/cop/12/doc/E12-58-A3.pdf), which was included in modified form in the report of the Animals and Plants Committee chairs to CoP13 (https://cites.org/sites/default/files/eng/cop/13/doc/E13-57.pdf)*

[3] *See: https://cites.org/sites/default/files/eng/cop/13/rep/E13-Plen5.pdf*

[4] *See Annex 2 https://cites.org/sites/default/files/eng/cop/12/doc/E12-66.pdf, page 99*

CITES Secretariat set out in the CITES Convention text, Article XV, paragraph 2 b), but it is not an official CITES entity and its advice, like any other advice on listing proposals, is non-binding.

18. When first convened prior to CITES CoP13 (Bangkok, 2004), FAO's small scientific Panel evaluated whether shark proposals that had been submitted met the criteria for listing commercially exploited aquatic species. The Panel could not determine whether the great white shark (*Carcharodon carcharias*) met CITES criteria for listing at CoP13, based on the FAO interpretation of the criteria; however, the proposal was adopted. At CoP14 (The Hague, 2007) the Panel found that the sawfish species in a proposal that had been submitted met the listing criteria and all but one species of sawfish (*Pristidae species)* were listed on Appendix I, with the final species in the family being added to Appendix I at CoP16 (Bangkok, 2013).

19. Following their listing in CITES, all of these species were subsequently listed by the Convention on the Conservation of Migratory Species of Wild Animals (CMS). In the case of CMS, they were listed on its Appendix I, which mandates stricter protection than CITES Appendix II, namely requiring "Parties that are Range States of a migratory species listed in Appendix I [to] prohibit the taking of animals belonging to such species", with very limited exceptions (CMS Article 3, paragraph 3). In addition to the take prohibition, CMS also places obligations on range states to endeavour to conserve habitats, migratory routes and to reduce other threats to the listed species (CMS Article 3, paragraph 4).

20. At CITES CoP14 and CoP15, proposals for widely commercially traded sharks and rays (including the porbeagle, oceanic whitetip and scalloped hammerhead shark) were put forward by multiple governments but were found by the FAO panel not to meet the CITES listing criteria at CoP14 (porbeagle), but to meet the criteria at CoP 15 (porbeagle, oceanic whitetip and scalloped hammerhead), but all proposals failed to reach the two-thirds of votes needed for adoption.

21. These proposals were resubmitted to CITES CoP16 (Bangkok, 2013) and subsequently adopted, making them the first sharks and ray species listed in Appendix II traded in commercially in significant volumes. These proposals were adopted on this occasion via a vote with incredibly narrow margins; the advice of the FAO Panel convened ahead of that meeting (FAO Fisheries and Aquaculture Report No. 1032) was that the species met the CITES listing criteria. Proposals adopted at CoP16 included the three large hammerhead sharks (Sp*hyrna lewini, S. mokarran, and S. zygaena*), the genus Manta (*Manta birostris and Manta alfredi*), the oceanic whitetip shark (*Carcharhinus longimanus*), and the porbeagle (*Lamna nasus*).

22. Since these landmark CITES listings, both manta species and oceanic whitetip have been listed on CMS Appendix I (see Table 2). Following more detailed updated analysis of their status, the IUCN Red List of Threatened Species now categorizes both manta species as globally Endangered; and great and scalloped hammerheads, oceanic whitetip sharks, as well as the North Atlantic population of Porbeagle shark as Critically Endangered (IUCN Red List, January 2021).

23. The severely deteriorated status of the populations leading to these updated assessments in part explains the low number of positive non-detriment findings (NDFs) publicly available for these species, as well as the low volumes of recorded international trade. This indicates their situation is more closely aligned with CITES Appendix I listing criteria, as trade cannot be scientifically shown to be non-detrimental to their populations.

24. At CoP17 and CoP18 (Johannesburg, 2016 and Geneva, 2019) a large number of additional sharks and rays were listed on CITES Appendix II. The proposals included species that were assessed by the IUCN Red List of Threatened Species as globally Critically Endangered (wedgefish and giant guitarfish), Endangered (shortfin mako sharks and bigeye thresher sharks)**,** and Vulnerable (common thresher and silky sharks). Several of the proposals broke the record for the most co-sponsor countries on a proposal in the history of the Convention: (e.g. the wedgefish proposal with over 50 co-proponents: https://cites.org/sites/default/files/eng/cop/18/prop/19032019/E-CoP18-Prop-44.pdf). All these proposals were adopted, gaining the two-thirds majority needed at the CoP by some margin (https://cites.org/sites/default/files/eng/cop/17/Com_I/SR/E-CoP17-Com-I-Rec-14-R2.pdf).

25. The adoption of these proposals, despite mixed advice regarding whether they met the criteria (see table 2), along with growing co-sponsorship from CITES Parties, demonstrates growing support for shark listings, including a growing global understanding of these species' poor conservation status and need for enhanced regulation and monitoring. However, the listings remained controversial, and subject to much debate by some Parties and associated IGOs and NGOs before and after their adoption (Friedman et al 2019).

3. Current status of CITES-listed sharks and challenges facing unlisted species threatened by trade

26. The significant increase in the numbers of shark species included on the Appendices at recent CoPs is in large part attributable to a significant growth in global knowledge on the decline and inherent vulnerability of the world's cartilaginous fish. The majority of CITES listed shark species were already within the IUCN threatened categories (Vulnerable, Endangered, or Critically Endangered) in all, or significant parts of their range at the point of CITES listing, and around 70% of the global shark fin trade is from species already assessed as within the threatened categories (Fields et al 2017, Dulvy et al 2021 and Cardeñosa in press). This level of trade in species that are already threatened clearly explains the growing interest in shark conservation at the political level globally, and the increase in CITES proposals for shark and ray species. One could argue however that it might be more effective to provide the benefits of CITES' regulation to these species before their fisheries collapse and they become threatened with extinction, as per the intent of CITES Appendix II in the Convention Text itself.

27. A wide range of scientific and political action, including these CITES listings, has significantly raised the profile of the declines in shark populations (Dulvy et al 2014, MacNeil et al 2020, Quieroz et al 2021, Pacoureau et al 2021). There is a growing recognition that sharks can strongly benefit from fisheries management (Davidson et al 2015) but cannot be managed the same as teleost fish. A range of domestic and intergovernmental interventions have been developed to reflect their conservative biology, rapid declines and the need for precautionary management (Dulvy et al 2017 and 2021, MacNeil et al 2020).

28. The aforementioned resistance of some Parties and stakeholders to CITES' listings of sharks has led to contentious debates in the lead up to as well as after CITES listings of shark species to date. This fact in turn, combined with the strict interpretation of the footnote for aquatic species in Annex 5 of the CITES listing criteria resolution, has led to higher requirements being applied to listing proposals for sharks under CITES compared to most other taxa. This has resulted in most species only being proposed and subsequently listed when their conservation status has already deteriorated to a point where sustainable offtake may no longer be possible and where other multilateral bodies (CMS, RFMOs) already put in place prohibitions. This dynamic seems incompatible with the intent of CITES Appendix II as stated in the Convention, which states:

> *'all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival'* (CITES Convention Text).

29. The CITES listings of IUCN Vulnerable species in recent years, such as the common thresher shark, silky shark, and some mobula rays, that have declined significantly but not to the degree of Critically Endangered species such as the wedgefish and large hammerhead sharks, shows a somewhat closer alignment with the intent of CITES Appendix II. Scientific consensus is clear, to prevent Vulnerable and Near-threatened species (on the IUCN Red List) from becoming endangered, fisheries must be managed for sustainability through fishing limits based on scientific advice and the precautionary principle (Dulvy et al 2021). When applied to international trade, underpinned by such sustainable fisheries, this approach of regulating the catch and trade of Vulnerable and Near-threatened species in a precautionary manner fully aligns with the intent of CITES Appendix II.

30. However, many of these Vulnerable species were only listed on CITES Appendix II as lookalikes for species that were already Endangered, as many successfully adopted shark proposals to date have been for Endangered or Critically Endangered species, and in many cases have come too late to support sustainable catch and trade. Any fisheries or trade pressure should be minimised for sharks classified as Endangered or Critically Endangered; scientific consensus is clear that for such species immediate policy action should be taken to prohibit all take and commercial utilization (Pacoureau et al 2021, Dulvy et al 2021) – which are measures compatible with CITES Appendix I, not CITES Appendix II. But Appendix II is about ensuring that trade is regulated such that species do not become threatened, not in regulating the trade of already threatened or endangered species.

31. Some 25% of the species commonly found in the global trade in shark fins are listed on Appendix II, and progress to adopt complementary trade measures via CITES listings over the last decade, although crucial, has been slow. Additionally, many species that would benefit from sustainable management and trade provided by an Appendix II listing, thereby preventing rapid population declines, still remain unlisted (Cardeñosa et al in press).

32. The cause of this slow progress and controversy in listing species, despite the vast majority of traded sharks warranting Appendix II listings based on their declining conservation status, is in part due to the continued debate and analysis around the criteria for CITES listing of aquatic species (e.g., decisions and

recommendations of the Seventeenth Session of the COFI Sub-Committee on Fish Trade, Vigo, Spain, 25–29 November 2019: http://www.fao.org/fileadmin/user_upload/COFI/COFI34/AgendaItem5-Japan.pdf).

33. This has led to Parties submitting Appendix II listing proposals for Endangered species but shying away from including Vulnerable or Near Threatened species (the intent of Appendix II) to avoid backlash or criticism. This controversy should not deter countries from proposing inclusion on CITES Appendix II of species that clearly qualify, such as heavily traded sharks that are assessed as Vulnerable or Near Threatened – and can benefit from sustainable management of catch and international trade.

34. This political situation has resulted in each species of shark proposed for listing creating a significant level of debate and significant work for the CITES and FAO Secretariats and Parties. There is still much disagreement on applying the aquatic species listing guidelines, which will be explored further in this document. The slow, but growing pace of shark listings (see Figure 1) are a strong indication that over two thirds of the CITES Parties feel that shark listings are warranted, even when consensus is not reached on meeting the current interpretation of the criteria for aquatic species in the pre-CoP assessments of proposals.

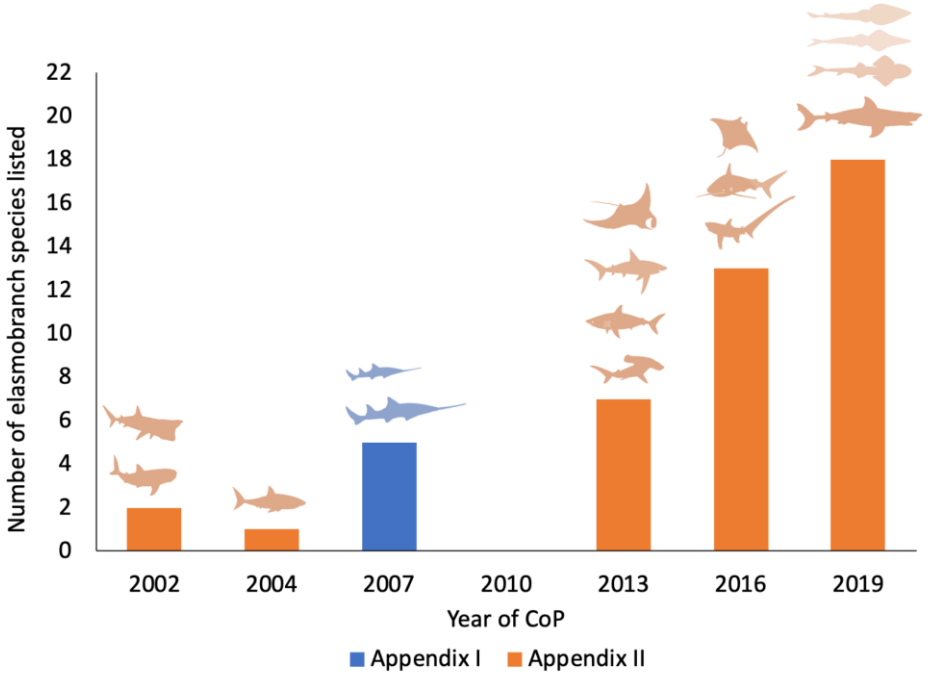

Figure 1: Shark listings on CITES; an increase in scale and scope since the year 2000

4. Shark and ray biology, and the latest research into population trends

35. CITES Res. Conf. 9.24 (Rev. CoP17) has been interpreted by some Parties and stakeholders as if it treats all aquatic species biology as the same or similar. However, that was not the intent of this text when developed (technical consultation on the suitability of CITES criteria for the listing of commercially important aquatic species 2001), as clearly shark biology is not comparable from a management perspective to the highly productive life strategy of thousands of species of bony fish; just as cetaceans, sea turtles, or seabirds cannot be compared to them either. Indeed, the vast majority of shark and ray species have life histories more comparable to many mammals and should be evaluated accordingly (as the negative impacts of unsustainable exploitation will be far more severe that for other fish species). However, the current interpretation and practice seems to aggregate the thousand plus species of sharks with bony fish as part of a political CITES decision-making process of interpreting the guidance associated with the CITES listing criteria: https://cites.org/sites/default/files/document/E-Res-09-24-R17.pdf.

36. While seemingly simplifying the CITES listing process, the trend by some parties and stakeholders to group sharks in with the rest of the aquatic species, particularly fast-growing bony fish, in the decades since the marine species criteria text was developed overlooks both the initial intent of that text, and the vast difference in reproductive biology and recovery potential of the species (see Table 1). As noted by the FAO, 'sharks have a risk profile that is more akin to mammals on land than fish in the ocean': https://www.fao.org/3/cb5378en/cb5378en.pdf

Table 1: Comparing the biology of a subset of sharks and rays that are part of the ongoing global shark trade to commercially exploited bony fish and large mammals.

		LONGEVITY/LIFESPAN (years)	MATURITY (years)	OFFSPRING	REPRODUCTIVE FREQUENCY	GESTATION LENGTH
MAMMALS	ELEPHANT	60	10–12	1	4-9years	18–22months
	ORCA	50	14–15	1	4-6 times in life	15–18months
	BENGAL TIGER	25	3–5	1–7	3-4years	3–4 months
SHARKS & RAYS	MANTA RAY	50	5–10	1	3-6 years	12–13months
	DUSKY SHARK	40-50	17-24	3–16	3years	22–24months
	SILKY SHARK	22	6–12	2–16	1-2years	12 months
BONY FISH	TUNA	8	2–3	10 million	multiple events per year	1 day
	SWORDFISH	13	3	4.3 million	multiple events per year	2.5 days
	MAHIMAHI	5	5–12 months	80k–1 million	2-3 per year	60 hours

37. Sharks grow slowly, mature late and have few young, with biology closer to large mammals than other fish. Their conservation status cannot be assessed using the same criteria that would be used to assess bony fish stocks, which can rebound rapidly from periods of overexploitation. For many shark species listed on CITES to date, recovery times for populations that have declined by 70% or more are likely to be several decades, even if subject to zero fishing mortality, with sustainable use near impossible at any scale (Pacoureau et al 2021, Rigby et al 2019).

38. Current management regimes for sharks have either been lacking or have failed in much of the world, with sharks being the first species to be fished out in mixed fisheries due to their life history and biology. Fisheries management can work for sharks when applied properly, but that action needs to be proactive and precautionary (Davidson et al 2015, Pacoureau et al 2021, Dulvy et al 2021). While classic fisheries management methods applied to bony fish can work well for some sharks, very few examples of effective action exist for sharks outside the developed world (Davidson et al 2015). This is reflected in the most recent research on sharks, which finds inadequate management linked to far greater declines than previously assumed in almost all shark species globally (IPOA sharks 1999, MacNeil et al 2020, Pacoureau et al 2021, Dulvy et al 2021).

39. To achieve the goal of sustainable use for such biologically vulnerable, long-lived, slowly reproducing species, policy action is needed far earlier than seen to date. Therefore, continuing to list commercially traded sharks on CITES Appendix II only when robust data is available to demonstrate they have declined by 70% or more (as per the current guidance in the aquatic species footnote) seems incredibly unlikely to be effective in ensuring sustainable trade. This is due to slim margins for error in addition to the challenges of ensuring effective management, especially in resource poor countries that contribute much of global catch and trade but also rely on fisheries resources (including sharks) for food security. Such high-risk approaches may work for many bony fish species given their rapid ability to bounce back from overfishing, but it is highly unlikely to work for sharks given their biology and myriad of other pressures (overfishing, IUU and ghost-fishing, overcapacity, food security, and climate change) their populations face. No one would suggest requiring terrestrial species to show a decline of more than 70% before inclusion in Appendix II.

40. A paper published in Nature in 2021 assessed the status of 31 pelagic sharks globally and found that they had declined since 1970 by 71% due to an 18-fold increase in relative fishing pressure. The study notes that:

'(shark) Species classified as critically endangered or endangered cannot support fisheries. In these cases, policy recommendations based on stock assessments or on the global Red List status will be congruent; strict measures to prohibit landings and minimize bycatch mortality (by avoiding hotspots, modifying gear and improving release practices) are urgently needed to halt declines and rebuild populations.' (Pacoureau et al 2021).

41. These management recommendations reflect shark biology. However, as documented here, CITES Appendix II listings were still considered controversial for shark species classified as Critically Endangered or Endangered at the recent CITES CoP18 (Geneva, 2019) (https://cites.org/sites/default/files/eng/cop/18/Com_I/SR/E-CoP18-Com-I-Rec-12-R1.pdf.). Several CITES parties, NGOs and IGOs, as noted in this summary record identified these Endangered and Critically Endangered species as not meeting the CITES criteria, despite IUCN's assessment that they already reached the point where they cannot support fisheries at any significant scale.

42. Transparency about datasets and methodologies used to assess whether a species meets the listing criteria can be an additional contention. The FAO Expert Panel often includes leading national and international fisheries experts with access to restricted datasets and/or inside knowledge about the strengths and weaknesses of specific public datasets. While this could be considered positive, it also restricts the possibility for peer-review by Parties and stakeholders not part of the Expert Panel and leads to assessments being conducted on the basis of different data. This has resulted in circumstances where certain species, categorised as Critically Endangered on the IUCN Red List of Threatened species as a result of severe population declines (such as wedgefish and giant guitarfish), were deemed inconclusive by the FAO panel due to "insufficient evidence".

43. A specific example is the globally Endangered shortfin mako shark (*Isurus oxyrinchus*). The International Commission for the Conservation of Atlantic Tunas (ICCAT) scientific body, the Standing Committee on Research and Statistics (SCRS), advised that the North Atlantic population requires a no retention measure for the stock to recover (advice that was followed at ICCAT's annual meeting in 2021, with retention of the species prohibited). However, the proposal to include the species on CITES Appendix II (a far lower level of protection) was not seen by the FAO or CITES Secretariat as meeting the listing criteria, and the ultimately successful listing is seen as controversial by some parties: (http://www.fao.org/fileadmin/user_upload/COFI/COFI34/AgendaItem5-Japan.pdf). Nevertheless, more than 2/3 of the CITES Parties voting on the proposal supported the proposal, securing its adoption.

44. While this controversy plays out, sharks that are exploited but not yet Endangered or Critically Endangered, that make up a significant proportion of the international fin trade urgently need catch and trade management to prevent the continued declines seen in almost all fisheries globally (Cardeñosa et al in press). Without proactive action, declines will continue to a level that preclude sustainable use, and jeopardize shark species survival, along with that of communities that rely on shark fisheries for food security or tourism. It is vital to consider the role of CITES is ensuring sustainability of those shark species that have not yet declined to the point that they are Endangered.

45. However, this controversy for even Critically Endangered and Endangered species discourages proactive policy action. This misalignment of the criteria when applied to sharks needs to be addressed and corrected if CITES Appendix II listings are to be effective, and sharks are to be utilized more sustainably. If not, far stronger measures including catch and trade bans already seen in many countries, and Appendix I listings, often for all sharks, are inevitable.

46. In addition to the interpretation that the footnote on decline for commercially exploited aquatic species in Annex 5 of Resolution Conf. 9.24. (Rev.CoP17) applies to sharks irrespective of their biological vulnerability, the current practice of using the criteria themselves also requires discussion. The criteria for inclusion on Appendix II have 2 sub-criteria (consistent with the treaty in Article II). In CITES Criteria para 2a, a species "should be included in Appendix II when, on the basis of available trade data and information on the status and trends of the wild population(s), at least one of the following criteria is met: A) It is known, or can be inferred or projected, that the regulation of trade in the species is necessary to avoid it becoming eligible for inclusion in Appendix I in the near future; or B) it is known, or can be inferred or projected, that regulation of trade in the species is required to ensure that the harvest of specimens from the wild is not reducing the wild population to a level at which its survival might be threatened by continued harvesting or other influences." In the second case (Criteria para 2b), a "species should be included in Appendix II if: A) specimens of the species in the form in which they are traded resemble specimens of a species included in Appendix II or I, so that enforcement officers who encounter specimens of CITES-listed species are unlikely to be able to distinguish between them; or B) there are compelling reasons other than those given in criterion A above to ensure that effective control of trade in currently listed species is achieved".

47. Therefore, in reference to Criteria Para 2a, where species are to be listed based on their conservation status (and not their similarity of appearance to other listed species), a species does not have to be on the verge of Appendix I, but can also be of a status that regulation is required to ensure its population is not reduced through trade to a level at which it much become threatened. The FAO and others, in their interpretation of the criteria, appear to only consider the case of becoming eligible for inclusion in Appendix I in the near future (2aA) which is a higher bar, but not appear to recognize criteria paragraph 2aB. Such an interpretation is not consistent with the treaty or criteria.

5. CITES aquatic species listing thresholds compared to management in other bodies

48. Given the growing body of policy and scientific evidence documented in sections 1-4, the CITES criteria and footnote on aquatic species clearly cannot continue be applied to sharks in the way they have been to date, if CITES is to contribute effectively to the conservation of these species, and if the Convention is to be strictly adhered to.

49. There was clearly an intent to account for the vulnerability of species such as sharks that have life history strategies dissimilar to other fish (Conf. 9.24 rev CoP17, footnote on aquatic species, emphasis added):

> *In marine and large freshwater bodies, a narrower range of 5-20 % is deemed to be more appropriate in most cases, with a range of 5-10 % being applicable for species with high productivity, 10-15 % for species with medium productivity and 15- 20 % for species with low productivity.* ***Nevertheless, some species may fall outside this range****. Low productivity is correlated with low mortality rate and high productivity with high mortality. One possible guideline for indexing productivity is the natural mortality rate, with the range 0.2-0.5 per year indicating medium productivity.*

50. As summarized in section 3 and 4, the literature now shows that for the intent of the convention to be met, and to match action in other multilateral bodies, shark Appendix II listings would be needed before the decline range detailed in the footnote was met, in line with the emphasis highlighted above.

51. However, as demonstrated in the debates around recent shark listings, despite their ultimate adoption by the required two thirds majority, this is not a view shared by all CITES Parties, or all stakeholders assessing listing proposals against the criteria as currently drafted. This has created a heightened level of political debate within CITES, and resulted in the Convention failing sharks, by listing heavily traded, biologically vulnerable species too late, and not listing species that can be sustainably traded in significant quantities at all, thereby leaving the majority of the trade in shark products unregulated. This is a failure to follow the intent of CITES Appendix II and the precautionary approach enshrined in the Convention text itself.

52. Applying the footnote to sharks has, in practice, meant listing Endangered or Critically Endangered species with several decade long recovery times in Appendix II (i.e., porbeagle, oceanic whitetip, wedgefish, manta rays, great hammerheads), when Appendix I listing would have been more appropriate. Even those Appendix II listings were adopted by narrow margins, leaving NDFs and sustainable trade near impossible for these newly listed species given that they have already suffered such severe declines due to unregulated exploitation and other threats.

53. This has created a divergence of views on when sharks should be considered for CITES listing. Some Parties and stakeholders have followed an interpretation that if the percentages contained within the footnote on decline criteria are not met with high confidence or large quantities of data (often lacking outside of developed countries), then listing is inappropriate (see the summary records of CoP17 and 18 debates on the shark proposals referenced above).

54. Other stakeholders and Parties have taken the wider evidence base of shark biology, ubiquitous declines driven by trade, the intent of CITES Appendix II, and the precautionary principle, to determine that for sharks the footnote, or its recent application is too conservative in its guidance: https://cites.org/sites/default/files/eng/cop/17/InfDocs/E-CoP17-Inf-13.pdf

55. This table explores that issue in detail – looking at the divergence of when CITES Appendix II action has taken place for shark species, compared to the action taken by other multilateral management bodies (including fisheries bodies that collate some of the most comprehensive data on shark populations and declines) when faced by similar evidence on shark population status and decline.

Table 2 – CITES Appendix II listings compared to species status and other multilateral measures

CITES Appendix II Species (and year of adoption)	Global IUCN status (current)	RFMO measures for that species (and year of adoption)	CMS Appendix (and year)	CITES Secretariat recommendation on listing proposal	FAO Panel position on listing proposal
Rhincodon typus Whale shark (2002)	Endangered (2016)	Retention/intentional setting prohibited – all major RFMOs: IATTC 2013, IOTC 2013, and WCPFC 2014.	Appendix I 2017 (no take)	N/A	N/A
Cetorhinus maximus Basking shark (2002)	Endangered	N/A	Appendix I 2005 (no take)	N/A	N/A
Carcharodon carcharias Great white shark (2004)	Vulnerable	N/A	Appendix I 2002 (no take)	N/A	FAO - Insufficient data
Carcharinus longimanus Oceanic Whitetip shark (2013)	Critically Endangered	Retention prohibited in all major tuna RFMOs: IATTC 2012, ICCAT 2010, IOTC 2013, WCPFC 2013	Appendix 1 2020 (no take)	Meets criteria	Meets criteria
Sphyrna lewini, *S. mokarran* and *S. zygaena* Large Hammerhead sharks (3 species) (2013)	Critically Endangered (two species), Vulnerable (one species)	Retention prohibited in ICCAT fisheries 2010	Appendix II	Meets criteria	Meets criteria
Lamna nasus Porbeagle shark (2013)	Vulnerable	Retention of live animals prohibited in ICCAT fisheries 2016	Appendix II (2008)	Meets criteria	Meets criteria

Manta spp. Manta rays (2 species) (2013)	Endangered	Retention prohibited in IATTC 2015, WCPFC 2021, and IOTC 2019 fisheries	Appendix I (2014)	Meets criteria	Meets criteria
Alopias spp. Thresher sharks (family) (2016)	Endangered/ Vulnerable	Retention of all species in IOTC fisheries 2010, bigeye threshers in ICCAT fisheries 2010	Appendix II (2014)	Does not meet criteria	Does not meet criteria
Carcharhinus falciformis Silky shark (2016)	Vulnerable	Retention prohibited in ICCAT 2011 and WCPFC fisheries 2014 and by IATTC purse seiners 2019	Appendix II (2014)	Meets criteria	Does not meet criteria
Mobula spp Mobulid rays (family) (2016)	Majority Endangered	Retention prohibited in IATTC 2015, WCPFC 2021 and IOTC 2019 fisheries, CMS Appendix I 2014	Appendix 1	Meets criteria	Meets criteria
Family Rhinidae Wedgefish (family) (2019)	Majority Critically Endangered	N/A as mainly costal	Appendix II (2017)	Meets criteria	Insufficient data
Glaugostegus spp. Giant guitarfish (family) (2019)	Critically Endangered	N/A as mainly costal	Appendix I and II (2017)	Meets criteria	Insufficient data
Isurus oxyrinchus and I. paucus Mako sharks (2 species) (2019)	Endangered	Catch reduction measures at ICCAT 2019, retention prohibited in the North Atlantic (2021)	Appendix II (2008)	Does not meet criteria	Does not meet criteria

56. As can be seen from Table 2, a significant number of shark species were found to not meet or only partially meet the CITES Appendix II criteria by one or more reviewing body. However, in several cases (such as thresher and silky sharks in multiple ocean basins, and North Atlantic shortfin mako sharks), the same species, within similar timeframes and based on the same evidence, were subject to full landing prohibitions adopted by consensus by fisheries management bodies. These species were already listed as Threatened on the IUCN Red List of Threatened Species, with sustainable utilization under CITES Appendix II already challenging at the time of CITES listing, as reflected in RFMO scientific advice and management measures. Several of these species, such as mobulid rays, oceanic whitetip sharks, and whale sharks were also listed on CMS Appendix I (no take permitted) in the same timeframe, based on the same evidence.

57. The action taken by other bodies is in line with CITES Appendix I listing criteria and not Appendix II as defined in the Convention text or CITES criteria, and yet even these Appendix II listings were adopted by narrow margins (passing by as few as three votes above the required 2/3) and seen as controversial (see summary records of plenary shark debates at CoP's 15-18). This reinforces the fact that there is a clear misalignment with how the CITES listing criteria are being applied to this particularly biologically vulnerable group of marine fishes by some Parties and IGOs, in comparison with wider CITES stakeholders. This is preventing CITES from taking a precautionary approach to aid in the management of the global trade in shark products in an effective manner, by listing them on Appendix II when sustainable take is still possible and Appendix I when it is not.

58. This misalignment between the intent of the Convention text and the interpretation of the criteria guidance by some Parties and stakeholders demonstrates why shark listing proposals have been adopted at CoP17 and CoP18, despite differing opinions from reviewers and the Parties on whether or not they meet the CITES listing criteria.

6. The case for sharks and rays to be given specific treatment when considering listing criteria

59. Looking at the biological information in Table 1, and the policy information in Table 2, there is clearly a need to reconsider how the CITES listing criteria are applied to sharks, in reference both the Criterion 2aA and 2aB, and the interpretation of the decline footnote for aquatic species to provide clarity to all. This is of particular concern if the aim of shark management is to deliver sustainable catch and international trade. For biologically vulnerable species, management action is needed well before overexploitation takes place. With international trade a key driver of overexploitation for all traded shark species, CITES listings can play a key role in achieving sustainability but only if listing decisions are properly matched to the species biology, and proposed and adopted in a timely manner.

60. There is a clear need to explore the aquatic species footnote in Resolution Conf. 9.24 (Rev. CoP17) and add specific references to applying it differently for sharks and rays to account for their biology. Such a step can ensure that CITES listing actions are based on scientific knowledge and are more complementary to that of RFMOs and CMS, with rapidly declining species listed on Appendix I, and those not yet threatened but likely to become so as a result of trade pressure, listed on Appendix II to allow for ongoing, sustainable trade in a timely manner.

61. Such changes can help solve the ongoing controversy around shark and ray listing proposals, conflicting opinions between Parties, and streamline expert advice on listing proposals, which appropriately consider the biology of species such as sharks.

62. We therefore recommend that Parties adopt the proposed amendment to Conf. 9.24 (Rev. CoP17) in the footnote on aquatic species (proposed changes in bold):

    Application of decline for commercially exploited aquatic species (Resolution Conf. 9.24 (Rev. CoP17))

    In marine and large freshwater bodies, a narrower range of 5-20 % is deemed to be more appropriate in most cases, with a range of 5-10 % being applicable for species with high productivity, 10-15 % for species with medium productivity and 15- 20 % for species with low productivity. Nevertheless, some species may fall outside this range, ***for example particularly biologically vulnerable commercially exploited aquatic species, such as Class Chondrichthyes****. Low productivity is correlated with low mortality rate and high productivity with high mortality. One possible guideline for indexing productivity is the natural mortality rate, with the range 0.2-0.5 per year indicating medium productivity.*

In general, the historical extent of decline should be the primary criterion for consideration of listing in Appendix I. However, in circumstances where information to estimate the extent of decline is limited, the rate of decline over a recent period could itself still provide some information on the extent of decline.

For listing in Appendix II, the historical extent of decline and the recent rate of decline should be considered in conjunction with one another. The higher the historical extent of decline, and the lower the productivity of the species, the more important a given recent rate of decline is.

A general guideline for a marked recent rate of decline is the rate of decline that would drive a population down within approximately a 10-year period from the current population level to the historical extent of decline guideline (i.e., 5-20 % of baseline for exploited fish species). There should rarely be a need for concern for populations that have exhibited an historical extent of decline of less than 50% unless the recent rate of decline has been extremely high.

Even if a population is not declining appreciably, it could be considered for listing in Appendix II if it is near the extent-of- decline guidelines recommended above for consideration for Appendix I listing. A range of between 5 % and 10 % above the relevant extent of decline might be considered as a definition of 'near', taking due account of the productivity of the species.

A recent rate of decline is important only if it is still occurring, or may resume, and is projected to lead to the species reaching the applicable point for that species in the Appendix-I extent-of-decline guidelines within approximately a 10-year period. Otherwise, the overall extent of decline is what is important. When sufficient data are available, the recent rate of decline should be calculated over approximately a 10-year period. If fewer data are available, annual rates over a shorter period could be used. If there is evidence of a change in the trend, greater weight should be given to the more recent consistent trend. In most cases, listing would only be considered if the decline were projected to continue.

For some marine taxa, such as Class Chondrichthyes, slow growth rates, long lives, live birth, and low fecundity will require a more precautionary approach, and the percentages indicated in this footnote are unlikely to be appropriate when considering their listing. Instead, the definition of decline in the main text of Conf. 9.24 should be used when considering the listing of species within this Class.

In considering the percentages indicated above, account needs to be taken of taxon- and case-specific biological and other factors that are likely to affect extinction risk ***and risk of becoming threatened****. Depending on the biology, patterns of exploitation and area of distribution of the taxon, vulnerability factors (as listed in this Annex) may increase this risk, whereas mitigating factors (e.g., large absolute numbers or refugia) may reduce it.*

Conclusions and recommendations

63. The changes proposed in section 6 reflect the way that Parties have increasingly applied the listing criteria for sharks over the last decade. While these changes would not curtail stakeholders developing their own interpretations of the listing criteria (as seen for sharks over the last decade), such changes would formally acknowledge the significant biological vulnerability of sharks, and would remove ongoing political debate around their listing, and associated delays in implementing essential management for traded sharks.

64. Therefore, we recommend that Parties adopt the proposed amendment to Conf. 9.24 (Rev. CoP17) in the footnote in aquatic species as detailed in section 6 of this document.

65. This is simply the precautionary approach, which, along with the intent of Appendix II, has been effectively lost for the biologically vulnerable Class Chondrichthyes in the recent political debate, and in definitions to date within Resolution Conf. 9.24 (Rev. CoP17) on the application of the CITES Convention to commercially exploited aquatic species.

COMMENTS OF THE SECRETARIAT

A. The Secretariat does not recommend that the proposals to amend Resolution Conf. 9.24 (Rev. CoP17) in the present document be adopted for the following reasons.

B. The fundamental elements of the criteria for the amendment of the Appendices are set out in Resolution Conf. 9.24 (Rev. CoP17) on *Criteria for amendment of Appendices I and II* and were adopted by consensus at CoP13 (Bangkok, 2004) after several years of detailed and consultative preparatory work. The Secretariat is not aware of any significant concerns being raised by Parties about the basic suitability of their biological aspects.

C. The proposals made in paragraph 62 of the present document to disapply the footnote in Annex 5 of Resolution Conf. 9.24 (Rev. CoP17) to 'some marine taxa, such as the Class Chondrichthyes' [known as Class Elasmobranchii under standard nomenclature adopted by CITES] does not seem to add clarity, indeed it would make for considerable uncertainty.

D. The Conference of the Parties has adopted Resolution Conf. 12.6 (Rev. CoP18) on *Conservation and management of sharks* and a large number of Decisions at recent meetings to address the effective implementation of the Convention for these species. In the view of the Secretariat, there still remains considerable scope for improvement in this regard and the efforts of Parties should be focused on these provisions.

TENTATIVE BUDGET AND SOURCE OF FUNDING
FOR THE IMPLEMENTATION OF DRAFT RESOLUTIONS OR DECISIONS

According to Resolution Conf. 4.6 (Rev. CoP18) on *Submission of draft resolutions, draft decisions and other documents for meetings of the Conference of the Parties*, the Conference of the Parties decided that any draft resolutions or decisions submitted for consideration at a meeting of the Conference of the Parties that have budgetary and workload implications for the Secretariat or permanent committees must contain or be accompanied by a budget for the work involved and an indication of the source of funding. The Secretariat proposes the following tentative budget and source of funding.

The proposals in the present document do not have budgetary or workload implications for the Secretariat or the permanent committees.