Recommendations for amendments to the Nairobi Convention Protocol Concerning Protected Areas and Wild Fauna and Flora in the East African Region

February 2023 - Wildlife Conservation Society



1. Rationale for amendment

Decisions of the Nairobi Convention Conferences of Parties from 2015 (CP8/4) and 2018 (CP9/5) called for the revision of the *Protocol Concerning Protected Areas and Wild Fauna and Flora in the East African Region* (hereinafter the Protocol) and its annexes. As this activity is now underway, and to further contribute to the revision of the Protocol and its annexes, the Wildlife Conservation Society (WCS) hereby submits recommendations for several revisions to the text and definitions of the Protocol, as well as to the annexes, and the titles, descriptions and coverage of the annexes, and proposes criteria that could be used for the identification of species to be listed in the revised annexes, with a focus on marine megafauna species. Recommendations are made relevant to Annexes II, III and IV, which pertain to fauna species, but not specifically for Annex I that pertains to flora species. However, some of the recommendations made herein for Annexes II, II and IV may also be relevant also for Annex I.

Furthermore, Decision CP7/12¹ from the 2012 Conference of Parties, called for collaboration with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Fauna (CMS), regional fisheries management organizations (i.e., the Indian Ocean Tuna Commission, IOTC) and other partners, on the conservation and management of sharks in the Nairobi Convention area. The recommendations presented in this document, if implemented, would improve adherence at the national level, with the measures defined under such agreements. The Nairobi Convention Member States are all Party to all or most of these agreements, and should thus benefit from implementing these recommendations.

¹ "Decision CP7/12: Conservation of Sharks. 1. To call for regional collaboration, in consultation with the Secretariats of the Convention on International Trade in Endangered Species, Convention on Migratory Species, regional fisheries management organizations and other partners, on the conservation and management of sharks.

2. Definitions – proposal of new definitions of selected terms

The *Red List of Threatened Species* (Red List), developed under the *International Union for the Conservation of Nature* (IUCN), is a comprehensive inventory of the conservation status of the world's plants and animals (<u>IUCN 2023</u>²). Red List assessments provide an objective measure of the extinction risk of species, by placing each species within specific categories of threat risk, each defined by multiple, carefully developed quantitative and qualitative criteria and following very specific terms and definitions (<u>IUCN 2012</u>³, <u>IUCN 2019</u>⁴). The Red List is thus an important tool to help focus management and biodiversity conservation efforts towards those species most at risk of extinction or in need of concerted research. For standardization and objectivity, it would be of significant value to align the Protocol with these terms and definitions.

Within the original Protocol and its annexes, as well as within the draft revised Protocol, there is a need to better define several terms presented in the text, which refer to threatened or vulnerable or at-risk species, or the groups of species facing different threat levels. There are two main concerns: 1) definitions of terms used are not clearly defined based on other global measures/standards (particularly the definitions or terms used by the IUCN Red List and the Categories and Criteria that define the Red List, IUCN 2012), and 2) if the IUCN definitions are applied, some of the terms used in the original Protocol text are inappropriate if following IUCN definitions, in part because they refer to more restricted species groups than the IUCN definition would imply (e.g. in the case of the use of the term "Endangered" in the original Protocol to refer to species under threat, rather than using the IUCN term "Threatened", which by definition includes "Endangered" species but also "Critically Endangered" and "Vulnerable" species).

We therefore recommend that definitions of certain terms used in the Protocol text be revised to align with those of the IUCN Red List as noted below.

Currently, there is a mismatch, particularly with IUCN definitions, in the way the Protocol uses the terms:

- "rare", "unique" and "depleted", as these terms have limited global standard definition, and are not well defined in the Protocol, leaving them open to interpretation;
- "threatened": this term is used in the Protocol, but the definition in the Protocol instead matches the IUCN's definition for "Near Threatened";
- "endangered": this term is used in the Protocol, but the definition in the Protocol instead matches the IUCN's definition of "threatened".
- We therefore propose that the following terms used in the Protocol be amended to align with the IUCN definitions in the following way:
 - The term "Endangered", where used in the Protocol, be replaced by the term "Threatened", and that the definition of the term "Threatened" aligns with the IUCN definition and classification for "Threatened⁵";
 - The term "Threatened", where used in the Protocol, be replaced by the term "Near Threatened", and that the definition of the term "Near Threatened" aligns with the IUCN definition and classification for "Near Threatened⁶"; and
 - The term "Depleted", where used in the Protocol, also be replaced by the term "Near Threatened", aligning with the IUCN definition for "Near Threatened".

² IUCN 2023. The IUCN Red List of Threatened Species. Version 2023-2. <u>iucnredlist.org</u>, accessed 20 February 2023

³ IUCN 2012. *IUCN Red List Categories and Criteria: Version 3.1*. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. iv + 32pp. https://portals.iucn.org/library/node/10315

⁴ IUCN 2019. Guidelines for Using the IUCN Red List Categories and Criteria. Version 14. https://www.iucnredlist.org/resources/redlistguidelines

⁵ "All taxa listed as Critically Endangered qualify for Vulnerable and Endangered, and all listed as Endangered qualify for Vulnerable. Together these categories are described as 'threatened'" (IUCN 2012)

⁶ A Near Threatened species "does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future" (IUCN 2012)

We further propose to include the terms "Vulnerable", "Endangered" and "Critically Endangered", with definitions that align with those defined by the IUCN, with the terms being included in the criteria proposed for listing of species under relevant Annexes. The definitions of these three terms as presented in the revised Protocol should for simplicity refer simply to their IUCN listing, but with the understanding that each incorporates the relevant detailed technical criteria used by the IUCN Red List for the categorization of species in that threat category.

Overall, adopting these revisions would ensure that the definitions match global standards, and align with the IUCN Red List definitions, which is critical as the IUCN Red List is the primary global standard for objective, science-based categorizations of a species' threat status. Adopting such standard definitions will ensure that the conservation status of a species, or a recognised sub-population of a particular species, can be easily determined based on global scientific expertise. This will also avoid several issues:

- the need to subjectively classify species that may or may not be "rare", "unique", "depleted", "threatened" or any other undefined description,
- the need to create new definitions for these terms that are specific to this Protocol, and
- the need for the Convention Secretariat, Parties or Partners to spend the time and resources having to subjectively allocate each species to a threat category.

We therefore propose the following definitions:

"Threatened Species" are all taxa classified globally or regionally by the IUCN Red List of Threatened Species as either Critically Endangered, Endangered or Vulnerable, due to their populations facing an extremely high, very high or high risk of extinction in the wild, respectively;

"Near Threatened Species" are all taxa classified globally or regionally by the IUCN Red List of Threatened Species as Near Threatened, due to not qualifying now for a Threatened category (Critically Endangered, Endangered or Vulnerable), but which are close to qualifying for or are likely to qualify for a threatened category in the near future;

"Vulnerable Species" are all taxa classified globally or regionally by the IUCN Red List of Threatened Species as Vulnerable. Such species are understood to meet the criteria for Vulnerable⁷ as defined by the IUCN Categories and Criteria and are therefore "considered to be facing a high risk of extinction in the wild";

"Endangered Species" are all taxa classified globally or regionally by the IUCN Red List of Threatened Species as Endangered. Such species are understood to meet the criteria for Endangered⁸ as defined by the IUCN Categories and Criteria and are therefore "considered to be facing a very high risk of extinction in the wild";

"Critically Endangered Species" are all taxa classified globally or regionally by the IUCN Red List of Threatened Species as Critically Endangered. Such species are understood to meet the criteria for Critically Endangered as defined by the IUCN Categories and Criteria and are therefore "considered to be facing an extremely high risk of extinction in the wild."

⁷ "A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable", and "it is therefore considered to be facing a high risk of extinction in the wild." (IUCN 2012) https://portals.iucn.org/library/node/10315

⁸ "A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered", and "it is therefore considered to be facing a very high risk of extinction in the wild." (IUCN 2012) https://portals.iucn.org/library/node/10315

⁹ "A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered", and "it is therefore considered to be facing an extremely high risk of extinction in the wild." (IUCN 2012) https://portals.iucn.org/library/node/10315

3. Annex titles and descriptions/definitions

The Protocol includes four annexes, listing species for different reasons, yet the titles of the annexes in the original version of the Protocol do not clearly define the content of each annex.

We therefore propose here amended titles for each of Annexes II, III and IV as per below.

Furthermore, the annexes of the Protocol list species that should be managed in a certain way, although the annexes themselves and the reasons for listing species within each are not well defined, thus leaving it unclear as to exactly what the implications are of listing of a species on any of the annexes.

We therefore propose here paragraphs recommended for insertion into the relevant sections of the text of the Protocol, to clearly define the annexes. These link to recommended revisions to the annex titles.

Annex II

Annex Title in Original Protocol Text: Species of wild fauna requiring special protection

The term "special protection" is not clearly defined and thus leaves this annex open to interpretation. Article 3, paragraph 2 of the Protocol text, referring to this annex, calls for "the strictest protection of the endangered¹⁰ wild animal species listed in Annex II". However, how "special protection" relates to "the strictest protection" is not clearly defined. Similarly, the term "strict" is not defined, and is more appropriate to the enforcement of the measure than then level of protection that should be provided. The title of this annex is therefore unclear and inconsistent with the text of the Protocol.

Considering the text of paragraph 2 and its sub-paragraphs a-e, we propose a revised title for this annex as "Species of wild fauna requiring full protection".

Aligned with the proposed revised title for Annex II, it is fitting that a paragraph be added under Article 3, preferably immediately under "National measures for the protection and conservation of biological diversity" to define the purpose or content of Annex II (similarly this could include a definition for Annex I).

Article 3 paragraph 2 of the draft revised Protocol calls on Parties to "take appropriate measures to ensure the strictest protection of the endangered wild animal species listed in Annex II". The term "strictest protection" suggests full protection, prohibition, total no-take, etc, for these species, although the use of "where appropriate" elsewhere in the same paragraph leaves a loophole for interpretation – i.e., whether or not protection is deemed appropriate is subjective. Parties are required to "strictly protect" these species, not only where appropriate, therefore this subjectivity should be removed. This annex should thus present a list of species requiring full protection, with any text allowing subjective interpretation removed.

We propose a new paragraph defining this annex, as "Annex II presents a list of threatened wild fauna species that are required to be fully protected within all Party States."

Furthermore, within Article 3 paragraph 2, the term "endangered" i) does not follow the proposed revisions to definitions and terminology described above and ii) suggests that there are species listed in this annex that that are not endangered, which creates ambiguity for paragraph 2 that calls on states to strictly protect "endangered species listed in Annex II", i.e., not necessarily any species that are listed in the annex that are not endangered. We therefore propose to delete the clause "endangered wild animal" here and rather have "...protection of the endangered wild animal species listed in Annex II" or "...protection of all species listed in Annex II".

¹⁰ Following the original Protocol's definition for Endangered

Annex III

Annex Title in Original Protocol Text: Harvestable species of wild fauna

Annex Title in Original Protocol Annex: Harvestable species of wild fauna requiring protection

Annex Title in Draft Revised Protocol Text Nov 2022: Exploitable biological species

The term "harvestable" in the original title suggests that the species in this annex can be harvested. In so doing, the species are no different to all other species not listed. The part of the title "requiring protection" contradicts the "harvestable" nature, as protected species should not be harvested. The original title is therefore contradictory and ambiguous. The proposed title "Exploitable biological species" in the draft revised Protocol is also quite different to the current title as presented in the annex of the original text "Harvestable species of wild fauna <u>requiring protection"</u> (as labelled in the actual annexes of the original protocol, not the text of the protocol). The revised title proposed in the 2022 draft Protocol revision refers to "exploitable biological species". However, this makes no mention of the need for stricter controls of the harvesting or trade of the species, as referred to in Article 5, paragraphs 1 and 2 (including sub-points a-f under paragraph 2), and may be confused for an annex listing species for which harvesting is encouraged. The draft title and paragraphs 1 and 2 under article 5 are thus also contradictory and ambiguous.

We propose a revised title for this annex as "Species of wild fauna requiring harvesting and/or trade restrictions".

Aligned with the proposed revised title for Annex III, it is fitting that a paragraph be added under Article 5 of the draft revised Protocol, preferably immediately under the title (currently "Exploitable biological species", which itself should be revised) to define the purpose or content of Annex III. This is particularly relevant considering the contradiction between the current title "exploitable biological species" and Paragraph 1 of Article 5 that calls for "ensuring protection of the depleted and threatened biological species listed in Annex III".

Overall, what this annex is trying to achieve is not totally clear. It could be interpreted to be about identifying exploitable species or species that are suited for exploitation, or about protecting or controlling fishery impacts on species that are not yet threatened but that may become so in the future if their catches or trade are not in some way regulated. The terminology of the original text and annex title (as presented in the annex, not the text) suggest the latter, calling for "protection of the depleted and threatened biological species listed in Annex III", which does not align with species that are identified as appropriate for exploitation.

Ultimately, there should be no planned exploitation of species that are known to be threatened or Near Threatened (following IUCN definitions). Rather this annex should be about species that are threatened or Near Threatened, but not yet at a level which meets the criteria for listing on Annex II (full protection), but for which harvest or fishery catch levels and/or trade should be regulated to avoid further declines, at least until a point where the population(s) has recovered to sustainable levels, at which stage they could be removed from the annex if appropriate.

We therefore propose a new paragraph defining this annex, as "Annex III presents a list of primarily threatened and Near Threatened wild fauna species for which harvesting and/or trade should be regulated within all Party States, to avoid further population declines and to allow population restoration."

Annex IV

Annex Title in Original Protocol Text: Migratory species

Annex Title in Original Protocol Annex: Protected migratory species

Article 6 of the Protocol refers simply to "migratory species" whereas the title of the annex as it appears in the annex of the Protocol refers to "protected migratory species", indicating disagreement between article and annex. The text within paragraph 1 under Article 6 calls on parties to coordinate their efforts for "the protection of migratory species listed in Annex IV", suggesting that the annex is intended for "protected" species or species requiring protection. However, paragraph 1 also calls on Parties to implement measures listed in Article 5 paragraph 2, which relates to "Harvestable species of wild fauna" not "Species of wild fauna requiring special protection", suggesting that Article 6 on migratory species is not necessarily on "protected" migratory species.

Ultimately, the title of this annex should accurately reflect the species that are listed – if this annex is intended for migratory species that require coordinated multilateral management (which may include *inter alia* prohibitions, regulated harvesting, trade controls and/or joint management plans), the title should reflect that. However, if this annex is simply to state that listed migratory species should also be protected, then such species could simply be listed under Annex II (currently 6 of the 8 species listed in Annex IV are also already listed in Annex II). Alternatively, if this is intended to list migratory species that require regulated harvesting (but not strict protection), then the species could simply be listed under Annex III. Thus, it appears that Annex IV would be relevant only if the intended purpose thereof is to specify species for which Parties are required to coordinate their conservation and management actions, which again may include regulation or full protection (and thus may even include species also listed in Annex II or Annex III).

In this case, we propose a revised title for this annex as "Migratory species requiring coordinated multilateral management and conservation".

Aligned with the proposed revised title for Annex IV, it is fitting that a paragraph be added under Article 6 of the draft revised Protocol, preferably immediately under the title (currently "Migratory species", which itself should be revised) to define the purpose or content of Annex III.

We therefore propose a new paragraph defining this annex, as "Annex IV presents a list of migratory species requiring coordinated multilateral management and conservation action between/among Party States or between/among one or more Party States and other non-Party range states of the species"; thereby binding Party States to coordinate their actions over and above national measures that may be implemented for Annex II and Annex III species.

Furthermore, Article 6 calls on Party States to "coordinate their efforts for the protection of <u>migratory</u> species listed in Annex IV". This could be interpreted to suggest that there are also non-migratory species listed in Annex IV, to which this measure does not apply. Therefore, the adjective "migratory" could be removed here, so as to not allude to there being non-migratory species listed in this annex. i.e., to read that States must "coordinate their efforts for the protection of <u>all</u> species listed in Annex IV".

4. Annex listing criteria

The four annexes list different, but in some cases overlapping, species lists, whereby species have been listed on a specific annex for certain reasons or conservation or management needs, although the justifications or reasons for listing are unclear and there are no formal criteria to guide the listing of species on any one annex.

> We therefore propose that a set of criteria be developed for each annex, to assist with the identification of species warranting listing on that annex. Such criteria should include, but not be limited to, those defined below.

For simplicity, the use of these criteria as proposed for inclusion in the revised Protocol should simply refer to a species' listing under the annexes, appendices or similar of other multilateral agreements or listings, such that the actual listing thereunder is the criterion for listing under the relevant Protocol Annex, but with the understanding that the criterion incorporates and is thus justified by the relevant detailed technical criteria used by the original agreement or convention. For example, one criterion for Annex II could be that "the species is listed on Appendix I of the *Convention on the Conservation of Migratory Species of Wild Animals* (CMS)", which calls for strict protection in range states. Therefore, species listed on CMS Appendix I should be listed in Annex II of the Protocol based on the criterion that "the species is listed under CMS Appendix I", but with the understanding that the criterion incorporates the relevant detailed technical criteria used by CMS for the inclusion of species in CMS Appendix I, i.e., "migratory species that have been assessed as being in danger of extinction throughout all or a significant portion of their range".

Proposed criteria - Annex II

Article 4 of the original Protocol: *Species of Wild Fauna Requiring Special Protection* stipulates: "The Contracting Parties shall take all appropriate measures to ensure the strictest protection of the endangered wild fauna species listed in Annex II. To this end, each Contracting Party shall strictly regulate and, where required, prohibit activities having adverse effects on the habitats of such species. In particular, the following activities shall, where required, be prohibited with regard to such species:

- a. all forms of capture, keeping or killing;
- b. damage to, or destruction of, critical habitats;
- c. disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation;
- d. destruction or taking of eggs from the wild or keeping these eggs even if empty;
- e. possession of and <u>internal trade</u> in these animals, alive or dead, including stuffed animals and any readily recognizable part or derivative thereof."
- > Following this definition, we propose the following criteria for listing species under Protocol Annex II:
 - I. Convention on the Conservation of Migratory Species of Wild Animals Appendix I Endangered migratory species 11 (CMS Appendix I): This Appendix "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)." Noting that CMS Appendix I requires that CMS 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". Thus, CMS Party States are expected to fully protect all species listed on CMS Appendix I. All Nairobi Convention member states, other than Comoros, are Party to CMS.

¹¹ cms.int/en/page/appendix-i-ii-cms

- II. Indian Ocean Tuna Commission (IOTC) Resolutions: IOTC resolutions 12/04, 12/09, 13/04, 13/05, 13/06 and 19/03 prohibit the capture/retention of turtles, marine mammals and several shark and ray species by vessels in the IOTC Register of Active Vessels in Contracting Parties and Cooperating Non-Contracting Parties (CPCs). Thus, IOTC prohibited species should be **prohibited from capture** in IOTC fisheries of IOTC member states. All Nairobi Convention member states are Party to IOTC.
- III. International Union for the Conservation of Nature (IUCN) Red List of Threatened Species 12: those species assessed as Critically Endangered (CR) or Endangered (EN) 13:
 - a. Critically <u>Endangered</u> (CR) species are "considered to be facing an extremely high risk of extinction in the wild";
 - b. <u>Endangered</u> (EN) species are "considered to be facing a very high risk of extinction in the wild".
- IV. Convention on International Trade in Endangered Species of Wild Fauna and Flora Appendix I¹⁴ (CITES Appendix I): This Appendix lists species that are "threatened with extinction and CITES prohibits international trade in specimens of these species". Thus, species listed in CITES Appendix I should be prohibited from international trade, from or to a signatory state. All Nairobi Convention member states are Party to CITES.
- V. International Whaling Commission: The IWC set a moratorium on commercial whaling, which specifically covers the "great whales" ¹⁵, therefore all species covered under this moratorium are appropriate for listing under Annex II of the Protocol. Since 1979 the Indian Ocean is also an agreed "Sanctuary", ratification of which also prohibited the capture of all whale and dolphin species. Unless there is evidence of "traditional" hunts; all cetacean species should thus also be listed under Annex II of the Protocol. Four Nairobi Convention member states, Kenya, Tanzania, South Africa and France, are Party to the IWC.
- VI. The United Nations Convention on the Law of the Sea¹⁶ (UNCLOS) calls on signatory states to conserve marine mammals, and is thus a valid rationale for listing marine mammal species on Annex II of the Protocol. UNCLOS also imposes a duty on signatory states to follow the guidelines of the IWC. All Nairobi Convention member states are Party to UNCLOS.

Proposed criteria - Annex III

Article 5 of the original Protocol: Harvestable Species of Wild Fauna stipulates:

- "1. The Contracting Parties shall take all appropriate measures to ensure the protection of the <u>depleted or threatened wild fauna species</u> listed in Annex III.
- 2. Any <u>exploitation of such wild fauna species shall be regulated</u> in order to restore and maintain the populations at optimum levels. Each Contracting Party shall develop, adopt and implement management plans for the exploitation of such species which may include:
 - 1. the <u>prohibition of the use of all indiscriminate means of capture and killing</u> and of the use of all means capable of causing local disappearance of, or serious disturbance to, populations of a species;
 - 2. closed seasons and other procedures regulating exploitation;

¹² IUCN 2023. The IUCN Red List of Threatened Species. Version 2023-2. <u>iucnredlist.org</u>, accessed 20 February 2023

¹³ IUCN 2012. IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. iv + 32pp.

¹⁴ cites.org/eng/app/appendices.php

¹⁵ The 'great whales' comprise 13 species, 12 of which occur in the NC area: Antarctic blue whale, pygmy blue whale, fin whale, sei whale, two subspecies of Bryde's whale, humpback whale, Omura's whale, common minke whale, Antarctic minke whale, Southern right whale, sperm whale ¹⁶ un.org/depts/los/convention agreements/convention overview convention.htm

- 3. the temporary or local prohibition of exploitation, as appropriate, in order to restore viable population levels;
- 4. the <u>regulation</u>, as appropriate, of sale, keeping for sale, transport for sale or offering for sale of live and dead wild animals;
- 5. the safeguarding of breeding stocks of such species and their critical habitats in protected areas designated in accordance with article 8 of this Protocol;
- 6. exploitation in captivity."
- Following this definition, we propose the following criteria for listing species under Protocol Annex III:
 - I. CMS Appendix II Migratory species conserved through Agreements¹⁷: This Appendix comprises "migratory species that have an <u>unfavourable conservation status</u> and that <u>require international agreements for their conservation and management</u>, as well as those that have <u>a conservation status which would significantly benefit from the international cooperation</u> that could be achieved by an international agreement. The Convention encourages the Range States to species listed on Appendix II to conclude global or regional Agreements for the conservation and management of individual species or groups of related species." This list would exclude those species listed in CMS Appendix II that are also listed on CMS Appendix I and which would be identified in the preceding section as being proposed for inclusion on Annex II of the Protocol, based on listing under CMS Appendix I.
 - **II. CITES Appendix II**¹⁸: This Appendix lists species that are "<u>not necessarily now threatened</u> with extinction but that may become so unless trade is closely controlled".
- III. Southern Indian Ocean Fisheries Agreement (SIOFA¹⁹) Conservation and Management Measure 2019/12: Conservation and Management Measures for Sharks²⁰ (Sharks), Annex I: This annex lists deep-sea shark species that are considered by SIOFA as being "of concern". The annex does not prohibit the capture of these species, but States that are Contracting Parties are obliged to ensure that their fishing vessels do not target any of the deep-sea sharks listed in this annex. Of the Nairobi Convention Member States, Mauritius, France and the Seychelles are Party to SIOFA, while Kenya, Madagascar and Mozambique are Signatories but have not yet ratified the Agreement, and Comoros is a Cooperating non-Contracting Party. These States are therefore obliged to adhere to the SIOFA management measures.
- IV. IUCN Red List of Threatened Species²¹: those species assessed as either Vulnerable (VU) or Near Threatened (NT)²²:
 - a. Vulnerable (VU) species are "considered to be facing a high risk of extinction in the wild";
 - b. Near Threatened (NT) a Near Threatened species "does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future".

¹⁷ cms.int/en/page/appendix-i-ii-cms

¹⁸ cites.org/eng/app/appendices.php

¹⁹ https://www.apsoi.org/

²⁰ SIOFA 2019. Conservation and Management Measure for Sharks (Sharks). 1–3.

²¹ IUCN 2023. The IUCN Red List of Threatened Species. Version 2023-2. <u>iucnredlist.org</u>, accessed 20 February 2023

²² IUCN 2012. IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. iv + 32pp.

Proposed criteria - Annex IV

Article 6 of the Protocol: Migratory Species stipulates: "The Contracting Parties shall, in addition to the measures specified in Articles 3, 4 and 5, co-ordinate their efforts for the protection of migratory species listed in Annex IV whose range extends into their territories. To this end, each Contracting Party shall ensure that, where appropriate, the closed seasons and other measures referred to in paragraph 2 of Article 5 are also applied with regard to such migratory species."

- > Following this definition, we propose the following criteria for listing species under Protocol Annex IV:
 - I. CMS²³ Appendix I Endangered migratory species (CMS Appendix I) or Appendix II Migratory species conserved through Agreements: The appendices of CMS list threatened migratory species. Therefore, all species listed on these two CMS appendices are proposed for Annex IV of the Nairobi Convention Protocol.
 - II. CMS taxon-specific Memoranda of Understanding (MOUs):
 - a. CMS Sharks MOU, Annex I²⁴: In addition to the listing of shark and batoid species on Appendices I and II of CMS, a taxon-specific MOU was developed for migratory shark and batoid species (CMS Sharks MOU). This MOU provides an instrument under the CMS for achieving a favourable conservation status for migratory sharks and batoids. The CMS Sharks MOU is non-binding, but encourages signatories "to strengthen and improve their role in taking measures to improve or restore a favourable conservation status of sharks listed in Annex 1 of the Memorandum of Understanding". Annex I lists migratory species of sharks and batoids for which this conservation measure is intended to apply.
 - b. **CMS Dugong MOU**²⁵: The Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range (Dugong MOU) aims to promote internationally coordinated actions to ensure the long-term survival of dugongs and their seagrass habitats throughout their extensive range. The MOU promotes a conservation plan for this species, and the species warrants listing under Annex IV of the Protocol, on migratory species requiring coordinated multilateral management.
 - c. **CMS Indian Ocean and South-East Asia Turtle MOU**²⁶: The Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia puts in place a framework through which States, territories, interand non-governmental stakeholders of the Indian Ocean and South-East Asian region, as well as other concerned States, can work together to conserve marine turtle populations and their habitats for which they share responsibility. Species of turtles listed in this MOU are appropriate listing under Annex IV of the Protocol, on migratory species requiring coordinated multilateral management.
- III. The United Nations Convention on the Law of the Sea²⁷ (UNCLOS) Annex I Highly Migratory Species²⁸: UNCLOS Annex I lists species considered to be "highly migratory species", making this an appropriate source for defining migratory species.

²³ cms.int/en/page/appendix-i-ii-cms

²⁴ cms.int/sharks/en/species

²⁵ https://www.cms.int/dugong

²⁶ https://www.cms.int/iosea-turtles

²⁷ un.org/depts/los/convention agreements/convention overview convention.htm

²⁸ un.org/depts/los/convention agreements/texts/unclos/annex1.htm

IV. Fowler²⁹ (2014): In a global review of migratory chondrichthyan fishes, Fowler (2014) identified and listed a number of shark and batoid species that can be defined as migratory or possibly migratory. These include 30 migratory shark species and 14 migratory batoid species, as well as 12 possibly migratory shark species and 9 possibly migratory batoid species, that occur within the WIO. Fowler (2014) used the definitions presented in CMS Article I³⁰ and defined "migratory species" as species for which "the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries".

5. Species proposed for listing under Protocol Annexes II, III and IV

Following the proposed criteria, we present in the tables that follow proposed lists of marine megafauna species in the WIO that are recommended for listing under Annex II (Table 1), Annex III (Table 2) and Annex IV (Table 3) of the revised Protocol.

It should be noted that each criterion should be considered adequate justification for listing of a species under that Annex, and that the species need not meet all of the proposed criteria in order to be listed under that Annex. Furthermore, the criteria proposed in this document should not be considered a finite list, and other parties may propose additional criteria that could be considered, particularly for other species groups.

We propose the listing of relevant marine megafauna species, including sharks, batoids, chimaeras, turtles and marine mammals. However, the proposed lists are not necessarily finite lists, as other parties and experts may propose additional species or species groups that are not considered here. However, the proposed lists are objective, based on global expert opinions and each proposed listing is well justified, therefore the listings as proposed in Tables 1 to 3 should be given consideration for inclusion in their entirety in the revised Protocol.

6. Concluding remarks

Pursuant to Conference of Party Decisions CP8/4 and CP9/5, this technical document is intended to provide biological and conservation information, to assist with the revision of the Nairobi Convention's *Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region* and its annexes, and to provide robust and objective rationales for the listing of species under each annex.

The document includes recommendations for several revisions and additions to the text and definitions of the Protocol, as well as to the annexes, and the titles, descriptions and coverage of the annexes, and proposes criteria to be used for the identification of species to be listed in the revised annexes. The proposed criteria are objective and scientifically robust, and based on global expertise and criteria already established and well defined under several other multilateral agreements, and thus offer well justified criteria for the Protocol's annexes.

Nairobi Convention Member States are all signatory to CITES, IOTC and UNCLOS, most are signatory to CMS, the CMS Sharks MOU, the CMS dugong MOU and the CMS turtle MOU. Kenya, Tanzania, South Africa and France are Party to the IWC. Mauritius, France and the Seychelles are Party to SIOFA, while Kenya, Madagascar and Mozambique are Signatories but have not yet ratified SIOFA, and Comoros is a Cooperating non-Contracting Party. States are thus encouraged to consider and accept the recommendations within this technical document, as these are strongly aligned with and would improve adherence at the national level to the measures defined under numerous multilateral environmental agreements, including the Nairobi Convention itself.

²⁹ Fowler, S. 2014. *The Conservation Status of Migratory Sharks*. UNEP/CMS Secretariat. Bonn, Germany. 30pp.

³⁰ cms.int/en/convention-text

Table 1: Shark, batoid, marine turtle and marine mammal species recommended for listing on Nairobi Convention Annex II, based on their listing either on the Convention on the Conservation of Migratory Species of Wild Animals Appendix I (CMS I), as an Indian Ocean Tuna Commission prohibited species (IOTC), on the Convention on International Trade in Endangered Species of Wild Flora and Fauna Appendix I (CITES I), on the International Union for Conservation of Nature Red List of Threatened Species as Critically Endangered (IUCN CR) or Endangered (IUCN EN), on the International Whaling Commission moratorium on commercial whaling (IWC), or on the United Nations Convention on the Law of the Sea (UNCLOS). Countries in which the species is confirmed (1) or reported but not confirmed (-), if the species is listed on CITES and/or CMS Appendix I or II, if the species is prohibited from capture by the IOTC (x) and the current IUCN Red List status (IUCN) for each species is also presented (CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Dada Deficient). ZA = South Africa, MZ = Mozambique, TZ = Tanzania, KE = Kenya, SO = Somalia, MG = Madagascar, MU = Mauritius, RE = La Réunion, SC = Seychelles, KM = Comoros, YT = Mayotte, ABNJ = Areas Beyond National Jurisdiction.

Family	Species	Common name	Taxonomic reference	7Δ	M7	T7	KF	so	MG N	MU.	RE S	C KI	V V	ΤΔ	BNI	CITES	CMS	IOTO	IUCN	Criteria for listing on Annex II
Sharks	эрешез	Common name	Taxonomic reference		1412	12	NL.	30	1410 11	VIO	INE 3	ic Ki	*	1 ^	D143	CITES	CIVIO	1010	1001	Citteria for listing on Annex II
Alopiidae	Alopias pelagicus ^a	Pelagic thresher shark	Nakamura, 1935	1	1	1	1	1	1			1 1		1		ш	П	х	EN	IOTC; IUCN EN
Alopiidae	Alopias superciliosus ^a	Bigeye thresher shark	(Lowe, 1841)	1	1	1	1	1				1 1		1			ii	X	VU	IOTC
Alopiidae	Alopias vulpinus ^a	Common thresher shark	(Bonnaterre, 1788)	1	-	-	-	_	_	_				_	1	"	ii.	X	VU	IOTC
Carcharhinidae	Carcharhinus amblyrhynchos	Grey reef shark	(Bleeker, 1856)	1	1	1	1	1		1	1 :				-	.: II	"	^	EN	IUCN EN
Carcharhinidae	Carcharhinus longimanus ^b	Oceanic whitetip shark	(Poev, 1861)	1	1	1	1	1		1					1	ii		х	CR	CMS I; IOTC; IUCN CR
Carcharhinidae	Carcharhinus obscurus	Dusky shark	(Lesueur, 1818)	1	1	-	-	1	1	_	-			1	-	"	i	^	EN	IUCN EN
Carcharhinidae	Carcharhinus obscurus	Sandbar shark	(Nardo, 1827)	1	1	1	1		_	1	1 :	1 1		1		"	"		EN	IUCN EN
Carcharhinidae	Negaprion acutidens	Sicklefin lemon shark	(Rüppell, 1837)	1	1	1				1		1 1				"			EN	IUCN EN
Carchariidae	Carcharias taurus	Ragged-tooth shark	Rafinesque, 1810	1	1	1	-	1	-	_		1		1		"			CR	IUCN CR
Centrophoridae	Centrophorus granulosus	Gulper shark	(Bloch & Schneider, 1801)	1	1	1		1	1			1 1		1	1				EN	IUCN EN
Centrophoridae	Centrophorus Iesliei	African gulper shark	White, Ebert & Naylor 2017	1	1	1		1	1			1 1		1	1				EN	IUCN EN
Centrophoridae	•	0 1	(Bonnaterre, 1788)	1					1			1			1				EN	IUCN EN
Centrophoridae	Centrophorus squamosus	Leafscale gulper shark Little gulper shark	(Rafinesque, 1810)	1		1		1	1	1		1			1				EN	IUCN EN
Cetorhinidae	Centrophorus uyato Cetorhinus maximus	Basking shark	(Gunnerus, 1765)	1	1	1		1	1	1			•	_	1	П	1, 11		EN	CMS I; IUCN EN
Echinorhinidae	Echinorhinus brucus	Bramble shark	(Bonnaterre, 1788)	1	1	1		1							1	11	1, 11		EN	IUCN EN
		Shorttail nurse shark	, ,	1	1	1	1	1	1										CR	IUCN CR
Ginglymostomatidae	Pseudoginglymostoma brevicaudatum		Günther, 1867	1					-	4					4	Ш			VU	CMS I
Lamnidae	Carcharodon carcharias	Great white shark	(Linnaeus, 1758)	1	1	1	1	1	1	1	1 :	$egin{array}{ccc} 1 & 1 \\ 1 & 1 \end{array}$			1	II	I, II II		EN	IUCN EN
Lamnidae	Isurus oxyrinchus	Shortfin mako shark	Rafinesque, 1810	1	1	1						1 1			1	'' 	11		EN	
Lamnidae	Isurus paucus	Longfin mako shark	Guitart Manday, 1966	1		_	1	1	1	1	1	1 1		1	1	Ш	Ш			IUCN EN
Oxynotidae	Oxynotus centrina	Angular rough shark	(Linnaeus, 1758)			-			1						-				EN	IUCN EN
Pentanchidae	Holohalaelurus favus	Honeycomb catshark	Human, 2006	1															EN	IUCN EN
Pentanchidae	Holohalaelurus punctatus	African spotted catshark	(Gilchrist, 1914)	1	1				1										EN	IUCN EN
Rhincodontidae	Rhincodon typus ^c	Whale shark	Smith, 1828	1	1	1	1	1	1	1	1	1 1		1	1	Ш	I, II	Х	EN	CMS I; IOTC; IUCN EN
Scyliorhinidae	Haploblepharus edwardsii	Puffadder shyshark	(Schinz, 1822)	1															EN	IUCN EN
Sphyrnidae	Sphyrna lewini	Scalloped hammerhead shark	(Griffith & Smith, 1834)	1					1					_		II	II		CR	IUCN CR
Sphyrnidae	Sphyrna mokarran	Great hammerhead shark	(Rüppell, 1837)	1	1				1					_		II	II		CR	IUCN CR
Stegostomatidae	Stegostoma tigrinum	Zebra shark	(Herman, 1783)	1	1	1		1		1		_	-	1					EN	IUCN EN
Triakidae	Mustelus manazo	Starspotted smoothhound	Bleeker, 1855		-	1	1		-			1							EN	IUCN EN
Triakidae	Mustelus mustelus	Common smoothhound	(Linnaeus, 1758)	1															EN	IUCN EN
Dataida (umus alcatas s	undendishen assufishen																			
Dasyatidae	wedgefishes, sawfishes) Himantura uarnak	Honeycomb stingray	(Gmelin, 1789)	1	1	1	1	1	1	1		1		1					EN	IUCN EN
				1	1	1	1	1	1	1		1		1		Ш			CR	
Glaucostegidae Mobulidae	Glaucostegus halavi Mobula alfredi ^d	Halavi guitarfish	Forsskål, 1775	1	1	1	1		1			1 1		1	1	II		.,	VU	IUCN CR CMS I; IOTC
	,	Reef manta ray	(Krefft, 1868)				4	4	1	4							I, II	Х		
Mobulidae	Mobula birostris d	Giant manta ray	(Walbaum, 1792)	1	1	1	1	1 1	1		1			1	1	II	I, II	Х	EN EN	CMS I; IOTC; IUCN EN
Mobulidae	Mobula eregoodoo ^a Mobula kuhlii ^a	Longhorned pygmy devil ray	(Cantor 1849)		1	-	1	_	1			 1 -		-	-	II	I, II I, II	Х	EN	CMS I; IOTC; IUCN EN
Mobulidae		Shortfin devil ray	(Valenciennes, 1841)	1	1	1		1		-		1 -			1	11	,	Х		CMS I; IOTC; IUCN EN
Mobulidae	Mobula mobular d	Spinetail devil ray	(Bonnaterre, 1788)	1			1	1		4		1			1		I, II	Х	EN	CMS I; IOTC; IUCN EN
Mobulidae	Mobula tarapacana ^d	Sicklefin devil ray	(Philippi, 1892)	1	-	1				1	1				1	II	I, II	Х	EN	CMS I; IOTC; IUCN EN
Mobulidae	Mobula thurstoni ^d	Bentfin devil ray	(Lloyd, 1908)	1	-	1			1						-	Ш	I, II	Х	EN	CMS I; IOTC; IUCN EN
Myliobatidae	Aetomylaeus bovinus	Duckbill ray	(Saint-Hilaire, 1817)	1	1	1													CR	IUCN CR
Myliobatidae	Aetomylaeus vespertilio	Ornate eagle ray	(Bleeker, 1852)	1	1	1						1							EN	IUCN EN
Myliobatidae	Myliobatis aquila	Common eagle ray	(Linnaeus, 1758)	1	1					_	1								CR	IUCN CR
Pristidae	Pristis pristis	Largetooth sawfish	(Linnaeus, 1758)	1	1	1					-	-				!	I, II		CR	CMS I; CITES I; IUCN CR
Pristidae	Pristis zijsron	Green sawfish	(Bleeker, 1851)	1	1	-	1	1		-	-					I	I, II		CR	CMS I; CITES I; IUCN CR
Rajidae	Raja ocellifera	Twineyed skate	Regan, 1906	1	-	-													EN	IUCN EN
Rajidae	Rostroraja alba	Spearnose skate	Lacepède, 1803	1	1		1		1			1							EN	IUCN EN
Rhinidae	Rhina ancylostomus	Bowmouth guitarfish	Bloch & Schneider, 1801	1	1	1				1			-	1		II			CR	IUCN CR
Rhinidae	Rhynchobatus australiae	Bottlenose wedgefish	Whitley, 1939		1	1					1	1				II	Ш		CR	IUCN CR
Rhinidae	Rhynchobatus djiddensis	Whitespotted wedgefish	(Forsskål, 1775)	1	1	-	-	-	-	-	-	-		-		Ш			CR	IUCN CR
Rhinobatidae	Acroteriobatus leucospilus	Greyspot guitarfish	Norman, 1926	1	1	1										П			EN	IUCN EN
Rhinopteridae	Rhinoptera jayakari	Shorttail cownose ray	Boulenger, 1895	1	1	1	1	1	1						1				EN	IUCN EN

Family	Species	Common name	Taxonomic reference	ZA	MZ	TZ	KE	SO	MG I	MU	RE S	C KI	M Y	T A	ABNJ	CITES	CMS	IOTC	IUCN	Criteria for listing on Annex II
Marine turtles																				
Cheloniidae	Caretta caretta e	Loggerhead turtle	(Linnaeus, 1758)	1	1	1	1	1	1	1	1 1	. 1	1 1	L	1	1	1	x	VU	CMS I; CITES I; IOTC
Cheloniidae	Chelonia mydas ^e	Green turtle	(Linnaeus, 1758)		1	1	1	1	1	1	- 1	. 1	1 1	L	1	1	- 1	х	EN	CMS I; CITES I; IOTC; IUCN EN
Cheloniidae	Eretmochelys imbricata ^e	Hawksbill turtle	(Linnaeus, 1766)	1	1	1	1	1	1	1	1 1		1 1	L	1	1	- 1	х	CR	CMS I; CITES I; IOTC; IUCN CR
Cheloniidae	Lepidochelys olivacea ^e	Olive ridley turtle	(Eschscholtz, 1829)	_	1	1	1	1	1	_	- 1	. 1	1 1	L	-	1	- 1	х	VU	CMS I; CITES I; IOTC
Dermochelyidae	Dermochelys coriacea ^e	Leatherback turtle	(Vandelli, 1761)	1	1	1	1	_	1	1	1 1	. 1	1 1	l	1	1	- 1	Х	VU	CMS I; CITES I; IOTC
Marine mammals	,		, , ,																	
Balaenidae	Eubalaena australis ^f	Southern right whale	Desmoulins, 1822	1	1				1						1	1		х	LC	CMS I: CITES I: IOTC: IWC: UNCLOS
Balaenopteridae	Balaenoptera musculus intermedia ^f	Antarctic blue whale	Burmeister, 1871	1		1	1	1	_	1	1 1	. 1	1 1		1	i	i	x	EN	CMS I; CITES I; IOTC; IUCN EN; IWC; UNCLOS
Balaenopteridae	Balaenoptera musculus brevicauda ^f	Pygmy blue whale	Ichihara, 1966	1	-		1	_	1		1 1				1	i	i	x	EN	CMS I; CITES I; IOTC; IUCN EN; IWC; UNCLOS
Balaenopteridae	Balaenoptera physalus ^f	Fin whale	Linnaeus, 1758	1		-	-	-		1	1		1		1	i	i	x	VU	CMS I; CITES I; IOTC; IWC; UNCLOS
Balaenopteridae	Balaenoptera borealis schlegelii ^f	Sei whale	Flower, 1865	1	-				1		1		-		1	i	i	x	EN	CMS I; CITES I; IOTC; IUCN EN; IWC; UNCLOS
Balaenopteridae	Balaenoptera edeni brydei ^f	Bryde's whale	Olsen, 1913	1					-		-				1	i	ii	x	LC	CITES I; IOTC; IWC; UNCLOS
Balaenopteridae	Balaenoptera edeni edeni ^f	Bryde's whale	Anderson, 1879		1	1	1	1	1	1	1 1	1	1 1		-	i	11	X	LC	CITES I; IOTC; IWC; UNCLOS
Balaenopteridae	Balaenoptera omurai ^f	Omura's whale	Wada, Oishi and Yamada, 2003	_	-	-	1		-	-						i	11	x	DD	CITES I; IOTC; IWC; UNCLOS
Balaenopteridae	Balaenoptera acutorostrata ^f	Common minke whale	Lacépède, 1804	1	1		-	-							1	i		X	LC	CITES I; IOTC; IWC; UNCLOS
Balaenopteridae	Balaenoptera bonaerensis ^f	Antarctic minke whale	Burmeister, 1867	1		1	1		1	1	1	1	1 1		1	i	П	x	NT	CITES I; IOTC; IWC; UNCLOS
Balaenopteridae	Megaptera novaeangliae australis ^f	Humpback whale	Borowski, 1781	1		1	1	1	1	1	1				1	i	ï	x	LC	CMS I; CITES I; IOTC; IWC; UNCLOS
Delphinidae	Orcinus orca f	Killer whale	Linnaeus, 1758	1	1	1		1	1	_	1 1				1	ii	i	X	DD	IOTC; UNCLOS
Delphinidae	Pseudorca crassidens ^f	False killer whale	Owen, 1846	1	1	1			1		1 1				1	II.		х	NT	IOTC; UNCLOS
Delphinidae	Feresa attenuata ^f	Pygmy killer whale	Gray, 1874.	1				1		_			1 1		1	II		Х	LC	IOTC; UNCLOS
Delphinidae	Peponocephala electra ^f	Melon-headed whale	Gray, 1846	1	1			1		1	1 1				_	II.		Х	LC	IOTC; UNCLOS
Delphinidae	Globicephala macrorhynchus ^f	Short-finned pilot whale	Gray, 1846	1				1					1 1			II.		Х	LC	IOTC; UNCLOS
Delphinidae	Globicephala melas edwardii ^f	Southern long-finned pilot whale	Smith, 1834	1	_	_	-	_	_	_						ii.		Х	LC	IOTC; UNCLOS
Delphinidae	Grampus griseus ^f	Risso's dolphin	Cuvier, 1812	1	1	1	1	1	1	1	1 1	. 1	1 1	L		П		х	LC	IOTC; UNCLOS
Delphinidae	Lagenodelphis hosei ^f	Frasers dolphin	Fraser, 1956.	1	1						1 1			L	1	П		х	LC	IOTC; UNCLOS
Delphinidae	Lissodelphis peronii ^f	Southern right whale dolphin	Lacépède, 1804	1	1										1	Ш		Х	LC	IOTC; UNCLOS
Delphinidae	Stenella attenuata ^f	Pantropical spotted dolphin	Gray, 1846	1	1	1	1	1	1	1	1 1	. 1	1 1	l	1	П		Х	LC	IOTC; UNCLOS
Delphinidae	Stenella coeruleoalba ^f	Striped dolphin	Meyen, 1833	1	1	1	1	1	1		1	. 1	1 1	L	1	П		х	LC	IOTC; UNCLOS
Delphinidae	Steno bredanensis ^f	Rough-toothed dolphin	Lesson, 1828)	1	1	1	1	1		1	1 1	. 1	1 1	L	1	П		х	LC	IOTC; UNCLOS
Delphinidae	Delphinus delphis delphis f	Common dolphin	Linnaeus, 1758.	1	1	1	1	1	1			1	1 1	L	1	П		х	LC	IOTC; UNCLOS
Delphinidae	Tursiops truncatus truncatus ^f	Common bottlenose dolphin	Montagu, 1821	1	1	1	1	1	1	1	1 1	. 1	1 1	L	1	П		х	LC	IOTC; UNCLOS
Delphinidae	Tursiops aduncus ^f	Indo-Pacific bottlenose dolphin	Ehrenberg, 1833	1	1	1	1	1	1	1	1 1	. 1	1 1	L		П		х	NT	IOTC; UNCLOS
Delphinidae	Sousa plumbea ^f	Indian Ocean humpback dolphin	Cuvier, 1829	1	1	1	1	1	1			1	1 1	L		-1		х	EN	CITES I; IOTC; IUCN EN; UNCLOS
Delphinidae	Stenella longirostris ^f	Spinner dolphin	Gray, 1828	1	1	1	1	1	1	1	1 1	. 1	1 1	L	1	II		Х	LC	IOTC; UNCLOS
Dugongidae	Dugong dugon	Dugong	Müller, 1776		1				1				1	L		- 1	Ш		VU	CITES I; UNCLOS
Kogiidae	Kogia breviceps ^f	Pygmy sperm whale	Blainville, 1838	1	1	1	1	1	1	1	1 1	. 1	1 1	L	1	II		Х	LC	IOTC; UNCLOS
Kogiidae	Kogia sima ^f	Dwarf sperm whale	Owen, 1866	1	1	1	1	1	1	1	1 1	. 1	1 1	L	1	П		Х	LC	IOTC; UNCLOS
Neobalaenidae	Caperea marginata ^f	Pygmy right whale	Gray, 1846	1												- 1	Ш	х	LC	CITES I; IOTC; UNCLOS
Otariidae	Arctocephalus pusillus pusillus	Cape fur seal	Schreber, 1775	1	1						1				1	П	Ш		LC	UNCLOS
Otariidae	Arctocephalus tropicalis	Subantarctic fur seal	Gray, 1872	1	1						1				1	П			LC	UNCLOS
Phocidae	Mirounga leonina	Southern elephant seal	Linnaeus, 1758	1							1				1	П			LC	UNCLOS
Physeteridae	Physeter macrocephalus ^f	Sperm whale	Linnaeus, 1758	1	1	1	1	1	1	1	1 1	. 1	1 1	L	1	-1	- 1	Х	VU	CMS I; CITES I; IOTC; IWC; UNCLOS
Ziphiidae	Ziphius cavirostris ^f	Cuvier's beaked whale	Cuvier, 1823	1	1	1	1			1	1 1	. 1	1 1	L	1	II		Х	LC	IOTC; UNCLOS
Ziphiidae	Indopacetus pacificus ^f	Longman's beaked whale	Longman, 1926	1	1	1	1	1	1			1	1 1	L	1	II		Х	LC	IOTC; UNCLOS
Ziphiidae	Hyperoodon planifrons ^f	Southern bottlenose whale	Flower, 1882	1											1	-1		Х	LC	CITES I; IOTC; UNCLOS
Ziphiidae	Mesoplodon densirostris ^f	Blainville's beaked whale	Blainville, 1817	1	1	1	1	1	1	1	1 1	. 1	1 1	l	1	II		х	LC	IOTC; UNCLOS
Ziphiidae	Mesoplodon grayi ^f	Gray's beaked whale	von Haast, 1876	1											1	П		х	LC	IOTC; UNCLOS
Ziphiidae	Mesoplodon layardii ^f	Strap-toothed beaked whale	Gray, 1865	1											1	П		х	LC	IOTC; UNCLOS
Ziphiidae	Mesoplodon eueu ^f	Ramari's beaked whale	Carroll et al. 2021	1	1				1						1	П		Х	LC	IOTC; UNCLOS
Ziphiidae	Berardius arnuxii ^f	Arnoux's beaked whale	Duvernoy, 1851	1						20-1					1	- 1		Х	LC	CITES I; IOTC; UNCLOS

^a IOTC Resolution 12/09 (https://www.iotc.org/cmm/resolution-12/09-conservation-thresher-sharks-family-alopiidae-caught-association-fisheries-iotc "Fishing Vessels flying the flag of an IOTC Member or Cooperating Non-Contracting Party (CPCs) are prohibited from retaining on board, transhipping, landing, storing, selling or offering for sale any part or whole carcass of thresher sharks of all the species of the family Alopiidae";

b IOTC Resolution 13/06 (http://www.iotc.org/cmm/resolution-1306-scientific-and-management-framework-conservation-sharks-species-caught) "CPCs shall prohibit, as an interim pilot measure, all fishing vessels flying their flag and on the IOTC Record of Authorised Vessels, or authorised to fish for tuna or tuna-like species managed by the IOTC on the high seas to retain onboard, tranship, land or store any part or whole carcass of oceanic whitetip sharks";

⁶¹OTC Resolution 13/05 (http://www.iotc.org/cmm/resolution-1305-conservation-whale-sharks-rhincodon-typus) CPC's "shall prohibit their flagged vessels from intentionally setting a purse seine net around a whale shark in the IOTC area of competence, if it is sighted prior to the commencement of the set" and that "in the event that a whale shark is unintentionally encircled in the purse seine net, the master of the vessel shall: a) take all reasonable steps to ensure its safe release";

[&]quot;IOTC Resolution 19/03 (https://iotc.org/cmm/resolution-1903-conservation-mobulid-rays-caught-association-fisheries-iotc-area-competence) CPC's "shall prohibit all vessels from intentionally setting any gear type for targeted fishing of mobulid rays in the IOTC Area of Competence, if the animal is sighted prior to commencement of the set" and "shall prohibit all vessels from intentionally setting any gear type for targeted fishing of mobulid rays in the IOTC Area of Competence, if the animal is sighted prior to commencement of the set" and "shall require all their fishing vessels, other than those carrying out subsistence fishery, to promptly release alive and unharmed, to the extent practicable, mobulid rays as soon as they are seen in the net, on the hook, or on the deck, and do it in a manner that will result in the least possible harm to the individuals captured".

^{*}IOTC Resolution 12/04 (https://iotc.org/cmm/resolution-12/04 conservation-marine-turtles) CPC's "shall require fishermen on vessels targeting species covered by the IOTC Agreement to bring aboard, if practicable, any captured marine turtle that is comatose or inactive as soon as possible and foster its recovery, including aiding in its resuscitation, before safely returning it to the water" and CPCs with longine vessels "Ensure that the operators of all longine vessels carry line cutters and de-hookers in order to facilitate the appropriate handling and prompt release of marine turtles caught or entangled, and that they do so in accordance with IOTC Guidelines" and CPCs with pursue senier vessels vested practicable, avoid encirclement of marine turtles, and if a marine turtle is encircled or entangled, take practicable measures to safety release the turtler in accordance with the handling guidelines in the IOTC Marine for turtle in accordance with the handling guidelines in the IOTC Marine for extent practicable, release all marine turtles observed entangled in fish aggregating devices (FADS) or other fishing "geod".

[/]IOTC Resolution 13/04 (https://iotc.org/cmm/resolution-1304-conservation-cetaceans) CPC's "shall prohibit their flagged vessels from intentionally setting a purse seine net around a cetacean in the IOTC area of competence, if the animal is sighted prior to the commencement of the set" and "CPCs shall require that, in the event that a cetacean is unintentionally encircled in a purse seine net, the master of the vessels shall: a) take all reasonable steps to ensure the safe release of the cetacean".

Table 2: Shark, batoid and chimaera species recommended for listing on Nairobi Convention Annex III, based on their listing on the International Union for Conservation of Nature Red List of Threatened Species as Vulnerable (IUCN VU) or Near Threatened (IUCN NT), on the Convention on the Conservation of Migratory Species of Wild Animals Appendix II (CMS II), on the Convention on International Trade in Endangered Species of Wild Flora and Fauna Appendix II (CITES II) or the Southern Indian Ocean Fisheries Agreement Annex I (SIOFA). Countries in which the species is confirmed (1) or reported but not confirmed (-), if the species is listed on CITES and/or CMS Appendix I or II, if the species is prohibited from capture by the IOTC (x) and the current IUCN Red List status (IUCN) for each species is also presented (CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Data Deficient). ZA = South Africa, MZ = Mozambique, TZ = Tanzania, KE = Kenya, SO = Somalia, MG = Madagascar, MU = Mauritius, RE = La Réunion, SC = Seychelles, KM = Comoros, YT = Mayotte, ABNJ = Areas Beyond National Jurisdiction.

	-	-																		
Family	Species	Common name	Taxonomic reference	ZA	MZ	TZ	KE	SO	MG	MU	RE	SC	KM	YT	ABNJ	CITES	CMS	IOTC	IUCN	Criteria for Annex III listing
Sharks																				
Carcharhinidae	Carcharhinus albimarginatus	Silvertip shark	(Rüppell, 1837)	1	1	1	1	1	1	1	1	1	1	1		Ш			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus altimus	Bignose shark	(Springer, 1950)	1	1	1	-	-	1					-		II			NT	CITES II; IUCN NT
Carcharhinidae	Carcharhinus amblyrhynchoides		Whitley 1934					1				-				II			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus amboinensis	Pigeye shark	(Müller & Henle, 1839)	1	1	1	1	1	1	1		1				Ш			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus brachyurus	Copper shark	(Günther, 1870)	1	-				1			1				П			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus brevipinna	Spinner shark	(Valenciennes, 1839)	1	1				1	1	1	1				П			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus falciformis	Silky shark	(Müller & Henle, 1839)	1	1	1	1	1	1	1	1	1	1	1	1	П	П		VU	CITES II; CMS II; IUCN VU
Carcharhinidae	Carcharhinus galapagensis	Galapagos shark	(Snodgrass & Heller, 1905)		1				1			1			1	П			LC	CITES II
Carcharhinidae	Carcharhinus humani	Human's whaler shark	White & Weigmann, 2014	1	1	1	1	1	1	1	1	1				П			DD	CITES II
Carcharhinidae	Carcharhinus leucas	Bull shark	(Valenciennes, 1839)	1	1	1	1	1	1	1	1	1	1	1		Ш			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus limbatus	Blacktip shark	(Valenciennes, 1839)	1	1	1	1	1	1	1	1	1	1	1		II			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus macloti	Hardnose shark	(Müller & Henle, 1839)			1	1	1								II			NT	CITES II; IUCN NT
Carcharhinidae	Carcharhinus melanopterus	Blacktip reef shark	(Quoy & Gaimard, 1824)	1	1	1	1	1	1	1	1	1	1	1		II			VU	CITES II; IUCN VU
Carcharhinidae	Carcharhinus sorrah	Spottail shark	(Valenciennes, 1839)	1	1	1	1	1	1	1	1	1		1		II			NT	CITES II; IUCN NT
Carcharhinidae	Loxodon macrorhinus	Sliteye shark	(Müller & Henle, 1839)	1	1	1	1	1	1	1	1	1				II			NT	CITES II; IUCN NT
Carcharhinidae	Prionace glauca	Blue shark	(Linnaeus, 1758)	1	1	1	1	1	1	1	1	1	1	1	1	Ш	Ш		NT	CITES II; CMS II; IUCN NT
Carcharhinidae	Rhizoprionodon acutus	Milk shark	(Rüppell, 1837)	1	1	1	1	1	1	1		1				П			VU	CITES II; IUCN VU
Carcharhinidae	Scoliodon laticaudus	Spadenose shark	Müller & Henle, 1838		-	1	1	1	1							П			NT	CITES II; IUCN NT
Carcharhinidae	Triaenodon obesus	Whitetip reef shark	(Rüppell, 1837)	1	1	1	1	1	1	1	1	1	1	1		П			VU	CITES II; IUCN VU
Centrophoridae	Centrophorus granulosus	Gulper shark	(Bloch & Schneider, 1801)	1	1	1		1	1			1	1	1	1				EN	SIOFA
Centrophoridae	Centrophorus moluccensis	Smallfin gulper shark	Bleeker, 1860	1	1	1			1			1		1	-				VU	IUCN VU
Centrophoridae	Deania calceus	Birdbeak dogfish	(Lowe, 1839)	1	-				-						1				NT	SIOFA; IUCN NT
Centrophoridae	Deania profundorum	Arrowhead dogfish	(Smith & Radcliffe, 1912)	1	_				-		-				1				NT	IUCN NT
Centrophoridae	Deania quadrispinosa	Longsnout dogfish	(McCulloch, 1915)	1	1				1		-								VU	IUCN VU
Chlamydoselachidae	Chlamydoselachus africana	Southern African frilled shark	Ebert & Compagno, 2009	1	1										1				LC	SIOFA
Dalatiidae	Dalatias licha	Kitefin shark	(Bonnaterre, 1788)	1	1	1			1						1				VU	SIOFA; IUCN VU
Etmopteridae	Etmopterus alphus	Whitecheek lanternshark	Ebert, Straube, Leslie, & Weigmann, 2016	1	1	_			-						1				LC	SIOFA
Etmopteridae	Etmopterus pusillus	Smooth lanternshark	(Lowe, 1839)	1	-					_	_				1				LC	SIOFA
Galeocerdonidae	Galeocerdo cuvier	Tiger shark	(Péron & Lesueur, in Lesueur, 1822)	1	1	1	1	1	1	1	1	1	1	1	1				NT	IUCN NT
Ginglymostomatidae	Nebrius ferrugineus	Tawny nurse shark	(Lesson, 1831)	1	1	1	1	1	1	1	1	1	1	1	-				VU	IUCN VU
Hemigaleidae	Hemigaleus microstoma	Sickelfin weasel shark	Bleeker 1852	-	-	1	-	-	-	-	-	-	-	-					VU	IUCN VU
Hemigaleidae	Hemipristis elongata	Snaggletooth shark	(Klunzinger, 1871)	1	1	1	1	1	1			1							VU	IUCN VU
Hemigaleidae	Paragaleus leucolomatus	Whitetip weasel shark	Compagno & Smale, 1985	1	1	-	-	-	1			-							VU	IUCN VU
Hexanchidae	Heptranchias perlo	Sharpnose sevengill shark	(Bonnaterre, 1788)	1	1	1	_	1	1	1	1	1	1	1					NT	IUCN NT
Hexanchidae	Hexanchus griseus	Bluntnose sixgill shark	(Bonnaterre, 1788)	1	1	1		1	1	1	1	1	1	1					NT	IUCN NT
Hexanchidae	Hexanchus nakamurai	Bigeyed sixgill shark	Teng, 1962	1	1	1	1	1	1	1	1	1		1					NT	SIOFA; IUCN NT
Hexanchidae		0, 0	C,	1	1	1	1	1		1	1	1	1	1					VU	IUCN VU
	Notorynchus cepedianus	Sevengill shark	(Peron, 1807) Jordan, 1898	1	1														LC	SIOFA
Mitsukurinidae Odontaspididae	Mitsukurina owstoni Odontaspis ferox	Goblin shark Smalltooth sand tiger shark	•	1	_	1			1			1	1		-				VU	IUCN VU
	' '	•	(Risso, 1810)	1	-	1	1	1	1			1	1						NT	
Pentanchidae	Bythaelurus hispidus	Bristly catshark	(Alcock, 1891)			4	1	1												IUCN NT
Pentanchidae	Bythaelurus tenuicephalus	Narrowhead catshark	Kaschner, Weigmann & Thiel, 2015		1	1													LC	SIOFA
Pentanchidae	Halaelurus boesemani	Speckled catshark	Springer & D'Aubrey, 1972				1	1											VU	IUCN VU
Pentanchidae	Halaelurus natalensis	Tiger catshark	(Regan, 1904)	1	1														VU	IUCN VU
Pentanchidae	Haploblepharus fuscus	Brown shyshark	Smith, 1950	1															VU	IUCN VU
Pentanchidae	Haploblepharus kistnasamyi	Natal shyshark	Human & Compagno, 2006	1															VU	IUCN VU
Scyliorhinidae	Cephaloscyllium sufflans	Balloon shark	(Regan, 1921)	1	1	-	-	-	1				1		-				NT	IUCN NT
Scyliorhinidae	Scyliorhinus capensis	Yellowspotted catshark	(Smith, 1838)	1															NT	IUCN NT
Somniosidae	Centroscymnus coelolepis	Portuguese dogfish	Barbosa du Bocage & de Brito Capello, 1864	1	1				1			1			1				NT	SIOFA; IUCN NT
Somniosidae	Centroscymnus owstoni	Roughskin dogfish	Gaman, 1906	-	-				1		1	1		1	1				VU	IUCN VU
Somniosidae	Centroselachus crepidater	Longnose velvet dogfish	(Barbosa du Bocage & de Brito Capello, 1864)		-				1		1	1		1	1				NT	SIOFA; IUCN NT
Somniosidae	Somniosus antarcticus	Southern sleeper shark	Whitley, 1939	-	-				1						1				LC	SIOFA

Family	Species	Common name	Taxonomic reference	ZA	MZ	TZ	KE	SO	MG	MU	RE	SC	KM	YT	ABNJ	CITES	CMS	IOTC	IUCN	Criteria for Annex III listing
Sharks continued																				<u> </u>
Somniosidae	Scymnodon macracanthus	Largespine velvet dogfish	Regan, 1906	-	-										1				DD	SIOFA
Somniosidae	Zameus squamulosus	Velvet dogfish	(Günther, 1877)	1	-				1	1	1	1			1				LC	SIOFA
Sphyrnidae	Sphyrna zygaena	Smooth hammerhead shark	(Linnaeus, 1758)	1	1	_		1	1	1	1	1	1		-	П	П		VU	CITES II; CMS II; IUCN VU
Squalidae	Squalus acutipinnis	Southern African spiny dogfish	Regan, 1906	1	-					1	-								NT	IUCN NT
Squatinidae	Squatina africana	African angelshark	Regan, 1908	1	1	1	1	1	1	1		1							NT	IUCN NT
Triakidae	Mustelus mosis	Arabian smoothhound	Hemprich & Ehrenberg, 1899	1	1	1	1	1	_	1	1	_							NT	IUCN NT
Triakidae	Scylliogaleus quecketti	Flapnose houndshark	Boulenger, 1902	1															VU	IUCN VU
Batoids (ravs. skates	, wedgefishes, sawfishes)																			
Aetobatidae	Aetobatus ocellatus	Indian eagle ray	(Kuhl. 1823)	1	1	1	1	1	1	1	1	1	1	1	1				VU	IUCN VU
Anacanthobatidae	Anacanthobatis marmorata	Spotted legskate	(Von Bonde & Swart, 1923)	1	1										-				NT	IUCN NT
Dasyatidae	Bathytoshia lata	Brown stingray	(Garman, 1880)	1	1	1	1				1		1						VU	IUCN VU
Dasyatidae	Dasyatis chrysonota	Blue stingray	(Smith, 1828)	1	-				1		-		-						NT	IUCN NT
Dasyatidae	Himantura leoparda	Leopard whipray	Manjaji-Matsumoto & Last, 2008	1	1	1	1	1											VU	IUCN VU
Dasyatidae	Maculabatis ambigua	Baraka's whipray	Last, Bogorodsky, & Alpermann, 2016		1	1	1	1	1										NT	IUCN NT
Dasyatidae	Pastinachus ater	Broad cowtail ray	(Macleay, 1883)	1	1	1	1	1	1			1	_	1					VU	IUCN VU
Dasyatidae	Pateobatis fai	Pink whipray	(Jordan & Seale, 1906)	1	1	1	_	_	1			_		1					VU	IUCN VU
Dasyatidae	Pateobatis jenkinsii	Jenkins whipray	(Annandale, 1909)	1	1	1	1	1	1										VU	IUCN VU
Dasyatidae	Taeniurops meyeni	Blotched stingray	(Müller & Henle, 1841)	1	1	1	1	1	1	1	1	1		1					VU	IUCN VU
Dasyatidae	Urogymnus asperrimus	Porcupine ray	(Bloch & Schneider, 1801)	1	1	1	1	1	1			1		1					VU	IUCN VU
Dasyatidae	Urogymnus granulatus	Mangrove whipray	(Macleay, 1883)				1					1		1					VU	IUCN VU
Gymnuridae	Gymnura poecilura	Longtail butterfly ray	(Shaw, 1804)		-	_	1	1	-										VU	IUCN VU
Narkidae	Heteronarce garmani	Natal electric ray	Regan, 1921	1	1				1										NT	IUCN NT
Rajidae	Dipturus campbelli	Blackspot skate	(Wallace, 1967)	1	1														NT	IUCN NT
Rajidae	Dipturus crosnieri	Madagascar skate	(Serét. 1989)						1						-				VU	IUCN VU
Rajidae	Leucoraja wallacei	Yellowspotted skate	(Hulley, 1970)	1	1										-				VU	IUCN VU
Rajidae	Raja clavata	Thornback skate	Linnaeus, 1758	1					1	1	1								NT	IUCN NT
Rajidae	Raja straeleni	Biscuit skate	Poll, 1951	1	1				-	_									NT	IUCN NT
Rhinobatidae	Acroteriobatus annulatus	Lesser guitarfish	Smith, 1841	1												П			VU	CITES II; IUCN VU
Rhinobatidae	Acroteriobatus andysabini	Malagasy blue-spotted guitarfish	Weigmann, Ebert, & Séret, 2021						1							П			NE	CITES II
Rhinobatidae	Acroteriobatus ocellatus	Speckled guitarfish	Norman, 1926	1	1											ii			DD	CITES II
Rhinobatidae	Acroteriobatus zanzibarensis	Zanzibar guitarfish	Norman, 1926			1	1	-								П			NT	CITES II; IUCN NT
Rhinobatidae	Rhinobatos austini	Austin's guitarfish	Ebert & Gon, 2017	1	1	1			1							П			DD	CITES II
Rhinobatidae	Rhinobatos holcorhynchus	Slender guitarfish	Norman, 1922	1	1	1	1		1							ii.			DD	CITES II
Rhinobatidae	Rhinobatos nudidorsalis	Bareback Guitarfish	Last, Compagno, & Nakaya, 2004												1	П			DD	CITES II
Chimaeras																				
Chimaeridae	Chimaera didierae	The Falkor chimaera	Clerkin, Ebert & Kemper, 2017												1				DD	SIOFA
Chimaeridae	Chimaera willwatchi	Seafarer's ghost shark	Clerkin, Ebert & Kemper 2017												1				DD	SIOFA
Rhinochimaeridae	Harriotta raleighana	Narrownose chimaera	Goode & Bean, 1895	1	1										-				LC	SIOFA

Table 3: Shark, batoid, marine turtle and marine mammal species recommended for listing on Nairobi Convention Annex IV, based on their listing on the Convention on the Conservation of Migratory Species of Wild Animals Appendix I (CMS I), CMS Appendix II (CMS II), the CMS Sharks MOU (if not listed on CMS Appendix I or II), CMS Indian Ocean and South-East Asia Turtle MOU (CMS Turtle MOU), or CMS Dugong MOU, or being identified as migratory (M) or possibly migratory (PM) as defined by Fowler (2014), or their listing as migratory on the United Nations Convention on the Law of the Sea Annex I at the family level (UNCLOS) or species level (UNCLOS species). Countries in which the species is confirmed (1) or reported but not confirmed (-), if the species is listed on CITES and/or CMS Appendix I or II, if the species is prohibited from capture by the IOTC (x) and the current IUCN Red List status (IUCN) for each species is also presented (CR = Critically Endangered, EN = Endangered, VU = Vulnerable, NT = Near Threatened, LC = Least Concern, DD = Data Deficient). ZA = South Africa, MZ = Mozambique, TZ = Tanzania, KE = Kenya, SO = Somalia, MG = Madagascar, MU = Mauritius, RE = La Réunion, SC = Seychelles, KM = Comoros, YT = Mayotte, ABNJ = Areas Beyond National Jurisdiction.

Family	Species	Common name	Taxonomic reference	7Δ	M7	TZ	KF	SO	MG	MII	RF	SC	км	ΥT	ABNJ	CITES	CMS	IOTC	IUCN	Criteria for listing on Annex IV
Sharks	эресіез	Common name	raxonomic reference		1412	12	ILL	30	1410	1410	IVL	30	IZIVI		ADIN	CITES	CIVIS	1010	10014	Citeria for listing on Affilex 14
Alopiidae a	Alopias pelagicus	Pelagic thresher shark	Nakamura, 1935	1	1	1	1	1	1	_	_	1	1	1		п	П	х	EN	CMS II; M; UNCLOS
Alopiidae a	Alopias superciliosus	Bigeye thresher shark	(Lowe, 1841)	1	1	1	1	1	1	1	1	1	1	1	_		ii.	X	VU	CMS II; M; UNCLOS
Alopiidae a	Alopias vulpinus	Common thresher shark	(Bonnaterre, 1788)	1	-	-	-	-	-	-	-	-	-	-	1		"	X	VU	CMS II; M; UNCLOS
Carcharhinidae a	Carcharhinus albimarginatus	Silvertip shark	(Rüppell, 1837)	1	1	1		1		1		1	1	1	-			^	VU	PM; UNCLOS
Carcharhinidae ^a	Carcharhinus altimus	Bignose shark	(Springer, 1950)	1	1	1	-	-	1	-	•	-	1	_		 II			NT	PM; UNCLOS
Carcharhinidae ^a	Carcharhinus amblyrhynchos	Grey reef shark	(Bleeker, 1856)	1	1	1	1	1	1	1	1	1	1	1					EN	PM; UNCLOS
Carcharhinidae a	Carcharhinus amboinensis	Pigeye shark	(Müller & Henle, 1839)	1		1	1	1	1	1	•	1	1	-					VU	PM; UNCLOS
Carcharhinidae a	Carcharhinus amblyrhynchoides	Graceful shark	Whitley 1934	-	-	_	-	1	-	-		-							VU	M; UNCLOS
Carcharhinidae ^a	Carcharhinus brachyurus	Copper shark	(Günther, 1870)	1	_			_	1			1							VU	M; UNCLOS
Carcharhinidae a	Carcharhinus brevipinna	Spinner shark	(Valenciennes, 1839)	1	1				1	1	1	1							VU	M; UNCLOS
Carcharhinidae a	Carcharhinus falciformis	Silky shark	(Müller & Henle, 1839)	1	1	1	1	1	1	1	1	1	1	1	1		Ш		VU	CMS II; M; UNCLOS
Carcharhinidae a	Carcharhinus galapagensis	Galapagos shark	(Snodgrass & Heller, 1905)	-	1	_	-	_	1	-	•	1	1	-	1				LC	PM; UNCLOS
Carcharhinidae ^a	Carcharhinus humani	Human's whaler shark	White & Weigmann, 2014	1	1	1	1	1	1	1	1	1			-				DD	PM; UNCLOS
Carcharhinidae ^a	Carcharhinus leucas	Bull shark	(Valenciennes, 1839)	1	1	1	1	1	1	1	1	1	1	1					VU	M; UNCLOS
Carcharhinidae ^a	Carcharhinus limbatus	Blacktip shark	(Valenciennes, 1839)	1	1	1	1	1	1	1	1	1	1	1					VU	M; UNCLOS
Carcharhinidae ^a	Carcharhinus longimanus	Oceanic whitetip shark	(Poey, 1861)	1	1	1	1	1	1	1	1	1	1	1	1		- 1	х	CR	CMS I; M; UNCLOS
Carcharhinidae ^a	Carcharhinus macloti	Hardnose shark	(Müller & Henle, 1839)	-	-	1	1	1	-	-	•	-	1	-	-			^	NT	M; UNCLOS
Carcharhinidae ^a	Carcharhinus melanopterus	Blacktip reef shark	(Quoy & Gaimard, 1824)	1	1	1			1	1	1	1	1	1					VU	PM; UNCLOS
Carcharhinidae ^a	Carcharhinus obscurus	Dusky shark	(Lesueur, 1818)	1	1	-	-	1	1	-	•	-	1	-	_		Ш		EN	CMS II; M; UNCLOS
Carcharhinidae ^a	Carcharhinus plumbeus	Sandbar shark	(Nardo, 1827)	1	1	1	1	1	1	1	1	1	1	1					EN	M; UNCLOS
Carcharhinidae ^a	Carcharhinus sorrah	Spottail shark	(Valenciennes, 1839)	1	1	1	1	1	1	1	1	1	1	1					NT	PM; UNCLOS
Carcharhinidae ^a	Negaprion acutidens	Sicklefin lemon shark	(Rüppell, 1837)	1	1	1	1	1	1	1	-	1	1	1		"			EN	M; UNCLOS
Carcharhinidae ^a	Prionace glauca	Blue shark	(Linnaeus, 1758)	1	1	1	1	1	1	1	1	1	1	1	1		Ш		NT	CMS II; M; UNCLOS
Carcharhinidae a	Rhizoprionodon acutus	Milk shark	(Rüppell, 1837)	1	1	1	1	1	1	1	-	1	1	_	1	"	"		VU	PM; UNCLOS
Carchariidae	Carcharias taurus	Ragged-tooth shark	Rafinesque, 1810	1	1		-		-	-		1				"			CR	M
Cetorhinidae	Cetorhinus maximus	Basking shark	(Gunnerus, 1765)	1	-	_	-	_				-			1	п	1, 11		EN	CMS I; M; UNCLOS species
Galeocerdonidae b	Galeocerdo cuvier	Tiger shark	(Péron & Lesueur, 1822)	1	1	1	1	1	1	1	1	1	1	1	1	"	1, 11		NT	M
Ginglymostomatidae	Nebrius ferrugineus	Tawny nurse shark	(Lesson, 1831)	1	1	1	1	1	1	1		1		1	1				VU	M
Hemigaleidae	Hemipristis elongata	Snaggletooth shark	(Klunzinger, 1871)	1	1	1	1	1	1	-	-	1	1	_					VU	PM
Hexanchidae	Hexanchus griseus	Bluntnose sixgill shark	(Bonnaterre, 1788)	1	1	1	-	1	1	1	1	1	1	1					NT	M; UNCLOS species
Hexanchidae	Notorynchus cepedianus	Sevengill shark	(Peron, 1807)	1	-	_		_	-	-	-	-	1	_					VU	M
Lamnidae a, c	Carcharodon carcharias	Great white shark	(Linnaeus, 1758)	1	1	1	1		1	1	1	1	1	1	1	п	I, II		VU	CMS I; M; UNCLOS
Lamnidae a, c	Isurus oxyrinchus	Shortfin mako shark	Rafinesque, 1810	1	1	1	1	1	1	1	1	1	1	1	1	"	ı, ıı		EN	CMS II; M; UNCLOS
Lamnidae a, c	Isurus paucus	Longfin mako shark	Guitart Manday, 1966	1	1	1		1		1		1	1	1	1	"	"		EN	CMS II; M; UNCLOS
Odontaspididae	Odontaspis ferox	Smalltooth sand tiger shark	(Risso, 1810)	1	-	1	-	_	1	-	-	1	1	_	1	"	"		VU	PM
Odontaspididae	Odontaspis noronhai	Bigeye sand tiger shark	(Maul, 1955)	1	-	1			1	1		_	1		1				LC	PM
Pseudocarchariidae	Pseudocarcharias kamoharai	Crocodile shark	(Matsubara, 1936)	1	1	1	1	1	1	1	1	1	1	1	1				LC	PM
Rhincodontidae	Rhincodon typus	Whale shark	(Matsubara, 1936) Smith, 1828	1	1	1	1	1	1	1	1	1	1	1	1	П		х	EN	CMS I; M; UNCLOS species
Somniosidae	Somniosus antarcticus		Whitley, 1939	1	1	1	1	1	1	1	1	1	1	1	1	"	I, II	Χ.	LC	CIVIS I, IVI, ONCLOS species
Sphyrnidae ^a		Southern sleeper shark	**	1	1	1	1	1	-	1	1	1	1	1	1	п	Ш		CR	CMS II. M. LINCLOS
	Sphyrna lewini	Scalloped hammerhead shark	(Griffith & Smith, 1834)	1	1	1		1	1	1 1	1	1 1	1 1	1	-	"	"		CR	CMS II; M; UNCLOS CMS II; M; UNCLOS
Sphyrnidae ^a	Sphyrna mokarran	Great hammerhead shark Smooth hammerhead shark	(Rüppell, 1837)	1	1	_	1	1	1	1		1	1	1	-	"	"		VU	' '
Sphyrnidae a	Sphyrna zygaena		(Linnaeus, 1758)		1	-		1	1	1	1	1	1		-	"	- 11		EN	CMS II; M; UNCLOS
Triakidae	Mustelus mustelus	Common smoothhound	(Linnaeus, 1758)	1															ΕIN	М
Batoids (rays, skates, wedge	efishes, sawfishes)																			
Aetobatidae	Aetobatus ocellatus ^d	Indian eagle ray	(Kuhl, 1823)	1	1	1	1	1	1	1	1	1	1	1	1				VU	M
Dasyatidae	Dasyatis chrysonota	Blue stingray	(Smith, 1828)	1	-				1		-		-						NT	PM
Dasyatidae	Himantura uarnak	Honeycomb stingray	(Gmelin, 1789)	1	1	1	1	1	1	1		1		1					EN	M

Family	Species	Common name	Taxonomic reference	ZA	MZ	TZ	KE	so	MG	MU	RE	SC	KM	ΥT	ABNJ	CITES	CMS	IOTC	IUCN	Criteria for listing on Annex IV
Batoids (rays, skates, wedgefish	es, sawfishes) continued																			
Dasyatidae	Pteroplatytrygon violacea	Pelagic stingray	(Bonaparte, 1832)	1	1	1	1	1	1	1	1	1	1	1	1				LC	M
Gymnuridae	Gymnura natalensis	Diamond ray	(Gilchrist & Thompson, 1911)	1	1														LC	PM
Mobulidae	Mobula alfredi	Reef manta ray	(Krefft, 1868)	1	1	1			1			1	1	1	1	П	I, II	x	VU	CMS I; M
Mobulidae	Mobula birostris	Giant manta ray	(Walbaum, 1792)	1	1	1	1	1	1	1	1	1	1	1	1	П	I, II	x	EN	CMS I; M
Mobulidae	Mobula eregoodoo	Longhorned pygmy devil ray	(Cantor 1849)	1	-	-	-	1	-	-	-	-	-	-	-	П	I, II	x	EN	CMS I; PM
Mobulidae	Mobula kuhlii	Shortfin devil ray	(Valenciennes, 1841)	1	1	1	1	1	1	-	-	1	-	1		П	1, 11	x	EN	CMS I; M
Mobulidae	Mobula mobular	Spinetail devil ray	(Bonnaterre, 1788)	1	1	1	1	1	1			1		1	1	П	1, 11	x	EN	CMS I; M
Mobulidae	Mobula tarapacana	Sicklefin devil ray	(Philippi, 1892)	1	-	1				1	1				1	П	I, II	x	EN	CMS I; M
Mobulidae	Mobula thurstoni	Bentfin devil ray	(Lloyd, 1908)	1	-	1			1						-	П	1, 11	x	EN	CMS I; PM
Myliobatidae	Aetomylaeus bovinus ^d	Duckbill ray	(Saint-Hilaire, 1817)	1	1	1													CR	PM
Myliobatidae	Aetomylaeus vespertilio	Ornate eagle ray	(Bleeker, 1852)	1	1	1	1					1							EN	PM
Myliobatidae	Myliobatis aquila	Common eagle ray	(Linnaeus, 1758)	1	1	1	1			1	1								CR	PM
Pristidae	Pristis pristis	Largetooth sawfish	(Linnaeus, 1758)	1	1	1	1	1	1	-	-	-				1	1, 11		CR	CMS I; M
Pristidae	Pristis zijsron	Green sawfish	(Bleeker, 1851)	1	1	-	1	1		-	-					1	1, 11		CR	CMS I
Rajidae	Raja clavata	Thornback skate	Linnaeus, 1758	1					1	1	1								NT	PM
Rajidae	Raja straeleni	Biscuit skate	Poll, 1951	1	1				-	-									NT	M
Rhinidae	Rhynchobatus australiae	Bottlenose wedgefish	Whitley, 1939		1	1	1	1	1	1	1	1				П	П		CR	CMS II
Rhinidae	Rhynchobatus djiddensis	Whitespotted wedgefish	(Forsskål, 1775)	1	1	-	-	-	-	-	_	-		_		ii.			CR	CMS Sharks MOU; M
Rhinobatidae	Acroteriobatus annulatus d	Lesser guitarfish	Smith, 1841	1	_											ii.			VU	M
Torpedinidae	Torpedo fuscomaculata	Blackspotted electric ray	Peters, 1855	1	1	1			1	1	1	1	1	1		•			DD	PM
	, ,	,																		
Marine turtles																				
Cheloniidae	Caretta caretta ^e	Loggerhead turtle	(Linnaeus, 1758)	1	1	1	1	1	1	1	1	1	1	1	1	1	- 1	x	VU	CMS I; CITES I; IOTC
Cheloniidae	Chelonia mydas ^e	Green turtle	(Linnaeus, 1758)		1	1	1	1	1	1	-	1	1	1	1	1	1	x	EN	CMS I; CITES I; IOTC; IUCN EN
Cheloniidae	Eretmochelys imbricata ^e	Hawksbill turtle	(Linnaeus, 1766)	1	1	1	1	1	1	1	1	1	1	1	1	1	- 1	x	CR	CMS I; CITES I; IOTC; IUCN CR
Cheloniidae	Lepidochelys olivacea ^e	Olive ridley turtle	(Eschscholtz, 1829)	-	1	1	1	1	1	-	-	1	1	1	-	1	- 1	x	VU	CMS I; CITES I; IOTC
Dermochelyidae	Dermochelys coriacea ^e	Leatherback turtle	(Vandelli, 1761)	1	1	1	1	-	1	1	1	1	1	1	1	1	1	х	VU	CMS I; CITES I; IOTC
Marine mammals																				
Balaenidae ^a	Eubalaena australis	Southern right whale	Desmoulins, 1822	1	1				1						1	1	- 1	х	LC	CMS I; UNCLOS
Balaenopteridae ^a	Balaenoptera acutorostrata	Common minke whale	Lacépède, 1804	1	1										1	1		x	LC	UNCLOS
Balaenopteridae ^a	Balaenoptera bonaerensis	Antarctic minke whale	Burmeister, 1867	1	1	1	1		1	1	1		1	1	1	i	П	х	NT	CMS II; UNCLOS
Balaenopteridae ^a	Balaenoptera borealis schlegelii	Sei whale	Flower, 1865	1	_	_	_		1	_	1			_	1	i	ï	Х	EN	CMS I; UNCLOS
Balaenopteridae ^a	Balaenoptera edeni brydei	Bryde's whale	Olsen, 1913	1					_		_				1	i	ii	Х	LC	CMS II; UNCLOS
Balaenopteridae ^a	Balaenoptera edeni edeni	Bryde's whale	Anderson, 1879	1	1	1	1	1	1	1	1	1	1	1	-	i	11	X	LC	CMS II; UNCLOS
Balaenopteridae ^a	Balaenoptera musculus brevicauda	Pygmy blue whale	Ichihara, 1966	1	1	1	1	1	1	-	1	1	1	1	1	i	ï	X	EN	CMS I; UNCLOS
Balaenopteridae ^a	Balaenoptera musculus intermedia	Antarctic blue whale	Burmeister, 1871	_	1	1	1	1	1	1		1		1	1	i	i	X	EN	CMS I; UNCLOS
Balaenopteridae ^a	Balaenoptera omurai	Omura's whale	Wada, Oishi and Yamada, 2003	-	-	_	-	1	1	-	-	-	-	-	-	i	ii	X	DD	CMS II; UNCLOS
Balaenopteridae ^a	Balaenoptera physalus	Fin whale	Linnaeus, 1758	1	1			-	1	1		1		1	1	i	ï	X	VU	CMS I; UNCLOS
Balaenopteridae ^a	Megaptera novaeangliae australis	Humpback whale	Borowski, 1781			1	1	1	1	1			1	1	1	i	i	X	LC	CMS I; UNCLOS
Delphinidae ^a	Delphinus delphis delphis	Common dolphin	Linnaeus, 1758.	1		1	1	1	1	-		-	1	1	1	i	•	X	LC	UNCLOS
Delphinidae ^a	Feresa attenuata	Pygmy killer whale	Gray, 1874.	1	1	1	1		1				1	1	1	II		X	LC	UNCLOS
Delphinidae ^a	Globicephala macrorhynchus	Short-finned pilot whale	Gray, 1846	1	1	1		1		1	1	1		1	-			X	LC	UNCLOS
Delphinidae ^a	Globicephala melas edwardii	Southern long-finned pilot whale	Smith, 1834	1	-	-	-	-	-	-	-	-	-	-				X	LC	UNCLOS
Delphinidae ^a	Grampus griseus	Risso's dolphin	Cuvier, 1812	1	1	1	1	1	1	1	1	1	1	1				X	LC	UNCLOS
Delphinidae ^a	Lagenodelphis hosei	Frasers dolphin	Fraser, 1956.	1	1					1				1	1	ii		X	LC	UNCLOS
Delphinidae ^a	Lissodelphis peronii	Southern right whale dolphin	Lacépède, 1804	1	1	_	1	_	-	-	_	_	-	1	1	ii		X	LC	UNCLOS
Delphinidae a	Orcinus orca	Killer whale	Linnaeus, 1758			1	1	1	1		1	1	1	1	1	ii		X	DD	CMS II
Delphinidae ^a		Melon-headed whale	,		1										1	ii	"		LC	UNCLOS
Delphinidae ^a	Peponocephala electra Pseudorca crassidens	False killer whale	Gray, 1846 Owen, 1846		1	1		1 1		1		1		1 1	1	"		X	NT	UNCLOS
•										1	T	1			1			X		
Delphinidae a	Sousa plumbea	Indian Ocean humpback dolphin	Cuvier, 1829		1			1		1	1	1		1	1	1		X	EN	UNCLOS
Delphinidae a	Stenella attenuata	Pantropical spotted dolphin	Gray, 1846							1	Т			1	1	II		X	LC	UNCLOS
Delphinidae ^a	Stenella coeruleoalba	Striped dolphin	Meyen, 1833		1			1		1	1	1		1	1	II		Х	LC	UNCLOS
Delphinidae a	Stenella longirostris	Spinner dolphin	Gray, 1828		1				1	1				1	1	II 		Х	LC	UNCLOS
Delphinidae ^a	Steno bredanensis	Rough-toothed dolphin	Lesson, 1828)		1		1					1		1	1	II 		Х	LC	UNCLOS
Delphinidae ^a	Tursiops aduncus	Indo-Pacific bottlenose dolphin	Ehrenberg, 1833		1					1					_	II 		Х	NT	UNCLOS
Delphinidae ^a	Tursiops truncatus truncatus	Common bottlenose dolphin	Montagu, 1821	1	1	1	1	1	1	1	1	1	1	1	1	II		Х	LC	UNCLOS

Family	Species	Common name	Taxonomic reference	ZA	MZ	TZ	KE	SO	MG	MU	RE	SC	KM	ΥT	ABNJ	CITES	CMS	IOTC	IUCN	Criteria for listing on Annex IV
Marine mammals continued																				_
Dugongidae	Dugong dugon	Dugong	Müller, 1776		1	1	1	1	1			1	1	1		1	П		VU	CMS II; CMS Dugong MOU
Neobalaenidae	Caperea marginata	Pygmy right whale	Gray, 1846	1												1	П	x	LC	CMS II
Otariidae	Arctocephalus pusillus pusillus	Cape Fur Seal	Schreber, 1775	1	1						1				1	II	П		LC	CMS II
Physeteridae ^a	Physeter macrocephalus	Sperm whale, cachalot	Linnaeus, 1758	1	1	1	1	1	1	1	1	1	1	1	1	1	- 1	x	VU	CMS I; UNCLOS
Ziphiidae ^a	Berardius arnuxii	Arnoux's beaked whale	Duvernoy, 1851	1											1	1		x	LC	UNCLOS
Ziphiidae ^a	Hyperoodon planifrons	Southern bottlenose whale	Flower, 1882	1											1	1		x	LC	UNCLOS
Ziphiidae ^a	Indopacetus pacificus	Longman's beaked whale	Longman, 1926	1	1	1	1	1	1				1	1	1	II		x	LC	UNCLOS
Ziphiidae ^a	Mesoplodon densirostris	Blainville's beaked whale	Blainville, 1817	1	1	1	1	1	1	1	1	1	1	1	1	II		x	LC	UNCLOS
Ziphiidae ^a	Mesoplodon eueu	Ramari's beaked whale	Carroll et al. 2021	1	1				1						1	II		x	LC	UNCLOS
Ziphiidae ^a	Mesoplodon grayi	Gray's beaked whale	von Haast, 1876	1											1	II		x	LC	UNCLOS
Ziphiidae ^a	Mesoplodon layardii	Strap-toothed beaked whale	Gray, 1865	1											1	II		x	LC	UNCLOS
Ziphiidae ^a	Ziphius cavirostris	Cuvier's beaked whale	Cuvier, 1823	1	1	1	1	1	1	1	1	1	1	1	1	П		Х	LC	UNCLOS

^a Listed by family in UNCLOS Annex I: <u>un.org/depts/los/convention_agreements/texts/unclos/annex1.htm</u>
^b Previously in family Carcharhinidae and therefore listed by family in UNCLOS Annex I

^c Listed on UNCLOS Annex I under previous taxonomic family name - Isuridae

^d Taxonomic update since Fowler (2014)