





CONVENTION ON MIGRATORY SPECIES

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DRAFT GLOBAL GAP ANALYSIS OF THE CONVENTION ON MIGRATORY SPECIES

Introduction

- 1. In Resolution 10.09 on the Future Structure and Strategies of the CMS and CMS family, the Conference of the Parties at its tenth meeting, held in Bergen, Norway, in November 2011, requested a global gap analysis at Convention level: including which issues are being addressed, which issues are not being addressed, if another organization is addressing these issues, a scientific gap analysis and what research is required (Res. 10.09, Annex I, Activity 5, Short Term deliverable 1).
- 2. Pursuant to this request, this document identifies some threats and challenges as well as other cross-cutting issues that are not directly addressed by CMS so far, but that have the potential to become relevant in the near future. This document also identifies gaps in the CMS Appendices, highlighting species which are not listed yet but could benefit from listing in the near future.
- 3. It has to be clarified that this document is a preliminary draft that has been elaborated internally at the CMS Secretariat and has not been circulated outside. The Secretariat believes that this document can benefit from the input of the Scientific Council and this is why it is tabled for the special meeting of the Council to be held in Formia in October 2013. It should be considered as a living document that will be updated after the Formia meeting and subsequently circulated to Parties for further consultation.

Methodology

- 4. The global gap analysis in this paper has benefited from a discussion and survey taken at the Strategic and Planning Meeting of the Scientific Council, held in Formia, Italy, from 9 to 11 October 2013.
- 5. At the meeting in Formia a simple questionnaire was circulated and participants asked to identify key gaps in the work of the Convention, including to emerging threats to migratory species, opportunities for the promotion of migratory species, and gaps in the Appendices. The questionnaire can be found in Annex II to this document. Of XX handed out, YY completed questionnaires were returned to the Secretariat.
- 6. Regarding emerging threats and opportunities ... [to be added]
- 7. The basis for the analysis of gaps in the appendices has been the Global Register for Migratory Species (GROMS) (Riede, 2004), which was developed by the Alexander Koenig Research Institute and Museum of Zoology in cooperation with the CMS Secretariat, and supported by the German Federal Agency for Nature Conservation. GROMS provides a database of 2880 migratory vertebrate species, including scientific and vernacular names, IUCN status and CMS and CITES listings.
- 8. GROMS is reflecting the current state of knowledge on migratory species. This means that that entries on migratory birds (whose migrations are comparatively well monitored) are more complete than those on mammals, fishes and insects (where information is only available on economically significant species).
- 9. Considerable knowledge gaps exist for bats, Asian antelopes, small whales, tropical fishes and insects. For this reason the information from GROMS was supplemented with information on bats from Mickleburgh et. al. (2009), on birds from Kirby (2010), on marine fish from the IUCN Species Survival Commission's Shark Specialist Group (2007), and on freshwater fish from Hogan (2011). The reviews undertaken by UNEP-WCMC on terrestrial mammals and marine turtles have also been taken into account; these reviews were tabled as information documents for COP10 in Bergen (UNEP/CMS/Inf.10.15 and UNEP/CMS/Inf.10.16).
- 10. [To be added]

Issues being addressed

11. A great number of critical issues to migratory species are already being addressed under the Convention usually through the work of the Scientific Council or in the form of COP resolutions and related follow-up actions. These issues include, for example, climate change, ecological networks, flyways, barriers to migration (fences, powerlines, etc.), bird poisoning, wildlife disease, marine debris, bycatch, underwater noise, etc.) In addition the Scientific

Council has undertaken a number of taxonomic reviews including sharks, freshwater fish, terrestrial mammals, marine turtles, etc.

<u>Issues not addressed</u>

12. Despite the broad range of issues that CMS is already addressing, there are a number of issues that are not being addressed. Some of these are related to emerging threats to migratory species and others present opportunities for the promotion of migratory species. There are also some taxonomic groups that have received very little attention from CMS, despite having species listed in the Appendices. Critical issues of all these categories include, but are not limited to, the following:

Taxonomic groups not addressed

Invertebrates

13. There is only one invertebrate species which is listed under CMS, the Monarch butterfly (*Danaus plexippus*), listed in Appendix II. However there are many other insects that are highly migratory and fulfill the requirements to be covered by CMS according to the definitions of Appendix I and Appendix II. An example is the Globe Skimmer (*Pantala flavescens*), a dragonfly that undertakes a yearly migration from India to East Africa in great numbers. This is one of the biggest gaps of the Convention and an issue that requires attention from the Scientific Council.

Threats to migratory species

Habitat destruction

14. Habitat destruction is perhaps the most important cause of species extinction worldwide. Conversion of land for agriculture is the principal cause of habitat destruction. Other important causes of habitat destruction include mining, logging, trawling, urban sprawl and infrastructure development. A wide range of organizations are dealing with different aspects of habitat destruction, including UNEP, FAO, the Ramsar Convention, and UNESCO's World Heritage Convention.

Renewable energy

15. The expansion of renewable energy production often causes land use change and degradation of habitat of migratory species. This has been noted, for example with regards to biofuel production and hydropower development. Solar power stations and tidal power plants might also have negative effects. The impacts of renewable energy production are addressed by a

number of organizations, including CBD, FAO and UNEP. The project that CMS is starting with the International Agency for Renewable Energy (IRENA) is expected to provide some answers by COP 11 in 2014.

Resource extraction

16. Mining and other forms of resource extraction (e.g. "fracking") are known to cause habitat loss, degradation and pollution, especially groundwater contamination. Other organizations dealing with environmental impacts of mining include for example The World Bank. Large scale mining projects like the one that is planned for Mongolia is likely to have a huge impact on migratory species, not only because of the mining per se but also because of the infrastructures that are linked to it (roads, railways, new settlements, etc). Strong and effective legal and regulatory frameworks, policies and practices for the mining sector are needed, including biodiversity safeguards for species and habitats.

Wildlife crime

17. Wildlife crime is a threat of growing importance to migratory species. Many endangered species are of considerable economic value, so even when conservation legislation exist, they are often illegally hunted, sometimes by well organized groups. Organizations focusing on wildlife crime include UNEP, CITES, Interpol, WCO, UNODC, and TRAFFIC.

Opportunities

Antarctica

18. Antarctica, through the Antarctic treaty "shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord." The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has been established to coordinate conservation (and fisheries) in Antarctica. Attempts to create a large system of marine protected areas (MPAs) have been undertaken under CCAMLR, to no success until now. Increased conservation efforts and ideally the establishment of large-scale MPAs in Antarctica would benefit in particular many marine mammals listed in the CMS Appendices. Other organizations addressing the issue include CCAMLR.

Business and biodiversity

19. Cooperation between the business and biodiversity conservation communities is essential to achieve goals for global sustainability. Within the international conservation community the

inclusion of the private sector has been frequently discussed (e.g. TEEB ¹ Business and Enterprise). Also within the UN System there are efforts to do so, e.g the UN Global Compact. Other organizations addressing the issue include TEEB, UN Global Compact, and the CBD.

Economic valuation of migratory species

20. Migratory species provide a large number of ecosystem services including food, medicines/pharmaceuticals, biochemicals, seed and nutrient dispersal, pollination, cultural, intellectual and spiritual inspiration. They play an important role in people's livelihoods and in local, national and regional economies. Based on the TEEB reports, IPBES in its 2014-2018 work programme will carry out fast-track assessments on values, valuation and accounting of biodiversity and ecosystem services. This assessment and others with a more specific focus on migratory species could yield key information to increase public awareness about the economic and cultural value of migratory species.

Marine Areas Beyond National Jurisdiction

21. Marine Areas Beyond National Jurisdiction (ABNJs), commonly called the high seas, are often considered the world's last global commons. ABNJs are key habitats for many migratory species. ABNJs suffer from inadequate governance, affecting the conservation and sustainable use of migratory (and non-migratory) species. Current ongoing processes in international fora on conservation in ABNJs present opportunities for the improved conservation of migratory species. ABNJS are addressed under UNCLOS, UNGA, Regional Fisheries Management Organisations (RFMOs), and the World Bank.

Sustainable Tourism

22. Sustainable tourism follows the paradigm that tourism should not harm the environment. At the same time the tourism activity should raise awareness, interest and compassion that result in increased public engagement for environmental conservation. This approach is suitable to apply, e.g. to increase awareness of a charismatic migratory species. Also a dialogue with the public, including knowledge transfer, can take place. This results in more conscient behaviour towards nature and migratory species. Other organizations dealing with sustainable tourism include the UNWTO and UNEP.

Telecommunication

23. The increase in coverage and intensity of wireless telecommunication systems, such as WWAN (Large Area Wireless Technologies), or Google's Project Loon² could have negative effects on migratory species (Cucurachi et al, 2012). At the same time, these technologies create

¹ TEEB stands for The Economics of Ecosystems and Biodiversity

² For more information, see: http://www.google.com/loon/

opportunities for research and data transmission in remote areas and possible synergies in facilitating the tracking of migratory species.

Migration ecology (Tracking animal movement)

For many migratory species knowledge of their migration routes, migration timing and consequently threats during their migration is missing. Furthermore there is a high number of endangered species, especially smaller ones, where it is unknown if they exhibit migratory behaviour. New technologies, such as those developed under the ICARUS project³, and new methodologies will make tracking of smaller animals feasible. Increasing application of existing animal tracking methodology and adoption of new technology and methods, holds great promise to improve knowledge on the migratory behaviour of many species. Several research institutes and universities advance research on tracking animal movement, including, for example, the Max Planck Institute for Ornithology and the members of ICARUS. Keeping up to date on these new technologies and promoting their use among CMS Parties is an issue that can help bring forward the CMS agenda in the coming years.

Gaps in the Appendices

- Annex I provides an overview of gaps in the CMS Appendices. The Annex draws on a 25. number of relevant sources but does not claim to be comprehensive. A total of over 250 species from different taxa have been identified.
- Species are listed in the Appendices at each COP at the proposal of the Parties. This 26. procedure depends very much on the interest and opportunity of each particular Party and does not follow a systematic approach. The list of species in Annex 1 is meant to assist Parties in identifying species that could be listed if Parties so wished.
- In Annex 1, the proposal for listing a species on CMS Appendix I and/or II is based on its 27. status on the IUCN Red List. "Critically Endangered" or "Endangered" species are suggested for listing on Appendices I and II, "Vulnerable" or "Near Threatened" species on Appendix II.⁴ Species that are defined as Least Concern by the IUCN do not appear on the list. Suggestions for species that are not listed by the IUCN, or are data deficient, are based on CITES status.
- 28. Inclusion of species in the Appendices and which species qualify for listing is an issue that is closely related to the availability of criteria for listing. In this respect a working group has

³ For more information, see: http://www.icarusinitiative.org/

⁴ According to the Convention, "Appendix I shall list migratory species which are endangered." (Art. III) and "Appendix II shall list migratory species which have an unfavourable conservation status and which require international agreements for their conservation and management, as well as those which have a conservation status which would significantly benefit from the international cooperation that could be achieved by an international agreement" (Art. IV).

⁵ Except for *Pantala flavescens* (Global Skimmer), *Capra sibirica* (Asian Ibex), *Cervus elaphus* (Red Deer), *Kobus* kob leucotis (White-eared Kob), and Rangifer tarandus (Reindeer) all of which are highly migratory and could benefit from specialized regional agreements.

been established under the Scientific Council to develop these criteria, and the results of this work will be presented to the Scientific Council in 2014.

Mammals

Terrestrial Mammals

- 29. Among the main threats for terrestrial mammals are habitat loss and degradation as well as unsustainable hunting. In addition, particularly the species of the order *Carnivora* suffer from human wildlife conflict.
- 30. Gaps in the CMS appendices exist in relation to many herbivorous species such as *Elephantidae* (Elephants) and the *Bovidae* (Bovids) to which both bisons and gazelles belong. Other charismatic species include *Panthera leo* (Lion), *Panthera tigris* (Tiger), and *Ursus maritimus* (Polar Bear). A listing proposal already exists for *Pantholopi hodgsonii* (Tibetan antelope).

Aquatic Mammals

- 31. Of the aquatic mammal species listed in Annex I, 2 cetacean species of the family *Monodontidae* are already listed in CMS Appendix II and proposed for uplisting. A listing proposal for *Ursus maritimus* (Polar Bear) is currently being consulted within the Scientific Council.
- 32. In addition, there are several candidates belonging to the Order *Carnivora*, seals and sea lions from the families *Otariidae* and *Phocidae*. These species are predominantly threatened by fishing practices, both directly as bycatch and indirectly through depletion of their prey. Diseases, loss of genetic diversity and changing ecological interactions caused e.g. by climate change are also major threats that affect these species. Pollution through marine debris and industrial production and human disturbance by recreational activities cause further concern.
- 33. The remaining cetacean species belong to various families. Bycatch, prey depletion, underwater noise, marine debris and climate change are major threats. Moreover, especially the *Delphinidae* are frequently subjected to directed takes. Other threats are entanglement in fishing gear, vessel collision, disturbance by underwater noise, oil spills and climate change.
- 34. A high number of aquatic mammals are data deficient and research is needed to improve knowledge on their conservation status.

Bats

35. There is a large number of bat species that are listed as least concern under IUCN. Gaps on the CMS Appendices exist particularly with regards to African and South and Central

American species. Among the main threats are the destruction or disturbance of caves and killing species due to an erroneous believe in vampire bats.

Birds

- 36. The CMS Appendices already contain a large number of bird species, but there are still many gaps, particularly regarding *Procellariiformes* (Seabirds), *Sphenisciformes* (Penguins), *Psittaciformes* (Parrots) as well as some *Columbiformes* (Pigeons).
- 37. Among the main threats to birds are habitat loss and degradation due to energy production and mining, agriculture and aquaculture as well as logging and unsustainable hunting and trapping. Competition by invasive alien species is also a serious problems.
- 38. For the *Procellariiformes* climate change connected to changing weather patterns and sea level rise represents another specific threat. Furthermore the *Procellariiformes* are the birds most affected by the rapidly increasing plastic pollution.
- 39. For the *Psittaciformes* the illegal pet trade is an issue. Habitat degradation and loss due to deforestation and timber production add to the pressure on this species group.

Fishes

Elasmobranchii

- 40. The IUCN Species Survival Commission's Shark Specialist Group's Review of Chondrichthyan Fishes (2007) identified 46 species within the class of Elasmobranchii that would be suitable for a CMS listing, including 13 Ray species (*Rajiformes*), 30 sharks species (belonging to the orders: *Carcharhiniformes* (19), *Lamniformes* (7), *Squaliformes* (1), *Squaliformes* (1) and *Pristiformes* (5, Sawfish).
- 41. The main threats for rays, sharks and sawfish are unsustainable fishing and harvesting. In addition, problems with population genetics based on the low reproduction rates of these species and habitat loss and degradation, mainly due to agriculture and aquaculture as well as energy production and mining are considered as key threats.

Actinoptygerii

42. According to Hogan (2011), gaps in the CMS appendices exist with regards to *Clupeiformes* (e.g. herring), *Cypriniformes* (e.g. carp), *Siluriformes* (Catfish) and *Salmoniformes* (Salmon).

43. For all freshwater fish species habitat loss and degradation resulting from river damming, energy production and mining are major threats. In addition, competition with invasive alien species, unsustainable fishing and harvesting are threatening these species.

Reptiles

44. Based on information from GROMS, no gaps in the CMS appendices could be identified with regards to reptiles.⁶

Amphibians

45. There are no migratory amphibians listed on GROMS, possibly due to a lack of data.

Insects

46. GROMS lists 10 suggestions for migratory insects, mostly butterflies. However, for none of these species data on migration behaviour and conservation status is available under IUCN.⁷ A potential species to be listed is the Globe Skimmer (*Pantala flavescens*), a wide-ranging dragonfly of the family *Libellulidae*.

Marine invertebrates

47. Within the marine realm, there are many invertebrate species that may also be migratory. *Octopus vulgaris*, for example, is known to undertake limited seasonal migrations, usually overwintering in deeper waters and occurring in shallower waters during summer. However, data on migratory behavior and threat status of marine invertebrates is lacking.

⁶ However, it is unclear if freshwater crocodiles migrate seasonally, as this behaviour is known for saltwater crocodiles (*Crocodylus porosus*).

⁷ The ICARUS project (http://icarusinitiative.org/) will possibly involve equipping animals as small as butterflies with small transmitters, which can potentially start to fill data gaps concerning the migratory behaviour of some species.

⁸ For the source of this information, see the FAO Species Fact Sheet for *Octopus vulgaris*: http://www.fao.org/fishery/species/3571/en

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UNEP-WCMC (2011): Review of CMS existing instruments and projects on marine turtles. UNEP/CMS/Inf.10.16. UNEP-WCMC, Cambridge, UK.

Annex 1

	Species	<u>Pressure</u>	<u>State</u>	Response	Potentia	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Terrestrial Mammals							
Bison bison	American bison	Habitat loss and degradation; Population genetics - Hybridisation, Inbreeding; Diseases; Other	IUCN Status Near Threatened, stable population trend,	CITES Appendix II		Х	Range States are not Parties to CMS
Bison bonasus	European bison	Habitat loss and degradation - Logging and unsustainable harvesting,	IUCN Status Vulnerable, increasing population trend			X	
Bos gaurus	Gaur	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Energy production and mining, Infrastructure and service corridors, Residential and commercial development, Logging and unsustainable harvesting; Human Disturbance - Population growth; Population genetics - Population fragmentation; Invasive Species - Destructive behaviour; Diseases	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I	x	x	

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Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Capra falconeri	Markhor	Unsustainable hunting and trapping; Population genetics - Population fragmentation; Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting	IUCN Status Endangered, decreasing population trend	CITES Appendix I	Х	х	
Capra caucasica	Western Tur	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Prey/Food depletion; Climate Change - Extreme weather	IUCN Status Endangered, decreasing population trend		Х	Х	
Capra cylindricornis	Eastern Tur	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Prey/Food depletion; Climate Change - Extreme weather	IUCN Status Near Threatened, decreasing population trend			Х	
Capra sibirica	Asian Ibex	Poaching and subsistence hunting; competition with livestock	IUCN Least Concern, population trend unknown			x	
Cervus elaphus	Red Deer	Intermixing of subspecies and introduction of parasites and diseases; Overhunting and habitat loss in some areas	IUCN Least Concern, increasing population trend			X	On Appendix II only populations of Cervus elaphus yarkandensis in Kazakhstan, Kyrgystan, Tajikistan, Turkmenistan, Uzbekistan andAfghanistan are listed
Cuon alpinus	Indian Wild Dog	Habitat loss and degradation - Prey/Food depletion, Changes in land-use management; Unsustainable hunting and trapping; Human wildlife conflict; Diseases	IUCN Status Endangered, decreasing population trend	CITES Appendix II	Х	Х	

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Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Elephas maximus	Indian Elephant	Human Disturbance - Population growth; Habitat loss and degradation - Agriculture; Unsustainable hunting and trapping; Population genetics - Adult sex-ratios	IUCN Status Endangered, decreasing population trend	CITES Appendix I	X	х	
Eudorcas rufifrons	Red fronted Gazelle	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture	IUCN Status Vulnerable, decreasing population trend			Х	
Eudorcas thomsonii	Thomson's gazelle	Invasive Species; Human Disturbance - Recreational activities; Habitat loss and degradation - Infrastructure and service corridors, Changes in land-use management	IUCN Status near threatened, decreasing population trend			x	
Kobus kob leucotis	Whiteeared Kob	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Climate Change	IUCN Status Least Concern, unknown Population trend			x	
Lynx pardinus	lberian Lynx	Habitat loss and degradation - Logging and unsustainable harvesting, River Damming, Energy production and mining, Prey depletion, Residential and commercial development	IUCN Status Critically Endangered, decreasing population trend	CITES Appendix I	Х	Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potentia	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Loxodonta africana	African Elephant	Human wildlife conflict; Unsustainable hunting and trapping; Illegal trade; Habitat loss and degradation - Changes in land-use management, Residential and commercial development	IUCN Status Vulnerable, increasing population trend	CITES Appendix I/ II (only Botswana, Namibia , South Africa, Zimbabwe)	x		listed on CMS Appendix II, could be uplisted
Pan troglodytes	Chimpanzee	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Changes in land-use management, Energy production and mining; Human Disturbance - Population growth; Unsustainable hunting and trapping; Illegal trade; Population genetics - Low reproduction rates; Diseases	IUCN Status Endangered, decreasing population trend	CITES Appendix I	x	X	
Panthera leo	Lion	Unsustainable hunting and trapping; Habitat loss and degradation; Diseases; Human wildlife conflict	IUCN Status Vulnerable, decreasing population trend	CITES Appendix I		Х	
Panthera tigris	Tiger	Illegal trade; Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Residential and commercial development; Human wildlife conflict	IUCN Status Endangered, decreasing population trend		X	X	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pantholops hodgsonii	Chiru	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture; Infrastructure and service corridors	IUCN Status Endangered, decreasing population trend	CITES Appendix I	х	х	
Procapra picticaudata	Tibetan Gazelle	Habitat loss and degradation - Agriculture, Infrastructure and service corridors; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			х	
Pongo pygmaeus	Bornean Orangutan	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting; Other; Population genetics - Population fragmentation, Inbreeding; Unsustainable hunting and trapping; Illegal trade	IUCN Status Endangered, decreasing population trend	CITES Appendix I	×	х	
Rangifer tarandus	Reindeer	Onshore petroleum exploration in Canada, poaching in the Russian Federation and habitat loss in Finalnd	IUCN Status Least Concern, stable population trend			х	
Bats							
Balantiopteryx io	Thomas' sac-winged bat	Human Disturbance - Recreational activities, Destructive behaviour	IUCN Status Vulnerable, decreasing population trend			х	
Choeronycteris mexicana	Mexican long-tongued bat	Habitat loss and degradation - Energy production and mining; Human Disturbance - Recreational activities	IUCN Status Near Threatened			Х	
Hipposideros commersoni	Grant leaf-nosed bat	Unsustainable hunting and trapping; Habitat loss and degradation	IUCN Status Near Threatened			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Leptonycteris curasoae	Western long-nosed bat	Habitat loss and degradation; Human Disturbance - Destructive behaviour	IUCN Status Vulnerable, decreasing population trend			х	
Leptonycteris nivalis	Mexican long-nosed bat	Habitat loss and degradation - Agriculture; Human Disturbance - Destructive behaviour	IUCN Status Endangered, decreasing population trend		Х	Х	
Myotis grisescens	Grey myotis	Habitat loss and degradation - Agriculture	IUCN Status Near Threatened, increasing population trend			Х	
Myotis sodalis	Indiana bat	Human Disturbance - Recreational activities, Destructive behaviour; Habitat loss and degradation - Agriculture, Infrastructure and service corridors, Residential and commercial development, Changes in land-use management	IUCN Status Endangered, decreasing population trend		X	х	
Natalus micropus	Cuban funnel-eared bat	Human Disturbance - Recreational activities; Habitat loss and degradation - Energy production and mining	IUCN Status Near Threatened, decreasing population trend			Х	
Aquatic Mammals							
Ursus maritimus	Polar Bear	Climate Change - Ecological interactions and habitat change; Pollution - Industry and production; Habitat loss and degradation - Energy production and mining	IUCN Status Vulnerable, decreasing population trend	CITES Appendix II		х	Listing Proposal out for consultation with the Scientific Council

	Species	<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Balaenoptera brydei	Bryde's whale	Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Data Deficient	CITES Appendix I	×		listed on CMS Appendix II, could be uplisted; especially North Pacific populations are threatened
Berardius amuxii	Arnoux´s beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch, Experimental fisheries, Prey depletion; Pollution - Noise pollution; Climate Change – Ocean temperature, Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix I	х	x	
Callorhinus ursinus	Northern fur seal	Unsustainable fishing and harvesting aquatic resources - Prey depletion, Bycatch; Pollution - Marine debris, Industry and production; Climate Change - Ecological interactions and habitat change	IUCN Status Vulnerable, decreasing population trend			x	
Cystophora cristata	Hooded seal	Unsustainable fishing and harvesting aquatic resources - Bycatch; Prey depletion; Polllution - Industry and production; Climate Change - Ecological interactions and habitat change	IUCN Status Vulnerable, decreasing population trend		×	х	

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Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	Арр. І	App. II	
Delphinus capensis	Long-beaked common dolphin	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Data Deficient	CITES Appendix II		Х	
Eschrichtius robustus	Grey whale (western subpopulation)	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Pollution - Industry and production, Prey depletion, Noise pollution; Habitat loss and degradation - Energy production and mining, Infrastructure and service corridors, Destructive fishing practices; Human Disturbance	IUCN Status Critically Endangered, increasing population trend	CITES Appendix I	x	x	
Eumetopias jubatus	Steller sea lion	Unsustainable fishing and harvesting aquatic resources - Bycatch, Prey depletion	IUCN Status Near Threatened, increasing population trend			Х	
Feresa attenuata	Pygmy killer whale	Unsustainable fishing and harvesting aquatic resources - Prey depletion, Bycatch, Overharvesting; Pollution - Noise pollution, Marine debris; Human Disturbance; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		х	
Globicephala macrorhynchus	Short-finned pilot whale	Unsustainable fishing and harvesting aquatic resources - Overharvesting, Bycatch; Illegal trade; Pollution - Noise pollution; Climate Change	IUCN Status Data Deficient	CITES Appendix II		Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Kogia breviceps	Pygmy sperm whale	Pollution - Noise pollution, Marine debris; Climate Change; Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Data Deficient	CITES Appendix II		Х	
Kogia sima	Dwarf sperm whale	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Pollution - Noise pollution, Marine debris; Climate Change	IUCN Status Data Deficient	CITES Appendix II		Х	
Lissodelphis peronii	Southern right-whale dolphin	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Data Deficient	CITES Appendix II		х	
Mesoplodon bidens	Sowerby's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		×	
Mesoplodon bowdoini	Andrews' beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	ıl listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Mesoplodon carlhubbsi	Hubbs' beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		Х	
Mesoplodon densirostris	Blainville's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Pollution - Marine debris, Noise pollution; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		х	
Mesoplodon europaeus	Gervais' beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		Х	
Mesoplodon ginkgodens	Ginkgo-toothed whale	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Mesoplodon grayi	Gray's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		х	
Mesoplodon hectori	Hector's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		х	
Mesoplodon layardii	Layard's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		x	
Mesoplodon mirus	True's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		x	
Mesoplodon peruvianus	Pygmy whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		x	

Species		<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Mesoplodon stejnegeri	Stejneger's beaked whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris; Climate Change - Ecological interactions and habitat change	IUCN Status Data Deficient	CITES Appendix II		х	
Phoca caspica	Caspian seal	Unsustainable fishing and harvesting aquatic - Overharvesting, Bycatch, Prey depletion; Invasive Species - Competition; Diseases; Climate Change – Ocean temperature, Altered weather patterns, Ecological interactions and habitat change; Habitat loss and degradation - Energy production and mining, Residential and commercial development; Human Disturbance - Work and other activities, Recreational activities; Unsustainable hunting and trapping	IUCN Status Endangered, decreasing population trend		X	X	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Sousa chinensis	Indo-pacific Hump- backed Dolphin	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Industry and production, Noise pollution; Human Disturbance - Work and other activities; Habitat loss and degradation -Residential and commercial development	IUCN Status Endangered, decreasing population trend	CITES Appendix I, CMS Appendix II	x	х	listed on CMS Appendix II, could be uplisted; Eastern Taiwan Strait subpopulation is Critically Endangered and has a decreasing population trend
Stenella frontalis	Atlantic spotted dolphin	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Data Deficient	CITES Appendix II		Х	
Tasmacetus shepherdi	Tasman beaked whale	Pollution - Noise pollution, Marine debris; Climate Change	IUCN Status Data Deficient	CITES Appendix II		Х	
Pseudorca crassidens	False killer whale	Human wildlife conflict; Unsustainable fishing and harvesting aquatic resources - Overharvesting, Prey depletion, Bycatch; Illegal trade; Pollution - Noise pollution, Marine debris; Climate Change	IUCN Status Data Deficient	CITES Appendix II		X	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Delphinapterus leucas	Beluga whale	Pollution - Industry and production; Unsustainable fishing and harvesting aquatic resources - Overharvesting, Bycatch; Human Disturbance - Work and other activities; Habitat loss and degradation - River Damming, Energy production and mining; Climate Change – Altered weather patterns, Ecological interactions and habitat change, Ocean temperature	IUCN Status Near Threatened	CITES and CMS Appendix II	×	x	listed on CMS Appendix II, could be uplisted. A proposal is under preparation.
Orcinus orca	Killer whale	Climate Change - Ecological interactions and habitat change; Human wildlife conflict; Unsustainable fishing and harvesting aquatic resources - Overharvesting, Prey depletion, Bycatch; Pollution - Industry and production, Noise pollution; Human Disturbance - Recreational activities; Habitat loss and degradation - Energy production and mining, Prey depletion	IUCN Status Data Deficient	CITES and CMS Appendix II	×	X	currently listed on App. II, proposal for uplisting concerning the populations in the North East Atlantic and the transient population in the North West Pacific, North Pacific residents discussed for listing at ScC17

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Ziphius cavirostris (Mediterranean subpopulation)	Cuvier's Beaked Whale	Unsustainable fishing and harvesting aquatic resources - Bycatch; Pollution - Noise pollution, Marine debris	IUCN Status Data Deficient	CITES Appendix II	x	х	proposal for listing, only concerning Mediterranean subpopulation, listing discussed at ScC16 & ScC17
Monodon monoceros	Narwhale	Climate Change – Altered weather patterns, Ecological interactions and habitat change, Ocean temperature; Unsustainable fishing and harvesting aquatic resources – Overharvesting; Human Disturbance - Work and other activities; Habitat loss and degradation - Energy production and mining, Bycatch; Illegal trade	IUCN Status Near Threatened	CITES and CMS Appendix II	×	х	currently listed on App. II, proposal for uplisting, discussed at ScC17
Aves							
Tadorna cristata	Crested Shelduck	Habitat loss and degradation - Infrastructure and service corridors; Human Disturbance - Work and other activities	IUCN Status Critically Endangered		×	х	listed on CMS Appendix II, could be uplisted
Pseudobulweria becki	Beck's Petrel	Invasive Species - Predators	IUCN Status Critically Endangered, decreasing population trend		X	Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Puffinus auricularis	Townsend's Shearwater	Invasive Species - Predators, Destructive behaviour; Habitat loss and degradation - Infrastructure and service corridors; Climate Change - Sea level rise	IUCN Status Critically Endangered, decreasing population trend		Х	Х	
Houbaropsis bengalensis	Bengal Florican	Habitat loss and degradation - Agriculture; Invasive Species - Predators, Destructive behaviour; Human Disturbance	IUCN Status Critically Endangered, decreasing population trend,	CITES Appendix I and II	х	х	
Vermivora bachmanii	Bachman's Warbler	Habitat loss and degradation - Agriculture; Human Disturbance - Work and other activities	IUCN Status Critically Endangered		Х	Х	
Eudyptes moseleyi	Northern Rockhopper Penguin	Human Disturbance; Invasive Species - Predators; Unsustainable fishing and harvesting aquatic resources - Prey depletion; Climate Change - Ecological interactions and habitat change; Pollution - Agriculture and hunting/fishing, Tourism, Light pollution	IUCN Status Endangered, decreasing population trend		X	X	
Pterodroma baraui	Barau's Petrel	Invasive Species - Predators; Human Disturbance - Work and other activities, Recreational activities; Climate Change - Altered weather patterns	IUCN Status Endangered, decreasing population trend		Х	Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potentia	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pterodroma alba	Phoenix Petrel	Invasive Species - Predators; Unsustainable hunting and trapping	IUCN Status Endangered, decreasing population trend		х	Х	
Pterodroma hasitata	Black-capped Petrel	Habitat loss and degradation; Unsustainable hunting and trapping; Pollution - Light pollution; Habitat loss and degradation - Residential and commercial development; Human Disturbance - Work and other activities	IUCN Status Endangered, decreasing population trend		x	x	
Pterodroma incerta	Atlantic Petrel	Climate Change - Extreme weather; Invasive Species - Predators; Pollution - Light pollution; Unsustainable hunting and trapping	IUCN Status Endangered, decreasing population trend		х	Х	
Puffinus huttoni	Hutton's Shearwater	Unsustainable fishing and harvesting aquatic resources - Prey depletion; Habitat loss and degradation; Invasive Species - Predators, Destructive behaviour; Climate Change - Ecological interactions and habitat change	IUCN Status Endangered, stable population trend		x	x	
Nesofregetta fuliginosa	White-throated Storm- petrel	Invasive Species - Predators; Human Disturbance; Habitat loss and degradation	IUCN Status Endangered, decreasing population trend		Х	Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Oceanodroma homochroa	Ashy Storm-petrel	Pollution - Industry and production, Light pollution; Invasive Species - Predators; Human Disturbance - Recreational activities; Climate Change - Ocean acidification; Sea level rise	IUCN Status Endangered, decreasing population trend		х	х	
Podiceps gallardoi	Hooded Grebe	Climate Change; Invasive Species; Habitat loss and degradation - Agriculture; Human Disturbance - Work and other activities	IUCN Status Critically Endangered, decreasing population trend		Х	Х	
Ciconia stormi	Storm's Stork	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture, Infrastructure and service corridors	IUCN Status Endangered, decreasing population trend		Х	х	
Leptoptilos dubius	Greater Adjutant	Habitat loss and degradation; Human Disturbance - Agriculture and aquaculture, Logging and unsustainable harvesting; Pollution; Diseases	IUCN Status Endangered, decreasing population trend		х	х	
Gorsachius magnificus	White-eared Night- heron	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Infrastructure and service corridors; Unsustainable hunting and trapping; Human Disturbance	IUCN Status Endangered, decreasing population trend		x	х	
Sypheotides indicus	Lesser Florican	Unsustainable hunting and trapping; Invasive Species - Destructive behaviour; Habitat loss and degradation - Agriculture	IUCN Status Endangered, decreasing population trend,	CITES Appendix II	х	х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Anodorhynchus hyacinthinus	Hyacinth Macaw	Illegal trade; Habitat loss and degradation - Agriculture	IUCN Status Endangered, decreasing population trend,	CITES Appendix I and II	X	х	
Rhynchopsitta pachyrhyncha	Thick-billed Parrot	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting; Illegal trade	IUCN Status Endangered, decreasing population trend,	CITES Appendix I and II	х	х	
Aratinga solstitialis	Sun Parakeet	Unsustainable hunting and trapping; Illegal trade	IUCN Status Endangered, decreasing population trend,	CITES Appendix I	x	Х	
Amazona vinacea	Vinaceous Amazon	Habitat loss and degradation - Logging and unsustainable harvesting; Illegal trade	IUCN Status Endangered, decreasing population trend,	CITES Appendix I and II	х	х	
Tachycineta cyaneoviridis	Bahama Swallow	Habitat loss and degradation - Logging and unsustainable harvesting; Invasive Species - Concurrence	IUCN Status Endangered, increasing population trend		х	Х	
Dendroica chrysoparia	Golden-cheeked Warbler	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting	IUCN Status Endangered, decreasing population trend		Х	Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potentia	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Tragopan melanocephalus	Western Tragopan	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I		X	
Tragopan blythii	Blyth's Tragopan	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I		×	
Lophophorus sclateri	Sclater's Monal	Unsustainable hunting and trapping; Habitat loss and degradation - Logging and unsustainable harvesting (locally)	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I		x	
Eudyptes chrysocome	Southern Rockhopper Penguin	Unsustainable hunting and trapping; Invasive species - Destructive behaviour; Human Disturbance - Work and other activities; Climate Change -Ecological interactions and habitat change; Unsustainable fishing and harvesting aquatic resources - Prey depletion	IUCN Status Vulnerable, decreasing population trend			X	
Eudyptes chrysolophus	Macaroni Penguin	Unsustainable fishing and harvesting aquatic resources; Diseases; Climate Change - Ocean temperature	IUCN Status Vulnerable, decreasing population trend			X	

Species		<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pterodroma externa	Juan Fernandez Petrel	Invasive species - Destructive behaviour; Human Disturbance - Work and other activities; Pollution - Light pollution; Climate Change - Ecological interactions and habitat change	IUCN Status Vulnerable, stable population trend			x	
Pterodroma pycrofti	Pycroft's Petrel	Climate Change -Ecological interactions and habitat change; Other	IUCN Status Vulnerable, increasing population trend			х	
Pterodroma longirostris	Stejneger's Petrel	Invasive species - Destructive behaviour, Predators; Human Disturbance - Work and other activities; Climate Change -Ecological interactions and habitat change	IUCN Status Vulnerable, stable population trend			х	
Pterodroma leucoptera	Gould's Petrel	Invasive species - Destructive behaviour, Predators; Pollution - Light pollution; Habitat loss and degradation - Residential and commercial development	IUCN Status Vulnerable, decreasing population trend			х	
Pterodroma cookii	Cook's Petrel	Invasive species - Destructive behaviour, Predators; Climate Change -Ecological interactions and habitat change	IUCN Status Vulnerable, increasing population trend			Х	
Pterodroma cervicalis	White-necked Petrel	Invasive species - Destructive behaviour, Predators; Climate Change -Ecological interactions and habitat change	IUCN Status Vulnerable, increasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	Арр. І	App. II	
Puffinus bulleri	Buller's Shearwater	Unsustainable fishing and harvesting aquatic resources - Bycatch, Prey depletion; Climate Change -Ecological interactions and habitat change	IUCN Status Vulnerable, stable population trend			х	
Puffinus heinrothi	Heinroth's Shearwater	Invasive Species - Predators	IUCN Status Vulnerable, stable population trend			x	
Mycteria cinerea	Milky Stork	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I		х	
Leptoptilos javanicus	Lesser Adjutant	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Destructive fishing practices; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			X	
Geronticus calvus	Southern Bald Ibis	Habitat loss and degradation - Changes in land-use management, Agriculture, Energy production and mining; Unsustainable hunting and trapping; Pollution - Agriculture and hunting/fishing	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix II		x	
Circaetus beaudouini	Beaudouin's Snake- eagle	Human Disturbance - Population growth; Habitat loss and degradation - Agriculture, Residential and commercial development, Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			X	

	Species	<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Coturnicops exquisitus	Swinhoe's Rail	Habitat loss and degradation - Changes in land-use management, Agriculture, Energy production and mining; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			х	
Rallus antarcticus	Austral Rail	Habitat loss and degradation - Agriculture	IUCN Status Vulnerable, decreasing population trend			x	
Rissa brevirostris	Red-legged Kittiwake	Unsustainable fishing and harvesting aquatic resources - Prey depletion; Climate Change -Ecological interactions and habitat change	IUCN Status Vulnerable, decreasing population trend			х	
Rynchops albicollis	Indian Skimmer	Habitat loss and degradation - Agriculture, Energy production and mining, Infrastructure and service corridors, Changes in land-use management; Human Disturbance - Work and other activities; Invasive Species - Destructive behaviour	IUCN Status Vulnerable, decreasing population trend			X	
Columba eversmanni	Pale-backed Pigeon	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture	IUCN Status Vulnerable, decreasing population trend			×	
Patagioenas oenops	Peruvian Pigeon	Unsustainable hunting and trapping; Habitat loss and degradation - Logging and unsustainable harvesting; Human Disturbance - Population growth	IUCN Status Vulnerable, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Leptotila ochraceiventris	Ochre-bellied Dove	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			х	
Ducula pickeringii	Grey Imperial-pigeon	Habitat loss and degradation - Agriculture; Unsustainable hunting and trapping; Human Disturbance - Recreational activities; Invasive Species - Predators	IUCN Status Vulnerable, decreasing population trend			х	
Charmosyna palmarum	Palm Lorikeet	Diseases; Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix II		X	
Ara militaris	Military Macaw	Illegal trade; Habitat loss and degradation - Logging and unsustainable harvesting, Changes in land-use management	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I and II		х	
Leptosittaca branickii	Golden-plumed Parakeet	Habitat loss and degradation -Logging and unsustainable harvesting, Energy production and mining, Agriculture; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix II		x	
Touit costaricensis	Red-fronted Parrotlet	Habitat loss and degradation -Logging and unsustainable harvesting, Agriculture, Residential and commercial development	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix II		Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Hapalopsittaca pyrrhops	Red-faced Parrot	Habitat loss and degradation -Logging and unsustainable harvesting, Agriculture	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix II		х	
Amazona pretrei	Red-spectacled Amazon	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture; Illegal trade	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix I and II		Х	
Apus acuticauda	Dark-rumped Swift	Habitat loss and degradation	IUCN Status Vulnerable, stable population trend			х	
Dendrocopos dorae	Arabian Woodpecker	Habitat loss and degradation - Agriculture, Energy production and mining, Logging and unsustainable harvesting	IUCN Status Vulnerable, decreasing population trend			Х	
Pitta nympha	Fairy Pitta	Habitat loss and degradation - Logging and unsustainable harvesting, Energy production and mining, Agriculture; Human Disturbance - Recreational activities; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend,	CITES Appendix II		х	
Piprites pileata	Black-capped Piprites	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Vulnerable, decreasing population trend			Х	
Procnias tricarunculatus	Three-wattled Bellbird	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Vulnerable, decreasing population trend			Х	

Species		<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Procnias nudicollis	Bare-throated Bellbird	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Energy production and mining, Infrastructure and service corridors, Logging and unsustainable harvesting	IUCN Status Vulnerable, decreasing population trend			Х	
Cephalopterus glabricollis	Bare-necked Umbrellabird	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Endangered, decreasing population trend			Х	
Xolmis dominicanus	Black-and-white Monjita	Habitat loss and degradation - Agriculture, Changes in land-use management	IUCN Status Vulnerable, decreasing population trend			Х	
Vireo atricapilla	Black-capped Vireo	Habitat loss and degradation - Agriculture; Residential and commercial development	IUCN Status Vulnerable, decreasing population trend			Х	
Oriolus mellianus	Silver Oriole	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			Х	
Chaetornis striata	Bristled Grassbird	Habitat loss and degradation - Agriculture, Energy production and mining; Logging and unsustainable harvesting	IUCN Status Vulnerable, decreasing population trend			Х	
Sitta formosa	Beautiful Nuthatch	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			Х	
Toxostoma bendirei	Bendire's Thrasher	Habitat loss and degradation - Agriculture, Residential and commercial development	IUCN Status Vulnerable, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Cinclus schulzi	Rufous-throated Dipper	Habitat loss and degradation - Energy production and mining, Agriculture, Logging and unsustainable harvesting; Invasive Species	IUCN Status Vulnerable, decreasing population trend			Х	
Anthus spragueii	Sprague's Pipit	Habitat loss and degradation - Agriculture, Energy production and mining; Invasive Species - Destructive behaviour	IUCN Status Vulnerable, decreasing population trend			х	
Euphagus carolinus	Rusty Blackbird	Habitat loss and degradation - Energy production and mining; Climate Change - Changes in precipitation, Ecological interactions and habitat change	IUCN Status Vulnerable, decreasing population trend			Х	
Sturnella defilippii	Pampas Meadowlark	Habitat loss and degradation - Agriculture	IUCN Status Vulnerable, decreasing population trend			х	
Emberiza sulphurata	Yellow Bunting	Habitat loss and degradation - Agriculture; Unsustainable hunting and trapping	IUCN Status Vulnerable, decreasing population trend			х	
Conirostrum tamarugense	Tamarugo Conebill	Habitat loss and degradation - Agriculture; Human Disturbance - Work and other activities	IUCN Status Vulnerable, increasing population trend			х	
Coturnix japonica	Japanese Quail	Habitat loss and degradation - Agriculture; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			Х	
Tragopan satyra	Satyr Tragopan	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting	IUCN Status Near Threatened, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	Арр. І	App. II	
Speculanas specularis	Spectacled Duck	Human Disturbance - Recreational activities; Habitat loss and degradation - Agriculture	IUCN Status Near Threatened, stable population trend			Х	
Pygoscelis papua	Gentoo Penguin	Human Disturbance - Recreational activities, Work and other activities	IUCN Status Near Threatened, decreasing population trend			х	
Spheniscus magellanicus	Magellanic Penguin	Habitat loss and degradation - Energy production and mining; Unsustainable fishing and harvesting aquatic resources - Bycatch, Prey depletion; Invasive Species - Predators; Climate Change - Changes in precipitation; Human Disturbance - Recreational activities	IUCN Status Near Threatened, decreasing population trend			Х	
Pterodroma feae	Fea's Petrel	Unsustainable hunting and trapping; Invasive Species - Predators, Destructive behaviour	IUCN Status Near Threatened, increasing population trend			х	
Pterodroma ultima	Murphy's Petrel	Invasive Species - Predators; Climate Change - Altered weather patterns, Ecological interactions and habitat change	IUCN Status Near Threatened, decreasing population trend			Х	
Pterodroma inexpectata	Mottled Petrel	Invasive Species - Competition, Predators	IUCN Status Near Threatened, decreasing population trend			х	
Pseudobulweria rostrata	Tahiti Petrel	Invasive Species - Predators; Habitat loss and degradation - Energy production and mining; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Puffinus griseus	Sooty Shearwater	Unsustainable hunting and trapping; Invasive Species - Predators	IUCN Status Near Threatened, decreasing population trend			Х	
Puffinus yelkouan	Yelkouan Shearwater	Unsustainable fishing and harvesting aquatic resources - Bycatch; Invasive Species - Predators	IUCN Status Vulnerable, decreasing population trend			Х	
Puffinus opisthomelas	Black-vented Shearwater	Habitat loss and degradation - Infrastructure and service corridors; Pollution - Light pollution; Invasive Species - Predators	IUCN Status Near Threatened			х	
Bulweria fallax	Jouanin's Petrel	Other	IUCN Status Near Threatened, increasing population trend			х	
Threskiornis melanocephalus	Black-headed Ibis	Habitat loss and degradation - Agriculture; Human Disturbance; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			Х	
Egretta rufescens	Reddish Egret	Other; Habitat loss and degradation	IUCN Status Near Threatened, increasing population trend			х	
Pelecanus philippensis	Spot-billed Pelican	Habitat loss and degradation - Logging and unsustainable harvesting, Prey/Food depletion, Agriculture, Aquaculture; Invasive Species - Destructive behaviour; Unsustainable hunting and trapping; Unsustainable fishing and harvesting aquatic resources - Prey depletion	IUCN Status Near Threatened, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pelecanus thagus	Peruvian Pelican	Human Disturbance - Work and other activities, Recreational activities	IUCN Status Near Threatened, increasing population trend			х	
Neotis denhami	Denham's Bustard	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture, Energy production and mining	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		х	
Tetrax tetrax	Little Bustard	Habitat loss and degradation - Agriculture, Energy production and mining, Prey/Food depletion; Unsustainable hunting and trapping; Climate Change - Altered weather patterns	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		х	
Laterallus jamaicensis	Black Rail	Habitat loss and degradation - Agriculture; Pollution	IUCN Status Near Threatened, decreasing population trend			х	
Porzana paykullii	Band-bellied Crake	Habitat loss and degradation; Pollution - Agriculture and hunting/fishing, Industry and production	IUCN Status Near Threatened, decreasing population trend			х	
Phegornis mitchellii	Diademed Plover	Habitat loss and degradation; Climate Change - Altered weather patterns	IUCN Status Near Threatened, decreasing population trend			х	
Larus heermanni	Heermann's Gull	Climate Change - Ecological interactions and habitat change, Altered weather patterns	IUCN Status Near Threatened, increasing population trend			х	
Pagophila eburnea	Ivory Gull	Habitat loss and degradation - Energy production and mining	IUCN Status Near Threatened, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	Арр. І	App. II	
Sterna elegans	Elegant Tern	Unsustainable fishing and harvesting aquatic resources - Prey depletion	IUCN Status Near Threatened, stable population trend			Х	
Larosterna inca	Inca Tern	Habitat loss and degradation - Agriculture; Invasive Species - Predators; Human Disturbance - Work and other activities	IUCN Status Near Threatened, decreasing population trend			X	
Columba janthina	Japanese Wood- pigeon	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			x	
Caloenas nicobarica	Nicobar Pigeon	Unsustainable hunting and trapping; Habitat loss and degradation - Agriculture and aquaculture; Invasive Species - Predators	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix I	x	Х	
Treron formosae	Whistling Green- pigeon	Habitat loss and degradation - Logging and unsustainable harvesting; Human Disturbance - Recreational activities; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			Х	
Ptilinopus jambu	Jambu Fruit-dove	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			Х	
Charmosyna multistriata	Striated Lorikeet	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, (Energy production and mining)	IUCN Status Near Threatened, decreasing population trend			Х	

Species		<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Psittinus cyanurus	Blue-rumped Parrot	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		x	
Psittacula longicauda	Long-tailed Parakeet	Habitat loss and degradation - Logging and unsustainable harvesting	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		x	
Aratinga erythrogenys	Red-masked Parakeet	Unsustainable hunting and trapping; Illegal trade; Habitat loss and degradation	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		х	
Nannopsittaca dachilleae	Amazonian Parrotlet	Habitat loss and degradation - Logging and unsustainable harvesting, Energy production and mining, Infrastructure and service corridors, Residential and commercial development	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		х	
Amazona dufresniana	Blue-cheeked Amazon	Habitat loss and degradation; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		х	
Cuculus vagans	Moustached Hawk- cuckoo	Habitat loss and degradation - Logging and unsustainable harvesting	IUCN Status Near Threatened, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Strix occidentalis	Spotted Owl	Habitat loss and degradation - Logging and unsustainable harvesting; Climate Change - Ecological interactions and habitat change, Altered weather patterns; Population genetics - Hybridisation	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		x	
Batrachostomus stellatus	Gould's Frogmouth	Habitat loss and degradation - Logging and unsustainable harvesting	IUCN Status Near Threatened, decreasing population trend			Х	
Eleothreptus anomalus	Sickle-winged Nightjar	Habitat loss and degradation - Agriculture	IUCN Status Near Threatened, decreasing population trend			Х	
Chaetura pelagica	Chimney Swift	Habitat loss and degradation - Logging and unsustainable harvesting, Changes in land-use management	IUCN Status Near Threatened, decreasing population trend			Х	
Eriocnemis derbyi	Black-thighed Puffleg	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix II		х	
Harpactes wardi	Ward's Trogon	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			Х	
Priotelus roseigaster	Hispaniolan Trogon	Habitat loss and degradation - Agriculture, Energy production and mining, Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			X	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pharomachrus mocinno	Resplendent Quetzal	Habitat loss and degradation - Logging and unsustainable harvesting; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend,	CITES Appendix I	х	х	
Andigena laminirostris	Plate-billed Mountain- toucan	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Residential and commercial development, Energy production and mining; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			х	
Melanerpes erythrocephalus	Red-headed Woodpecker	Habitat loss and degradation - Agriculture, Infrastructure and service corridors, Changes in land-use management; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			х	
Phibalura flavirostris	Swallow-tailed Cotinga	Habitat loss and degradation - Logging and unsustainable harvesting	IUCN Status Near Threatened, decreasing population trend			х	
Contopus cooperi	Olive-sided Flycatcher	Habitat loss and degradation - Logging and unsustainable harvesting, Changes in land-use management	IUCN Status Near Threatened, decreasing population trend			х	
Spartonoica maluroides	Bay-capped Wren- spinetail	Habitat loss and degradation - Agriculture	IUCN Status Near Threatened, decreasing population trend			Х	
Vireo bellii	Bell's Vireo	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Residential and commercial development	IUCN Status Near Threatened, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Bombycilla japonica	Japanese Waxwing	Habitat loss and degradation - Logging and unsustainable harvesting; Illegal trade	IUCN Status Near Threatened, decreasing population trend			х	
Pycnonotus melanoleucos	Black-and-white Bulbul	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Near Threatened, decreasing population trend			Х	
Andropadus montanus	Cameroon Montane Greenbul	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Near Threatened, decreasing population trend			Х	
Bradypterus major	Long-billed Bush- warbler	Habitat loss and degradation - Logging and unsustainable harvesting, Agriculture	IUCN Status Near Threatened, decreasing population trend			×	
Carpodacus cassinii	Cassin's Finch	Habitat loss and degradation - Logging and unsustainable harvesting	IUCN Status Near Threatened, decreasing population trend			×	
Vermivora chrysoptera	Golden-winged Warbler	Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting; Invasive Species - Competition; Population genetics - Hybridisation	IUCN Status Near Threatened, decreasing population trend			x	
Emberiza cineracea	Cinereous Bunting	Human Disturbance - Recreational activities; Habitat loss and degradation - Changes in land-use management	IUCN Status Near Threatened, decreasing population trend			Х	
Emberiza yessoensis	Ochre-rumped Bunting	Habitat loss and degradation	IUCN Status Near Threatened, decreasing population trend			Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Calcarius ornatus	Chestnut-collared Longspur	Habitat loss and degradation - Residential and commercial development	IUCN Status Near Threatened, decreasing population trend			Х	
Ammodramus henslowii	Henslow's Sparrow	Habitat loss and degradation - Agriculture, Changes in land-use management	IUCN Status Near Threatened, decreasing population trend			Х	
Passerina ciris	Painted Bunting	Habitat loss and degradation - Residential and commercial development, Infrastructure and service corridors, Agriculture; Unsustainable hunting and trapping	IUCN Status Near Threatened, decreasing population trend			х	
Progne sinaloae	Sinaloa Martin		IUCN Status Vulnerable, stable population trend			Х	
Pisces							
Marine fish							
Aetobatus flagellum	Longheaded eagle ray	Unsustainable fishing and harvesting aquatic resources - Bycatch; Habitat loss and degradation - Destructive fishing practices	IUCN Status Endangered, decreasing population trend		Х	X	
Aetobatus narinari	Bonnet ray	Unsustainable fishing and harvesting aquatic resources - Overharvesting, Bycatch	IUCN Status Near Threatened, decreasing population trend			Х	
Aetomylaeus nichofii	Banded eagle ray	Habitat loss and degradation - Destructive fishing practices	IUCN Status Vulnerable, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Alopias pelagicus	Pelagic thresher shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Population genetics - Low reproduction rates	IUCN Status Vulnerable, decreasing population trend			х	
Alopias superciliosus	Bigeye thresher shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Population genetics - Low reproduction rates	IUCN Status Vulnerable, decreasing population trend			х	
Alopias vulpinus	Common thresher shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Population genetics - Low reproduction rates	IUCN Status Vulnerable, decreasing population trend			x	
Anoxypristis cuspidata	Knifetooth sawfish	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Population genetics - Population fragmentation, Loss of genetic diversity; Habitat loss and degradation - Energy production and mining	IUCN Status Endangered, decreasing population trend, CITES Appendix I		x	х	
Carcharhinus acronotus	Blacknose shark	Unsustainable fishing and harvesting aquatic resources - Bycatch	IUCN Status Near Threatened, decreasing population trend			Х	
Carcharhinus albimarginatus	Silvertip shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Near Threatened			Х	
Carcharhinus brachyurus	Bronze whaler	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Near Threatened			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Carcharhinus brevipinna	Spinner shark	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Human Disturbance - Recreational activities	IUCN Status Near Threatened			х	often also referred to as Blacktip shark
Carcharhinus falciformis	Silky shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Near Threatened, decreasing population trend			х	
Carcharhinus leucas	Bull shark	Habitat loss and degradation - Residential and commercial development, Energy production and mining; Unsustainable fishing and harvesting aquatic resources - Overharvesting; Human Disturbance - Recreational activities	IUCN Status Near Threatened			х	
Carcharhinus limbatus	Blacktip shark	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Human Disturbance - Recreational activities	IUCN Status Near Threatened			х	
Carcharhinus Iongimanus	Oceanic whitetip shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Vulnerable, decreasing population trend			х	
Carcharhinus obscurus	Dusky shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Human Disturbance - Recreational activities	IUCN Status Vulnerable, decreasing population trend			x	

Species		<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Carcharhinus plumbeus	Sandbar shark	Unsustainable fishing and harvesting aquatic resources - Overharvesting, Sport-fishing, Bycatch (in Mediterranean); Population genetics - Low reproduction rates; Habitat loss and degradation; Pollution (in Mediterranean)	IUCN Status Vulnerable, decreasing population trend			x	
Carcharhinus signatus	Night shark	Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Vulnerable, decreasing population trend			Х	
Carcharias taurus	Sandtiger shark	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Human Disturbance - Recreational activities	IUCN Status Vulnerable			х	
Galeorhinus galeus	Tope shark	Unsustainable fishing and harvesting aquatic resources - Overharvesting, Bycatch; Habitat loss and degradation - Destructive fishing practices, Energy production and mining	IUCN Status Vulnerable, decreasing population trend, Cites Appendix II			Х	
Isogomphodon oxyrhynchus	Daggernose shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Population genetics	IUCN Status Critically Endangered, decreasing population trend		х	х	
Mobula hypostoma	Atlantic devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch	IUCN Status Data Deficient			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Mobula japanica	Japanese devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Population genetics - Low reproduction rates	IUCN Status Near Threatened			х	
Mobula kuhlii	Shortfin devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch	IUCN Status Data Deficient, decreasing population trend			х	
Mobula mobular	Giant devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch	IUCN Status Endangered, decreasing population trend		х	х	
Mobula munkiana	Monk's devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch; Population genetics - Low reproduction rates	IUCN Status Near Threatened			х	
Mobula rochebrunei	Lesser Guinean devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Population genetics - Low reproduction rates	IUCN Status Vulnerable			х	
Mobula tarapacana	Box ray	Unsustainable fishing and harvesting aquatic resources - Bycatch; Population genetics - Low reproduction rates	IUCN State Data Deficient			Х	
Mobula thurstoni	Bentfin devil ray	Unsustainable fishing and harvesting aquatic resources - Bycatch	IUCN Status Near Threatened			Х	
Prionace glauca	Blue shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Sport-fishing	IUCN Status Near Threatened			Х	

Species		<u>Pressure</u>	<u>State</u>	Response Potential listing		Comments	
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pristis microdon	Freshwater sawfish	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Habitat loss and degradation - Aquaculture, Energy production and mining, Logging and unsustainable harvesting; Pollution	IUCN Status Critically Endangered, decreasing population trend,	CITES Appendix I	х	х	
Pristis pectinata	Smalltooth sawfish	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Habitat loss and degradation - Aquaculture, Residential and commercial development	IUCN Status Critically Endangered, decreasing population trend,	CITES Appendix I	х	х	
Pristis perotteti	Largetooth sawfish	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation	IUCN Status Critically Endangered, decreasing population trend,	CITES Appendix I	х	х	
Pristis pristis	Common sawfish	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Habitat loss and degradation - Aquaculture, Energy production and mining, Logging and unsustainable harvesting, Residential and commercial development; Pollution - Industry and production, Marine debris; Human Disturbance - Recreational activities	IUCN Status Critically Endangered, decreasing population trend,	CITES Appendix I	х	х	
Pteromylaeus bovinus	Bullray	Unsustainable fishing and harvesting aquatic resources; Pollution	IUCN Status Data Deficient			Х	
Sphyrna corona	Crown/Mallethead shark	Unsustainable fishing and harvesting aquatic resources	IUCN Status Near Threatened			Х	

	Species	<u>Pressure</u>	<u>State</u>	<u>Response</u>	onse Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Sphyrna lewini	Scalloped hammerhead shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Human Disturbance - Recreational activities	IUCN Status Endangered		х	х	
Sphyrna mokarran	Great hammerhead shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Human Disturbance - Recreational activities	IUCN Status Endangered, decreasing population trend		x	x	
Sphyrna tudes	Golden hammerhead shark	Unsustainable fishing and harvesting aquatic resources - Experimental fisheries	IUCN Status Vulnerable, decreasing population trend			х	
Sphyrna zygaena	Smooth hammerhead shark	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting	IUCN Status Vulnerable, decreasing population trend			х	
Squatina squatina	Angel shark	Unsustainable fishing and harvesting aquatic resources - Bycatch; Habitat loss and degradation - Destructive fishing practices	IUCN Status Critically Endangered, decreasing population trend		х	х	
Freshwater fish							
Brycon orbignyanus	Piracanjuba	Habitat loss and degradation - River Damming	IUCN Status Not listed			Х	
Salminus brasiliensis	Golden dorado	Habitat loss and degradation - River Damming; Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Not listed			Х	
Piaractus mesopotamicus	Pacu	Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Not listed			Х	
Pseudoplatystoma corruscans	Spotted sorubim	Habitat loss and degradation - River Damming	IUCN Status Not listed			Х	

	Species	<u>Pressure</u>	State Response	<u>Response</u>	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pseudoplatystoma fasciatum	Barred sorubim	Habitat loss and degradation - River Damming; Usustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Not listed			Х	
Zungaro jahu	Brazilian Jahu Catfish	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming	IUCN Status Not listed			X	
Brachyplatystoma vaillantii	Laulao catfish	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - Agriculture, Energy production and mining, River Damming	IUCN Status Not listed			х	
Pangasius hypophthalmus	Striped Catfish	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming	IUCN Status Endangered, decreasing population trend		х	х	
Tor putitora	Golden Mahaseer	Habitat loss and degradation - Agriculture; Energy production and mining - River Damming; Pollution - Industry and production; Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Endangered, decreasing population trend		Х	х	
Bagarius yarrelli	Giant devil catfish	Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Near Threatened, decreasing population trend			Х	

Species		<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Hucho taimen	Siberian Taimen	Unsustainable fishing and harvesting aquatic resources - Sport-fishing; Pollution - Industry and production; Habitat loss and degradation - Energy production and mining, River Damming, Infrastructure and service corridors; Climate Change	IUCN Status Vulnerable, decreasing population trend			х	
Dasyatis laosensis	Mekong Freshwater Stingray	Unsustainable fishing and harvesting aquatic resources - Bycatch, Experimental fisheries; Habitat loss and degradation - River Damming, Agriculture; Human Disturbance - Recreational activities	IUCN Status Endangered, decreasing population trend		X	х	
Himantura chaophraya	Giant freshwater stingray	Human Disturbance - Recreational activities; Unsustainable fishing and harvesting aquatic resources - Sport-fishing; Habitat loss and degradation - River Damming, Agriculture and aquaculture, Residential and commercial development	IUCN Status Endangered, decreasing population trend		x	х	
Himantura fluviatilis	Cowtail Stingray	Unsustainable fishing and harvesting aquatic resources - Bycatch, Overharvesting; Habitat loss and degradation - Agriculture, Logging and unsustainable harvesting, Energy production and mining	IUCN Status Data Deficient			х	
Alosa immaculata	Pontic shad	Unsustainable fishing and harvesting aquatic resources - Overharvesting ; Habitat loss and degradation - River Damming	IUCN Status Vulnerable, decreasing population trend			Х	

Species		<u>Pressure</u>	<u>State</u>	Response	Potential listing		Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Alosa volgensis		Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming, Changes in land-use management	IUCN Status Endangered		×	х	
Anguilla anguilla	European eel	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming, Changes in land-use management	IUCN Status Critically Endangered, decreasing population trend,	CITES Appendix II	х	х	
Aspiolucius esocinus	Pike asp	Habitat loss and degradation - Agriculture, Energy production and mining	IUCN Status Vulnerable			Х	
Coregonus lavaretus	Common whitefish	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Pollution; Invasive Species - Competition	IUCN Status Vulnerable			Х	
Cyprinus carpio carpio	Common carp	Population genetics - Hybridisation; Habitat loss and degradation - Changes in land-use management	IUCN Status Vulnerable			Х	
Gila elegans	Bonytail	Habitat loss and degradation - River Damming; Invasive Species - Predators, Competition; Population genetics - Hybridisation	IUCN Status Critically Endangered, decreasing population trend		Х	Х	
Hucho hucho	Huchen	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Pollution; Habitat loss and degradation - Energy production and mining, River Damming	IUCN Status Endangered		Х	Х	

Species		<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Hucho perryi	Japanese Huchen	Unsustainable fishing and harvesting aquatic resources - Overharvesting, Bycatch; Habitat loss and degradation - Logging and unsustainable harvesting, Energy production and mining, Agriculture, Residential and commercial development	IUCN Status Critically Endangered, decreasing population trend		х	х	
Luciobarbus brachycephalus	Aral barbel	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming	IUCN Status Vulnerable, decreasing population trend			х	
Marcusenius victoriae	Victoria Stonebasher	Habitat loss and degradation - Agriculture; Pollution - Agriculture and hunting/fishing; Unsustainable fishing and harvesting aquatic resources - Overharvesting; Invasive Species - Competition	IUCN Status Endangered, decreasing population trend		x	х	
Mystus bocourti		Pollution; Habitat loss and degradation - River Damming	IUCN Status Vulnerable, decreasing population trend			Х	
Opsaridium microcephalum		Unsustainable fishing and harvesting aquatic resources - Overharvesting	IUCN Status Vulnerable, decreasing population trend			х	
Opsaridium microlepis	Lake salmon	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - Logging and unsustainable harvesting	IUCN Status Endangered, decreasing population trend		х	х	
Osphronemus exodon	Elephant ear gourami	Pollution - Agriculture and hunting/fishing; Habitat loss and degradation - River Damming	IUCN Status Vulnerable, decreasing population trend			Х	

	Species	<u>Pressure</u>	<u>State</u>	Response	<u>Potentia</u>	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I	App. II	
Pandaka pygmaea	Dwarf pygmy goby	Pollution; Habitat loss and degradation	IUCN Status Critically Endangered		Х	х	
Pangasius sanitwongsei	Giant pangasius	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming	IUCN Status Critically Endangered, decreasing population trend		Х	Х	
Probarbus jullieni	Isok barb	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - River Damming	IUCN Status Endangered, decreasing population trend,	CITES Appendix I	Х	х	
Ptychocheilus lucius	Colorado pikeminnow	Habitat loss and degradation - River Damming; Invasive Species; Climate Change - Altered weather patterns, Changes in precipitation, Ecological interactions and habitat change	IUCN Status Vulnerable, stable population trend			х	
Silhouettea sibayi	Barebreast goby	Habitat loss and degradation - Energy production and mining, Infrastructure and service corridors; Human Disturbance - Recreational activities	IUCN Status Endangered		×	х	
Tenualosa thibaudeaui	Laotian shad	Unsustainable fishing and harvesting aquatic resources - Overharvesting; Habitat loss and degradation - Infrastructure and service corridors, River Damming	IUCN Status Vulnerable, decreasing population trend			X	
Micralestes comoensis	Micralestes	Habitat loss and degradation - Logging and unsustainable harvesting; Pollution	IUCN Status Vulnerable			Х	
Barbus liberiensis	Carps	Habitat loss and degradation - Energy production and mining, Logging and unsustainable harvesting	IUCN Status Endangered		Х	Х	

Species		<u>Pressure</u>	<u>State</u>	<u>Response</u>	Potentia	al listing	Comments
Latin name	Common name		IUCN Status, Population trend	CMS, CITES Status	App. I App. II		
Insects							
Pantala flavescens	Globe Skimmer	Habitat loss and degradation	IUCN Least Concern			Х	

Annex II

Questionnaire for the

Global Gap Analysis of the Convention on Migratory Species

Formia, Italy, October 2013

1. In your opinion, what are important threats to migratory species which the Convention is (sufficiently addressing? Why should they be addressed?	s not
	_
2. In your opinion, what are important opportunities for the promotion of migratory species Why?	?
	_
3. In your opinion, which important species/taxonomic groups are not listed on the CMS appendices?	