

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

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CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II



Proposal Summary – Manta Rays *Manta* spp.

Proposal

Inclusion of manta rays *Manta* spp. in Appendix II in accordance with Article II paragraph 2(a) of the Convention, satisfying Criteria A and B of Annex 2a of Resolution Conf. 9.24 (Rev. CoP14):

“It is known, or can be inferred or projected, that the regulation of trade in the species is necessary to avoid it becoming eligible for inclusion in Appendix I in the near future.” (Criterion A)

“It is known, or can be inferred or projected, that a regulation of trade in the species is required to ensure that the harvest of specimens from the wild is not reducing the wild population to a level at which survival might be threatened by continued harvesting or other influences.” (Criterion B)

This proposal includes the two described species of the Genus *Manta* – *Manta birostris* (giant or oceanic manta ray) and *Manta alfredi* (reef manta ray) – and would also extend to the possibly soon-to-be-declared third species, *Manta cf. birostris*.

Proponents

Ecuador, Brazil and Colombia.

Rationale

Manta spp. qualify for inclusion in Appendix II because they are globally threatened, low-productivity species that are facing intensifying and expanding fishing pressure to supply the international trade in their gill rakers. This trade – and most of the fisheries supplying it – is wholly unregulated, and available evidence points to population declines resulting from fishing pressure. CITES Appendix II listing will assist States and regional entities to ensure compliance with prohibitions affecting these species, while also providing the basis for science-based limits on exports that can complement other fishery management measures and be enforced by importing CITES member States.

IUCN Red List Status

M. alfredi and *M. birostris* – Vulnerable globally¹.

Species Description and Life History

Manta rays are among the world’s largest and longest-living fishes, with a “wingspan” that grows over 7m wide and life-span exceeding 40 years. *Manta* spp. are circumglobal in distribution and generally inhabit

productive coastal and near-shore environments, such as island groups and atolls, as well as offshore coral reefs and seamounts. *M. birostris* is found in tropical, subtropical and temperate waters and is more widely distributed, while *M. alfredi* is limited to the tropics and subtropics. Manta rays are found in the Pacific, Atlantic and Indian Oceans.

Despite their global distribution manta rays exhibit several characteristics that make them extremely vulnerable to over-exploitation in fisheries, in particular: exceptionally low reproductive rates (a female gives birth to only one pup every two to three years); late maturity; small and highly fragmented subpopulations; slow swimming speed; and aggregating behaviour. These factors combine to mean that individual subpopulations, which rarely exceed 1,000 animals, can be rapidly depleted by over-fishing, are very slow to recover, and have a low probability of recolonization by other subpopulations.

Population Trends

Global population numbers are not known for either manta ray species but, with the identification of individual subpopulations and migratory behaviour, are presumed to be quite small. There is evidence of steep rates of decline in several regions with targeted fisheries, giving rise to concerns that the species may soon become commercially extinct in some fisheries. Annual landings of manta rays in one important Indonesian fishery, for example, declined by 56% during the nine years leading up to 2010, while in Mozambique, sightings of *M. alfredi* declined by 86% in just eight years following the expansion of the fishery. Observations from fishers, divers and tourism operators in countries such as Madagascar, Sri Lanka, Thailand and Australia have also indicated rapidly declining populations over the past 10 years as a result of increased targeted fishing and incidental fisheries bycatch.

Economic Importance

Manta rays are highly prized for their valuable gill plates, which are traded internationally for use in an increasingly popular Asian health tonic thought to have medicinal benefits. The growing market for, and high value of, manta ray gills has led to a marked increase in fisheries directly targeting the species in key range States and deploying more modern fishing gear. Annual manta ray landings from known fisheries is estimated at 3,100 animals worldwide but is expected to be higher due to unreported landings. This inference is supported by surveys of manta gill plate markets, which estimate annual volumes representing 4,652 manta rays.

¹ The full IUCN Red List species assessments and supporting documentation for *M. alfredi* and *M. birostris* and details of the IUCN Red List and Red List Categories and Criteria are available at: www.iucnredlist.org

Indonesia, India and Sri Lanka have by far the largest observed landings of manta rays, but significant fisheries also exist in other States, such as China, Peru, Ghana, Tanzania and Mozambique, although official landings data are unavailable. These fisheries are primarily geared towards supplying gill plates to markets in China and Singapore; the remaining manta ray carcasses are of relatively low value and are regularly discarded at sea in a process known as 'gilling.'

Manta rays are also caught as bycatch in myriad fisheries throughout their range, including tuna and other pelagic fisheries, but these catches are rarely reported at the species level. The best available information suggests a trend in *Manta* spp. catch away from bycatch towards more targeted fisheries. In addition, observations from Sri Lanka report that, in the past, fishers avoided setting their nets where manta rays were known to occur and released any incidentally caught rays unharmed, but they now land all manta rays caught, and gilling is becoming more widespread. There is also evidence that former shark fishers are turning to manta rays in some range States as shark stocks are depleted and regulations on shark fishing and finning tighten.

Recent analysis also reveals that the incomes earned by artisanal fishers from catching manta rays does not adequately reflect the high prices their gills fetch in international markets, while a small number of traders in these gill plates are realizing much of the profits.

Manta rays are increasingly recognized as an important non-extractive resource. Mantas are a popular and lucrative tourist attraction, and manta viewing has the potential to generate far higher and more long-lasting revenues for national economies than manta fishing. Recent analysis of manta tourism in Indonesia, for example, estimates revenues in excess of USD 18 million per year, compared with fishery revenues of USD 475,000. Manta viewing tours can bring millions of dollars of sustainable income to local coastal communities every year, as is already the case in other popular diving locations including Mozambique, Thailand, Papua New Guinea and the Solomon Islands. The global *Manta* spp. tourism industry is currently estimated to exceed USD 75 million, with associated expenditures possibly twice as high, compared to just USD 5 million for the manta ray gill plate trade. As can already be seen in the high-value, community-based whale shark tourism industry in countries such as India and the Philippines, there is huge potential for non-extractive use through manta ray tourism to support sustainable coastal livelihoods so long as their populations remain numerous.

International Trade

The gill plates of *Manta* spp. retail at up to USD 680/kg in Chinese markets, making them a highly prized commodity. Consumption of dried gill plates occurs primarily in China and Singapore. The cartilage and skins of manta rays are also internationally traded, but far less frequently and at far lower prices.

As import/export figures are not classified at the species level for *Manta* spp., the most reliable source of information on overall trade volumes are surveys of the major gill plate markets, 99% of which are based in Guangzhou, China. Analysis of these surveys estimates that approximately 21,000kg of dried manta ray gill plates were traded globally in 2011, worth a total of USD 5 million, and representing an estimated 4,652 manta rays worth an average USD 849 each. The gill plate trade is believed to be concentrated in a very small number of businesses which are driving rising prices and, unlike many fishers involved in manta ray capture, are earning large profits.

Illegal Trade and IUU Fishing²

The vast majority of international trade in *Manta* spp. products is unregulated. Although a few range States have protected these species, illegal landings continue to be reported; this is the case in the Philippines and Mexico, where fishing of manta rays is prohibited. Insufficient fisheries monitoring and enforcement and lack of international trade regulation preclude an estimate of the true extent of illegal fishing or trade in these species.

Legal Status

At the international level, *M. birostris* was listed in Appendices I and II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in 2011; the species is not yet listed on the Annexes of the CMS Memorandum of Understanding on Migratory Sharks.

A number of range States – including Ecuador, the European Union (EU), Maldives, Mexico, New Zealand, and the Philippines – have put in place legislation prohibiting the catch and/or trade of *Manta* spp., and the species are also protected in no-take zones within marine protected areas (MPAs). However, the three range States that account for an estimated 90% of all manta ray landings – India, Indonesia and Sri Lanka – have no fishing restrictions or population monitoring programs in place. No Regional Fisheries Management Organizations (RFMOs) have adopted legally binding measures for these species. Finally, there is no regulation of international trade.

CITES History

This is the first time that *Manta* spp. have been proposed for inclusion in the CITES Appendices.

² IUU fishing is defined by the FAO as: illegal, unreported, and unregulated fishing