Mobulid Rays Reef Manta and Devil Rays

Reef Manta Ray *Manta alfredi*
Giant Devil Ray *Mobula mobular*
Spinetail Devil Ray *Mobula japanica*
Bentfin Devil Ray *Mobula thurstoni*
Chilean Devil Ray *Mobula tarapacana*
Pygmy Devil Ray *Mobula eregoodootenkee*
Shortfin Devil Ray *Mobula kuhlii*
Atlantic Devil Ray *Mobula hypostoma*
Lesser Guinean Devil Ray *Mobula rochebrunei*
Munk's Devil Ray *Mobula munkiana*

Proposed action Inclusion on CMS Appendices I & II
Proponents Fiji

YAP BARTOSZ CIESLAK/WIKIPEDIA COMMONS

Overview

Manta and Devil Ray species (family Mobulidae) share an inherent vulnerability to overexploitation due to exceptionally low productivity and aggregating behavior. Around the world, these large, migratory rays are facing intense targeted and incidental fishing pressure, increasingly driven by escalating Chinese demand for their gill plates. This largely unregulated mortality risks population and ecosystem health, as well as threatening substantial revenue possible through tourism. Inclusion in CMS Appendices I & II is warranted to prevent long-standing depletion, bolster existing national safeguards, preserve economic and ecological benefits, and improve the understanding of species status. Such action will also complement the CMS Appendices I & II listing for the Giant Manta Ray (*Manta birostris*), and the listing of *Manta* species under the Convention on International Trade in Endangered Species (CITES).

Biology and Distribution

Mobulid rays occur in the world's tropical and temperate seas in fragmented and sparsely distributed populations. They migrate across national boundaries, feeding on small fish and plankton, which they filter through pre-branchial appendages known as gill plates.

Mobulids are thought to be among the world's least fecund marine fish. Their vulnerability to overexploitation is due to late maturity (up to 10 years of age), lengthy gestation (up to approximately one year), exceptionally small number of offspring (as few as one pup every two to three years), and long life (estimated at 40 years for Reef Mantas).

Population Status and Threats

Mobulid rays are used for human consumption and bait, are taken in substantial numbers as bycatch in a variety of fisheries, and are increasingly sought for their gill plates, which are used to make a Chinese health tonic. Demand for gill plates, which can sell for hundreds of USD per kg, is driving targeted yet largely unregulated fisheries. The mobulids' large size and tendency to move slowly in predictable aggregations can make them easy targets.

Landings data and/or anecdotal reports indicate significant declines in mobulid populations around the world, including off Philippines, Indonesia, Thailand, Sri Lanka, India, Mozambique, Madagascar, Guinea, Mexico, and Peru.

The IUCN classifies the Reef Manta Ray (*Manta alfredi*), the Lesser Guinean Devil Ray (*Mobula rochebrunei*), and the Giant Devil Ray (*Mobula mobular*) as threatened species. IUCN Red List assessments that place the remaining Mobula rays in the *Near Threatened* or *Data Deficient* categories also offer cause for concern, especially considering that they were conducted before the surge in gill plate demand.

Uses

Like the CMS-listed Giant Manta Ray, the iconic Reef Manta is a popular species for divers and snorkelers. Substantial revenue from Manta-based tourism has been documented for communities in the Maldives, Ecuador, Thailand, Mozambique, Yap, Palau, Indonesia, Australia, Mexico, Brazil, and the United States, with an estimated global value of 140 million USD annually. Tourist activities focused on Devil Rays are being developed in the Azores, Costa Rica, and Peru. Mobulid rays are also popular attractions for a few large, public aquariums.

Conservation Measures

The Giant Manta Ray was included in CMS Appendices I & II in 2011. CITES Appendix II listings for the Giant Manta and the Reef Manta came into force in September 2014. A great number of range states, including many that protect the Giant Manta Ray, lack safeguards for the Reef Manta; specific legal protections are in place in the Maldives, Indonesia, Yap, the US (Hawaii, Florida, Guam, and Northern Mariana Islands), and Australia (Christmas Island and Cocos Keeling Islands). The General Fisheries Commission for the Mediterranean (GFCM) has agreed protection for the Giant Devil Ray (*Mobula mobular*) based on the species' listing under the Barcelona Convention, but compliance reporting for these measures is lacking. There are no other international measures for Mobula rays; domestic safeguards for these species are rare.

Expert Advice

The CMS Scientific Council agreed in 2007, based on a review by the IUCN Shark Specialist Group (SSG), that mobulid rays qualify for listing in both Appendices. Family Mobulidae is the subject of a special SSG global conservation strategy, now in development.

Family Mobulidae has been highlighted by the CITES Animals Committee as a "taxonomic group that contains a significant proportion of species subjected to unregulated, unsustainable fishing pressures, leading to severe stock depletion."

TRAFFIC, in its analysis of the CITES proposal for Manta rays, noted difficulties in distinguishing between the gill plates of *Manta* and *Mobula* rays in trade, and reported that these species are often transported under common trade names and in amalgamated shipments.

Inter-American Tropical Tuna Commission staff have recommended international measures to prohibit retention and ensure the live release of incidentally caught mobulids.

CALL TO ACTION

Strict protections are warranted and in several cases urgently needed for species in family Mobulidae to prevent depletion. Listing the proposed species under CMS Appendices I & II is in line with the precautionary approach and could:

- **enhance and encourage national recovery efforts;**
- **facilitate regional cooperation in protection of shared populations and key habitats;**
- **bolster the CMS Appendices I & II listing for the Giant Manta Ray; and**
- **complement the CITES Appendix II listings for the Reef Manta Ray and Giant Manta Ray.**

We urge CMS Parties to support inclusion of the Reef Manta Ray and all Mobula Ray species on CMS Appendices I & II at CoP11

References

Information in this fact sheet is based on the CMS listing proposal, the relevant Red List Assessments, and the following:

Dulvy, N., Pardo, S., Simpfendorfer, C. & Carlson, J. 2014. Diagnosing the dangerous demography of manta rays using life history theory. PeerJ PrePrints 162/v1: 1–26.

IUCN Shark Specialist Group/Convention on Migratory Species 2007. *Review of Chondrichthyan Fishes*. CMS Technical Report Series 15. IUCN and UNEP/ CMS Secretariat, Bonn, Germany.