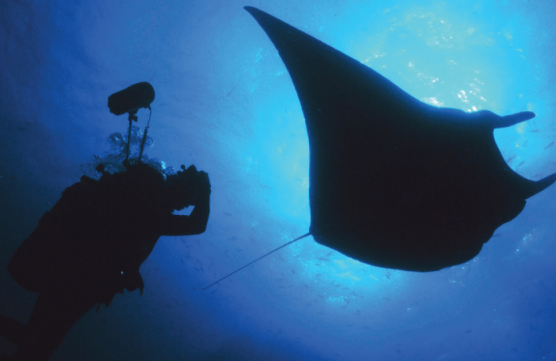




Support Inclusion of the Giant Manta Ray (*Manta birostris*) in CMS Appendix I & II, as proposed by the Government of Ecuador (I/5)

Overview

Mantas, exceptionally large and vulnerable rays found around the world in tropical to temperate waters, are under increasing threat. Critical aggregation areas are at risk while new markets for manta gills drive unsustainable fisheries that may squander substantial economic benefits of manta-based tourism. Some countries have protected manta rays, but additional national safeguards, as well as collaborative regional efforts to study and conserve manta rays, are urgently needed to avoid further depletion of these valuable and iconic animals. The Convention on Migratory Species (CMS) is an ideal vehicle for facilitating conservation of manta rays and their essential habitats.



JACKIE REID / NOAA

Biological Characteristics

The giant (*Manta birostris*) and reef (*Manta alfredi*) manta rays are among the world's largest fishes. The giant manta ray can grow to more than seven meters across. Manta rays are especially vulnerable to overexploitation due to their very limited reproductive capacity. Female mantas are thought to mature at 8-10 years of age, produce just one pup after a year-long gestation period (with a year or two resting stage), and live at least 30 years. Manta rays feed on plankton filtered through their gills.

Distribution & Migration

Manta rays occur in tropical, sub-tropical, and temperate waters of the Atlantic, Indian, and Pacific Oceans, often along productive coasts and offshore islands. Populations appear to be sparsely distributed and highly fragmented. Mantas are capable of dives to depths of more than 1,000 meters and are known to aggregate for feeding and mating. Most manta rays migrate cyclically and fairly predictably across national boundaries. Tagged giant mantas have ventured onto the high seas. In some cases, their movements exceed 1,000 km.

Populations

The global manta population has not been assessed, but regional subpopulations appear to be generally small (fewer than 1000 individuals, often just a couple hundred rays). Interchange between subpopulations is unclear, but assumed low. Manta rays have been classified as Vulnerable under the IUCN Red List.

Fisheries & Demand

Fishing is the main threat to manta rays; they are taken in targeted fisheries and incidentally as bycatch by nets, trawls,

and harpoons. Their large size and tendency to move slowly in predictable aggregations make them easy targets.

Manta rays are used for human consumption and shark bait, and are increasingly sought for their gill rakers, which are traded to East Asia for use in Chinese medicine. This relatively new market is driving dramatic increases in targeted manta fisheries, particularly in Southeast Asia, India, and Eastern Africa, which are probably unsustainable. Rapid depletion has already been documented for certain monitored subpopulations. These declines are not likely to be mitigated by immigration.



Manta ray gill rakers which have been harvested.

PAUL HILTON / MANTA RAY CONSERVATION GROUP

Global catch of devil rays (including mantas) reported to the Food and Agriculture Organization increased from 900 tonnes (t) to over 3300t from 2000 to 2007. Significant declines in catch per unit effort have been reported for sites in Philippines, Japan, Indonesia, and Mexico, suggesting depletions.

Other Threats

Manta rays are also vulnerable to degradation of coastal habitat, including damage from oil spills and pollution, particularly with respect to their critical habitats. Global climate change and ocean acidification are likely to affect the migration and food supply of manta rays. Boat strikes, as well as entanglement in marine debris, including ghost fishing gear, also pose threats to individuals of the species.

Alternative Uses

Increasing interest in manta rays from divers and snorkelers is demonstrating that sustainable tourism for these charismatic species can provide long-term economic benefits that greatly outweigh short-term returns from fishing. Manta ray tourism is on the rise in Ecuador, Thailand, the U.S. (Hawaii), Mozambique, the Maldives, Yap, Palau, Indonesia, Australia, Mexico, Brazil, and Japan, providing significant income for local communities.

Night diving and snorkeling excursions alone generate an estimated US\$2.4 million annually for the Hawaiian economy. A recent study in the Maldives found that manta ray based activities generate more than US\$8 million per year in combined revenue for the islands. At a popular dive site in southern Mozambique, 80% of people surveyed cited the opportunity to see manta rays as the reason they visited the country.

Small numbers of manta rays are generating economic benefits through public display in facilities such as the Georgia Aquarium, the Atlantis Resort in the Bahamas, and the Lisbon Aquarium.

Existing Protections

Manta rays are protected in the U.S. state of Hawaii, Maldives, Philippines, Mexico, Brazil, Ecuador, Yap, Western Australia, and New Zealand. There are no international agreements or regional fishery management measures for manta rays.



DR. ANDREA MARSHALL

Needed Action

National management measures introduced by individual Range States are insufficient to effectively conserve migratory manta rays. Additional national protections as well as collaborative regional efforts are urgently needed to avoid further depletion of these valuable yet vulnerable animals. Considering the lack of information on manta population status and fisheries, as well as the species' exceptionally limited reproductive capacity, all targeted fisheries should end until sustainability can be ensured. Documentation of manta catches and trade must be greatly improved. Research into manta critical habitats, such as aggregation sites and nursery grounds, is needed to inform the establishment of protected areas.

Inclusion in the CMS Appendices can serve to dramatically improve awareness of the threats faced by manta rays and as a major step toward the effective conservation of these magnificent marine animals.

Shark Advocates International, The Ocean Foundation, Marine Megafauna Foundation, Humane Society International, The Norwegian Shark Alliance, Project AWARE Foundation, Wildlife Conservation Society, and Shark Trust urge CMS Parties to:

- agree to add the giant manta ray to CMS Appendix I and II, as proposed by Ecuador,
- ensure the development of national safeguards and studies for manta rays, and
- engage in efforts to develop regional manta conservation plans as a matter of priority.

Primary source:

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