

## Proposal II / 13

### PROPOSAL FOR INCLUSION OF SPECIES ON THE APPENDICES OF THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS

A. PROPOSAL: Inclusion of the whale shark *Rhincodon typus* on **Appendix II**.

B. PROPONENT: **Government of the Philippines**

C. SUPPORTING STATEMENT:

#### 1. Taxon

1.1	Classis	Elasmobranchii
1.2	Ordo	Orectolobiformes
1.3	Familia	Rhincodontidae
1.4	Genus/species	<i>Rhincodon typus</i>
1.5	Common name	English: Whale shark Spanish: Tiburón ballena, pez dama French: Requin-baleine

#### 2. Biological data

##### 2.1 Distribution

Pantropical. Tropical and warm-temperate waters of the Atlantic, Pacific and Indian Oceans. Most often encountered in a band around the equator extending to roughly 30° N and 35° S (World Conservation Monitoring Centre, IUCN 1998).

##### 2.2 Population

Global population size is unknown. The species is generally considered rare in its pelagic high-seas habitat but may be locally common in certain coastal areas on a seasonal basis, with tens of animals present over a period of several months.

##### 2.3 Habitat

The whale shark is basically pelagic and can be encountered in very deep water far from land. Shallow waters near the mouths of some rivers and estuaries may constitute feeding or breeding/birthing grounds where whale sharks gather seasonally. Virtually nothing is known about what may make these areas important to the whale sharks, i.e., water quality, concentrations of plankton and detritus, temperature range, current patterns, weather, sea state, and other characteristics.

##### 2.4 Migrations

The whale shark is highly migratory. Movements of 1000s of km over periods of weeks or months have been recorded through satellite tracking in the eastern Pacific and Southeast Asia. One shark satellite-tagged in the Mindanao Sea in the inner Philippines traveled over 3,000 km to the EEZ of Vietnam in two months (personal communication

from S. Eckert, Hubbs-Sea World Research Institute, San Diego, California, Sep 1998). Another tagged on the coast of Sabah in Malaysia traveled offshore and then returned to coastal Malaysian waters over a 2152-km route (loc. cit.). Several sharks satellite-tagged in the Gulf of California, Mexico moved over 12,000 km southeast into international waters and the waters of offshore South Pacific nations (loc. cit.). Migrations have a seasonal component; aggregations of whale sharks appear in certain coastal waters and may remain for several months. It is not known whether all components of the population(s) (adults, juveniles, males, females) undergo these migrations, but it is clear that the migratory sharks are shared by two or more nations.

### 3. Threat data

#### 3.1 Direct threats to the populations

Sharks are more vulnerable to exploitation than most other fishes, because of their longevity, delayed maturation and relatively low fecundity (Rose 1996). In their life histories they are in general more similar to marine mammals than to other fishes. The whale shark is ovoviviparous (live-bearing), but the basic reproductive parameters of its age at maturation, life span and fecundity are unknown.

The whale shark is hunted or has been hunted for its fins and meat in several places in Asia (India, Pakistan, China, Indonesia, Philippines, Taiwan, Japan, Maldives and elsewhere – Wolfson and Notarbartolo 1981, Rose 1996, World Conservation Monitoring Centre, IUCN, 1998), in some cases despite legal protection (e.g., in the Philippines). In very recent years, a market for fresh whale shark meat has developed rapidly in Taiwan (Perrin 1998, Chen et al. 1998). Local seasonal populations have apparently declined drastically in some places, even though fishing effort and price have greatly increased. In the Philippines, great declines in catch-per-unit-of-effort (CPUE) in two traditional whale-shark hunting regions (in Bohol and Misamis Occidental) have led to attempts to develop new hunting areas (e.g., in Sorsogon and Davao) (Alava et al. 1998; W. F. Perrin, unpublished data). A similar decline possibly caused by over-exploitation has been noted in the Maldives (World Conservation Monitoring Centre, IUCN, 1998). It is not known to what degree hunting in one area affects population(s) in other areas, although the fact that the sharks migrate long distances suggests that the effects may not be purely local.

The whale sharks seasonally present in shallow waters in the Philippines exhibit a large number and variety of scars, marks and severe mutilations resulting from collisions with boats (unpublished data, WWF Philippines). The level of mortality from collisions is unknown but could be significant.

#### 3.2 Habitat destruction

Whale sharks seasonally frequent shallow-water areas near estuaries and river mouths. These waters are highly vulnerable to contamination with sewage and industrial effluent and alteration due to development, removal of mangroves and other human activities. The seasonal whale shark habitats have not been surveyed to assess extent, status and threats to their existence.

#### 3.3 Indirect threats

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Burgeoning human populations and progressive resource depletion in the less-developed countries pose a long-term threat to all vulnerable coastal resources, including seasonally present whale sharks.

### 3.4 Threats connected especially with migrations

Migrations concentrate sparse pelagic populations of whale sharks in small local coastal areas, making them highly vulnerable to fishermen.

### 3.5 National and international utilization

The pattern of development of the whale shark as a resource is typified by what has happened in the Philippines (Alava et al. 1998). The shark has been harvested there in several localities for perhaps a century or more in small numbers for subsistence and local commerce. The meat was sun-dried and either consumed in the fishing villages or sold to “middlemen” who marketed it locally. Then in the 1980s a market for shark fins developed rapidly in countries with large Chinese populations. Suddenly the whale shark became more valuable, and the catches increased. The fins entered international trade, mainly with Hong Kong. Most recently, whale-shark meat has become popular and expensive in Taiwan (selling at about US\$15/kg), and buyers now buy the meat in the fishing villages and ship it on ice by air directly from the Philippines to Taiwan. Catch-per-unit-effort has dropped, presumably because of over-exploitation, and the hunters have begun to seek out new shark ground, with capital support from the buyers. This has happened just when interest in utilizing the sharks as a tourist attraction has arisen. Whale-shark watching is now a significant economic asset in at least one locality on the main island, Luzon.

Similar developments have occurred in other countries. Tourist industries based on whale sharks now exist in Thailand, Australia, South Africa, and the Maldives as well as the Philippines and are likely to appear in yet other areas. Although international trade in whale shark products has not been well-documented (Rose 1996; Chen et al. 1998), the sharks arguably have become more valuable alive than dead, and international interest in their study and in the need for multilateral assessment and management has been increasing.

## 4. Protection status and needs

### 4.1 National protection status

The whale shark is fully protected in the Philippines (as of 1998), but exploitation has continued; enforcement is difficult because of the extremely long coastline and the high commercial value of the sharks. It is also protected in the Maldives, Australia, the U.S, and South Africa.

### 4.2 International protection status

None.

### 4.3 Additional protection needs

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Range States should consider cooperative investigation, assessment and management of likely shared populations, possibly through regional agreements under the Bonn Convention.

## 5. Range States

Known and potential (all states having tropical or warm-temperate marine coasts; CMS members in bold): Kiribat, Tuvalu, Marshall Islands, Vanuatu, Western Samoa, Northern Mariana Islands, Federated States of Micronesia, Belau, France (New Caledonia, Reunion, French Polynesia and other South Pacific possessions, Clipperton Island, Guadalupe, Martinique and other Caribbean possessions), Fiji, Tonga, Nauru, Australia, New Zealand (including South Pacific possessions), Papua New Guinea, Solomon Islands, Indonesia, Malaysia, Singapore, Philippines, Japan, Korea, China, Vietnam, Cambodia, Myanmar, Bangladesh, India, Sri Lanka, Pakistan, Iran, Iraq, Kuwait, United Arab Emirates, Bahrain, Qatar, Djibouti, Oman, Saudi Arabia, Egypt, Yemen, Sudan, Somalia, Kenya, Tanzania, Mozambique, U.K. (St. Helena, Ascension, Bermuda, Virgin Islands, Anguilla, Turks and Caicos, Montserrat and other Caribbean and South Pacific possessions), Netherlands (Netherlands Antilles, Curacao and other Caribbean possessions), Spain (Canary Islands), Portugal (Madeira, Azores, Macau), Morocco, Mauretania, Senegal, The Gambia, Guinea Bissau, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria, Cameroon, S. Tome and Principe, Cape Verde Islands, Gabon, Congo, Democratic Republic of the Congo, Angola, Namibia, South Africa, Madagascar, Mauritius, Seychelles, Maldives, U.S., Cuba, Bahamas, Haiti, Dominican Republic, Jamaica, Antigua, St. Kitts-Nevis, Barbuda, Dominica, St. Lucia, St. Vincent and the Grenadines, Barbados, Grenada, Trinidad and Tobago, Belize, Guatemala, Nicaragua, Costa Rica, Panama, Venezuela, Colombia, Guyana, Surinam, French Guiana, Brazil, Uruguay, Argentina, Chile, Peru, Ecuador, El Salvador, Mexico.

## 6. Comments from range states

## 7. Additional remarks

## 8. References

- Alava, M. N. R., A. A. Yaptinchay, R. B. Trono and E. R. Z. Dolumbal. 1998. Fishery and trade of whale sharks and manta rays in the Bohol Sea, Philippines. WWF-Philippines Research Paper No. 3, Series of 1998. Also in press in Proceedings of the International Seminar and Workshop on Shark and Ray Biodiversity, Conservation and Management; Sabah, Malaysia, 7-10 July 1997. Department of Fisheries - Sabah and IUCN Species Survival Commission Shark Specialist Group, IUCN, Gland, Switzerland.
- Chen Che-Tsung, Liu Kwang-Ming and Joung Shou-Jeng. 1998. Preliminary report on Taiwan's whale shark fishery. TRAFFIC East Asia, Taipei.
- Perrin, W. F. 1998. Conservation of the whale shark (*Rhincodon typus*). Unpublished meeting document CMS/ScC.8/Doc 9. 2 pp. and annex.
- Rose, D. A. 1996. An overview of world trade in sharks and other cartilaginous fishes. TRAFFIC International, Cambridge, UK. 108 pp.
- Wolfson, F. H. and G. Notarbartolo di Sciara. 1981. The whale shark, *Rhincodon typus* Smith, 1828: an annotated bibliography. *Atti Soc. ital. Sci. nat. Museo civ. Stor. nat. Milano* 122(3-4):171-203.
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