

ation Union

The term "sharks" is used to refer to the Chondrichthyan or cartilaginous fishes, which comprise elasmobranchs (sharks and batoids; batoids include the sawfish, skates and rays) and holocephalans (chimaeras and rabbitfish).

Why the concern?

Species Spotlight

Regional protection has been achieved for the Basking Shark (*Cetorhinus maximus*), Great White Shark (*Carcharodon carcharias*), and Giant Devil Ray (*Mobula mobular*).

However, urgent legal protection is needed for the Sawfishes, *Pristis* spp. (CR IUCN Red List), Sand Tiger Sharks, *Carcharias taurus* and *Odontaspis ferox* (CR preliminary assessment in the Mediterranean), Gray Skate, *Dipturus batis* (EN preliminary assessment). There is also an urgent need to further assess the many Data Deficient species in the region such as Hammerhead Sharks (*Sphyrna spp.*)

(*Sp[(Tc0 Tction is Angel yrna spp065 spis f2409.4111quat* Shark majTf ty ofp(up T*70% Tcte, Sawfishes1441".cishes

[] The San Marino Workshop ⁽²⁾

The Mediterranean Sea

Covers an area of about 2,512,000 km², including the Sea of Marmara but excluding the Black Sea. Its maximum depth is 5,121m, with average depth of 1,500m.

It is home to 82 species of cartilaginous fish (47 sharks, 34 batoids and one chimera). 80% are coastal species, the majority of these demersal fish. Several species, like the Basking Shark (Cetorhinus maximus), are pelagic.

The Basking Shark, measuring

The Common Skate (Dipturus batis)

Locally Extinct in the Mediterranean

This species would now be more aptly named the 'uncommon skate' according to Nick Dulvy (SSG member and Red List assessor). It has already disappeared from the coastal waters of England and Ireland and is close to extinction in the Mediterranean Sea. During the period 1994-1999 this species was captured in only 2 of 6336 trawl operations of the MEDITS trawl survey. It was common in the Gulf of Lyons in 1950-60s and in a survey of the northern and central Adriatic Sea in 1948, but recent surveys confirm it is now absent from these areas. This decline is believed to be due to an increase in effort and number of trawl fisheries in the Mediterranean that overlap with the former geographic and depth range of the common skate ⁽²⁾.

Facts and Figures

Some sharks have natural growth rates of only 1-2% per year.

Every year, 100 million sharks and related species are caught in fisheries. Some species have been reduced by more than 80% over recent years, and some may become extinct before long.

In 2000, FAO reports put total catches of shark at 828,364 tons. This was 20% more than in 1990.

Indonesia had the largest recorded shark catch in 2000 at 111,973 ton. Spain had the second largest recorded shark catch total at 77,269 ton (FAO Fishstat).

The FAO estimates that in 1997 world production of shark fins was 6 million kg.

Hong Kong handles 50-80% of the world trade in shark fins.

I Human Impacts on Sharks

There are five main ways that people can adversely affect sharks.

Over-fishing

Sharks have traditionally provided resources such as meat, skin and liver oil, considered to be of relatively low economic value, for human use. However, today many sharks have become the target of directed commercial and recreational fisheries around the world due to intensive industrialization of the fishing sector and a growing demand for shark fins. Commercial fishing of sharks has thus increased in terms of effort, yield and area covered. Over-fishing is, however, difficult to manage due to a lack of available biological and catch data. The FAO's International Plan of Action for Sharks (IPOA-Sharks) recognises the vulnerability of sharks to detrimental long-term commercial fishing. It also emphasises the need for international coordination in the management of both the direct and indirect catch of sharks given their wide-ranging distribution and long migrations, particular989ses the ne40, px1.993sesbloSspaAdria554 IhnBT1 0 0ula

- "Finning" is the removal and retention of shark fins *and* disposal of shark carcass at sea.

- Considered by the IUCN Shark Specialist Group to be a threat to

What is the Red List?

(http://www.redlist.org)

- The IUCN Red List of Threatened Species is a widely-recognised, easy-to-understand system for classifying species at risk of global extinction.
- Uses an objective and explicit structure to clean ify the widest possible range of species according to of extinction.
- Status.
- Purpose is to convey the scale of urgency of conservation problems to the public and political leaders, and to motivate the international community to fight against the reduction of species.

Has no legal standing, but is frequently used by governments and directors of environmental institutions to set priorities and conservation actions, and to make subsequent evaluations of such long-term initiatives.

The Shark Specialist Group (SSG)

http://www.flmnh.ufl.edu/fish/Organizations/S SG/SSG.htm

Established by IUCN as part of its Species Survival Commission in 1991. The SSG was formed to assess and address the conservation needs of sharks, rays and chimaeras (the cartilaginous or chondrichthyan fishes) (6).

Mission:

To promote the long-term conservation of the world's chondrichthyan fishes (the sharks, skates, rays and chimeras), effective management of their fisheries and habitats, and, where necessary, the recovery of their populations.

• To date, a total of 262 species have been assessed globally, with 200 assessments in preparation. Fifty-six (or ~ 21%) of assessed shark species are globally threatened (CR, EN, or VU).

• A further 26 subpopulations are assessed as threatened at the regional level.

References

- 1. Internet Guide to International Fisheries Law
- 2. IUCN Shark Specialist Group and Global Marine Program. 2003. Assessing the extinction risks of Mediterranean sharks. Expert Workshop. Cattolica, San Marino.
- 3. IUCN. 2003. Intervention at General Fisheries Council for the Mediterranean-Tangiers.
- 4. Stevens, J.D., Bonfil, R., Dulvy, N.K., and Walker, P.A. 2000. The effects of fishing on sharks, rays, and chimaeras (chondrichthyans), and the implications for marine ecosystems. *ICEAS Journal of Marine Science*. 57: 476-494
- 5. IUCN Shark Specialist Group. Shark Finning Position Statement.
- 6. Camhi, M., Fowler, S.L., Musick, J.A., Bräutigam, A. and Fordham, S.V. 1998. *Sharks and their Relatives Ecology and Conservation*. IUCN/SSC Shark Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK. iv + 39 pp.
- 7. United Nations Food and Agriculture Organisation. 1999. International Plan of Action for the Conservation and Management of Sharks.
- 8. Bonfil, R. 1994. Overview of World Elasmobranch Fisheries. FAO Fisheries Technical Paper No 341.
- 9. Valeiras, J., López, A., Garcia, M. 2001. Geographical, seasonal occurrence and incidental fishing captures of basking shark *Cetorhinus maximus* (Chondricthyes: Cetorhinidae). *J. Mar. Biol. Ass. U.K.* 81: 183-184.

The content of this paper benefited substantially from the review of Andrew Chin, Lourdes Lazaro, Agnese Mancini, Deborah Pople, and Fabrizio Serena. Special thanks go to Samantha Birch, Rachel