

# Conservation status of shark species in West Africa: strategy for the preservation of shark species threatened

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## Introduction

Sharks and rays have faced uncontrolled exploitation in West Africa for many years. In 2004 we began promoting the sustainable management of shark populations in seven countries of the Sub-Regional Fisheries Commission (SRFC) - Gambia, Cape Verde, Guinea, Guinea-Bissau, Mauritania, Senegal and Sierra Leone. The intensive exploitation of sharks over the last thirty years has resulted in a number of threatened populations. Some species are already extinct locally, as it is the case for Pristidae (sawfish). The Rhynchobatidae (guitar-rays) have also virtually disappeared throughout the Sub-Region, except on the Banc d'Arguin, Mauritania. Other species, like the great hammerhead shark *Sphyrna mokarran* and the lemon shark *Negaprion brevirostris* are also threatened. In the sub-region, the number of many shark species has decreased in all large species. In general, there is a deterioration of the status of all species and clear risks for the larger species. The update of the IUCN Red List for the Sharks in West Africa in 2006, thanks in part to the project results from PSRA Requins, shows that species that still seemed to have a reasonable overall status are already Endangered or Critically Endangered with extinction in the region. Thus, 35% of them are threatened - 5% are Critically Endangered, 7% are endangered and 23% are Vulnerable. This work provides an analysis of the situation of threatened species in order to offer a better strategy for their conservation.

## Sharks and rays threatened species in seven countries of West Africa

The threatened species include three categories: Critically Endangered, Endangered and Vulnerable species. The figure below lists more than thirty species of sharks and rays are threatened in the seven countries of SRFC area in West Africa.

- This represents about 35 % of all species identified in those countries.
- Some of them are extinct locally, as it the case of all pristidae;
- Some of them are identified in only one country (*Alopias vulpinus*, *Carcharias taurus*, *Carcharhinus longimanus*, *Centrochrous lusitanicus*, *Lamna nasus* etc.).
- The most common species landed are Smooth hound (*Mustelus mustelus*); Guitarfish (*Rhinobastos Spp.*); Scalloped hammerhead (*Sphyrna lewini*); etc.

## Strategy for the conservation of sharks and rays in the West African region

The strategy proposed here is mainly focused on the role of Marine Protected Areas (MPAs) in conserving species. In fact, in West Africa, MPAs (around thirty in the seven countries) are characterized by high biological importance: all contain one or more rare, threatened or in danger species. Most of these species participate in maintaining the stability of the marine and coastal ecosystem.

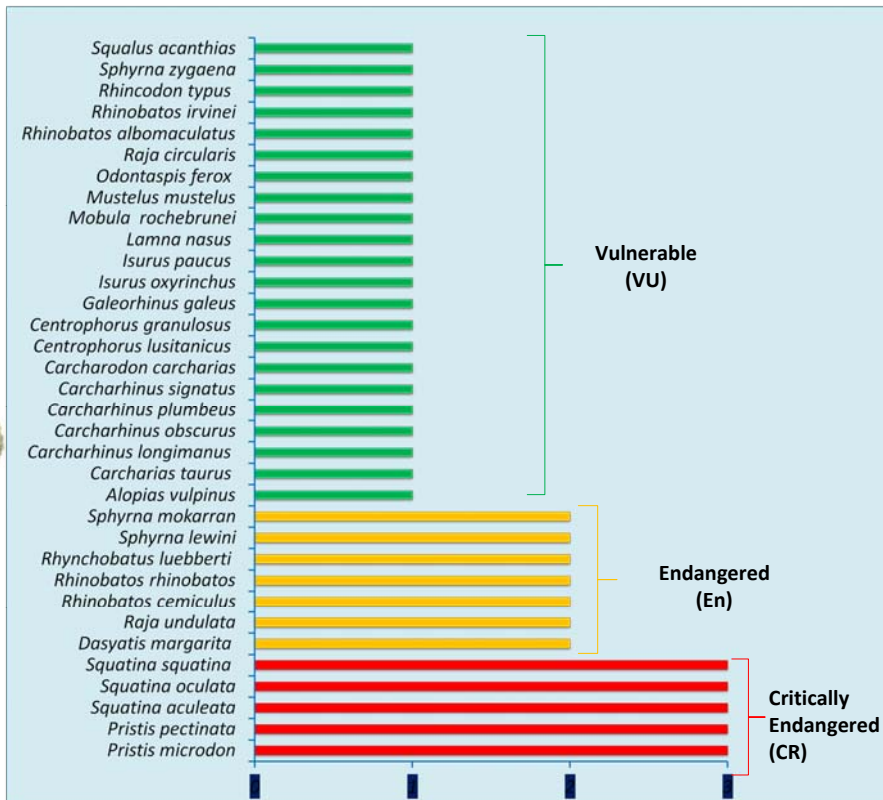
Given the deterioration of the populations of rays and sharks, the recommended measures discussed at the international level, include improving the state of knowledge on the status of sharks, but also adequate management measures, with consideration of the role of MPAs as a tool for sustainable conservation of sharks. Thus, several measures can be put to the AMP in West Africa:

- (1) Regulation of access to resources and their exploitation in MPA through zoning and development of business rules;
- (2) The prohibition of access to certain areas in the AMP represents a significant regulatory action, which reduces human pressure on some importance for the renewal of stocks (spawning, nursery, juvenile habitats). Also, this regulatory action reduces pressure on the most vulnerable species associated with these areas, allowing maintaining shelters for breeding, feeding, growth or survival of the fragile stages of endangered species.
- (3) The MPA also offers the possibility to set up systems to monitor population trends, allowing to implement management measures tailored to the dynamic needs of the species. Follow-up campaigns have been carried out in some such as National Park of Banc d'Arguin (in Mauritania), where a fishery monitoring has contributed to the development of adequate management rules for the benefit of the people.

In addition, each country will update the information on each species to help in updating the status of species through the IUCN Red List. A strategy should be put in place to effectively support international bodies for listing species in CITES.

## Conclusions

Given the migratory nature of sharks and the vulnerability of most species in the countries of the sub-region, the regional network of MPAs in West Africa could be an additional tool to strengthen the mechanisms for coordination and cooperation for the conservation of sharks face the pressure of artisanal fisheries in the sub-region. Also, this strategy should consider the impacts of bycatch particularly at industrial fishing. For this purpose, a provision establishing avoidance large species (like TED) could be an asset.



IUCN status of sharks and rays threatened in SRFC countries, West Africa