
Sawfishes in Odisha-Fishers' perspective

Sawfishes belong to the family Pristidae among elasmobranchs and are extremely susceptible to fishing gears like trawls and gills because of their saw like toothed rostrum. They easily get entangled in these gears and it is very difficult to remove such fishes. All sawfish species are listed on Appendix I of the Convention on International Trade of Endangered Species (CITES), which bans commercial international trade in sawfishes and their parts and also they are added to Appendix I and II of the Convention on Migratory Species (CMS), for their protection on a regional basis. Sawfishes are also protected under the Indian Wildlife (Protection) Act 1972 which makes its fishing/capture, illegal. With several conservation measures in place such as sawfishes being protected under Schedule 1 of the Wildlife (Protection) Act 1972, use of bycatch reduction devices in Odisha and awareness programs, reports of sawfish landed along the Indian coast were fewer than 10 times in the last decade. On 12th November, 2022 a female sawfish was caught accidentally in a trawler south-east off Paradeep, Odisha. It was 15 feet (>4 m) long in total length (TL) and weighed approximately 150 kg. The species had 17 teeth in each side of the rostrum and was identified as large tooth sawfish (*Pristis microdon*) as the

dorsal fin was placed well in forward of pelvic fins and the caudal fin was forked, which are its significant identifying characters. Hence, a survey along the Odisha coast with the local fishermen at the fish landing sites (Balasore, Ganjam, Puri and Paradeep) following a semi-structured questionnaire, including pictures of species was done. Selected, 40 full time fishermen aged between 25-75 years provided the information based on their traditional knowledge (Table 1) which can be considered to execute further scientific investigations.

Sawfishes reportedly grow to massive sizes of upto 7 m in total length (TL) and are mostly found in shallow, warm waters worldwide. They use their rostrum for detecting and catching the prey and removal of the rostrum severely affects its capacity to survive. Usually when the sawfish accidentally get entangled in nets, it causes damage to the net and therefore fishermen in some states of India, consider it as a bad omen. Hence, although rare, efforts are required to create more awareness among the local fishermen to avoid the incidental catch and encourage them not to fish in areas which may be nursery grounds for the juvenile sawfishes. They should be trained to safely release those which get entangled in their nets. Some of the general

guidelines developed by US sawfish research and conservation which can be followed are

1. To leave the sawfish in the water without dragging it to the boat or shore
2. Try not to injure the animal or remove the saw
3. Use extreme caution while the sawfish thrash violently from side to side
4. Not to use a rope to secure a sawfish.

During the survey, it was very encouraging to note that all respondents were in favor of conserving the sawfishes on a participatory mode to work with the scientists and to follow the rules which prevents the capture and trade of endangered species under Indian Wildlife (Protection) Act, 1972. Also, they were very positive in sharing information about the sawfishes through catch reporting and releasing the incidental catch. Precautionary approaches are often followed to conserve endangered, threatened and protected (ETP) species. Identifying the important habitats for all life stages of sawfish is a priority for conservation programmes. The sawfishes reportedly rely on freshwater habitats for some period to complete their life cycle and hence conservation

Table 1. Information based on fisher's knowledge of sawfishes along Odisha coast

Species	Local name	Locations of occurrence	Size	Habitat of occurrence	Year of incidences as recounted	Season of occurrence	Depth	Current IUCN Red List status
<i>Pristis microdon</i>	Karatia/Chironi magara/ Khandamagara	Balasore/Kendrapada, Arakhakuda/ Sanopatna	1-5m	Marine, estuarine and fresh water	2-20 years before	June to August and November to December	2-3m	Critically Endangered
<i>Anoxypristis cuspidata</i>	Karatia/Chironi magara/ Khandamagara	Dhamara, Kendrapada, Paradeep	<1-4m	Marine, estuarine and fresh water	7-20 years before	October to December	3m	Endangered
<i>Pristis zijsron</i>	Karatia / Hadicha magara	Puri, Noagaon	1-2m	Marine, estuarine and fresh water	30 years before	November to January	2-5m	Critically Endangered
<i>Pristis clavata</i>	Karatia/Chironi magara/ Khandamagara	Ganjam	1-2m	Marine, estuarine and fresh water	20 years ago	October to December	2-3m	Critically Endangered

of critical habitats in both fresh and marine ecosystems, minimization of bycatch with effective enforcement of species- specific legal protections are measures which will ensure protection to the iconic sawfishes. The mangrove areas Bramhani -Baitarani delta in Kendrapada district of Odisha declared

as Bhitarkanika Wildlife Sanctuary in April 1975 and the core area of the sanctuary declared as Bhitarkanika National Park in September, 1998 provides protection to many endangered species such as estuarine crocodile (*Crocodylus porosus*) and Olive ridley turtle (*Lepidochelys olivacea*) which is

beneficial for the sawfishes also.

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