

Fishing in Protected areas – A Bane for Aquatic Wildlife

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Introduction - This study was conducted in the National Chambal Gharial Sanctuary and Gandhisagar Reservoir to find out the causes of unnatural death of protected fauna and the impact of licensed or illegal fishing in these areas. It is often argued that fishes are an important resource for millions of people, who depend on it for food and employment. This is probably the reason for keeping fish out of the purview of the Indian Wildlife Protection Act. The Act is also quite vague on the point of fish while defining 'animal' as are not construed as such! Hiding behind the veil of this logic a number of state governments have continued giving fishing licenses in the protected water, even though the fish are defined as 'wildlife' and as a consequence, must be considered "protected" in the wildlife protected areas. Also, in the study it was found that a number of aquatic mammals, birds and reptiles, accorded with highly protected status in Schedule - I of the Act, get captured, killed, maimed or snared due to fishing operations.

Study Area - The National Chambal Gharial Sanctuary extends over three Indian states, namely Rajasthan, Madhya Pradesh and Uttar Pradesh. The river runs from south to north and passes through a great boundary fault near Kota in south-east Rajasthan. The sanctuary spans over 600 Km from Jawahar Sagar in Rajasthan to Pachnada in Uttar Pradesh, leaving an 18 Km free zone between Kota and Keshoraipatan. The width of the protected area is 1000 m. on both banks of the river. Geographically the sanctuary falls between Lat 25°30' and 26°52' North; Long 76°28' and 79°01' East. The Gandhi Sagar Reservoir on river Chambal is one of the largest inland wetlands in India, having 650 Sq. Km. area of submergence. It is a huge source of employment for over 1500 fisher folk belonging to local, Bihari and Bengali fishing communities.

Results and Discussion - During the six years of observation (1998-2003), thirteen species of vertebrates including reptiles [7], birds [4] and mammals [2] had become some of the commonest victims of fishing operations, or were illegally caught for trade as an indirect fallout of illegal fishing in the protected area. Most of the reptiles and mammals got entangled in the nets and drowned while trying to catch a fish already entangled in the net. Experience teaches them that netted fishes are an easy prey and they become habitual marauders of the nets. The large crocodiles and gharials cause severe damage to fishing nets but it is the young ones which get caught and die. The average length of the crocodiles and gharials found caught during my observations was 1.5 m., except for one instance in which a 4 m. long gharial had a net stuck to its snout which had it incapacitated for some time. On five occasions the Indian roofed turtle, *Kachuga tecta*, Indian tent turtle, *Kachuga tentoria*, and Indian flapshell turtle, *Lissemys punctata*, were found entangled and dead in the net. The Indian softshell turtle *Aspideretus gangeticus* and Indian flapshell turtles are caught as a sideline by the fisherman, as their meat is consumed locally and the body parts are exported to eastern markets. This practice is

more prevalent among tribals and migrant fishermen belonging to erstwhile east Bengal. Till recent times the Government of Rajasthan was issuing fishing licenses in Chambal River, all along the protected area. The wildlife wing of the Department of Forest and a local NGO of Kota could successfully stop illegal or legal fishing, atleast between Jawaharsagar Dam and Kota Barrage. When the fishing was rampant in Chambal River four caches of live turtles and their body parts were caught by the local police. The author witnessed these raids as he was called to establish the identity of each species. In one instance 5 live Indian softshell turtles and body parts of 41 turtles were found. The plastron was packed in jute bags and was ready for transportation. In another large catch 30 live and 10 dead Indian softshell turtles and 103.3 kg dried body parts were found abandoned by the roadside. In a similar incident over 50 Indian softshell and Indian flapshell turtles were caught at Lakheri, 62 km from Kota.

In two of the recent incidences, migrant tribal labourers from Chhattisgarh were caught with 8 live turtles at Kota and 25 assorted turtles at Anta, 50 Km from Kota. The turtles caught at Anta were collected from the tanks of Sorsan which is a Great Indian Bustard Hunting Closed Area. Mostly the turtles get inadvertently caught in the fishing nets and are collected for the gray market, but quite a few of the fisherman have their connection with the Kolkata market and they lure the local fisherman to catch turtles. This is normally done by snaring them with a hand held harpoon or by netting them. The holes are punched in the webbing of the feet and a rope is passed through these holes. The turtle so tied and rolled over on its back cannot get away. The turtles are kept like this until a whole cache is ready for export.

No such organized crime has been reported from Gandhisagar reservoir but the fishermen admitted that quite often Indian softshell, Indian flapshell and Indian roofed turtles get caught in their fishing nets. The turtle meat is considered a delicacy, therefore it is consumed locally by the families.

In the most recent and bizarre incidence two 3 m and 3.5 m long pythons, *Python molurus* were found entangled in fishing nets. Obviously they had caught hold of a fish, which was entangled in the net. When I found the snakes they were already dead for 3-4 days and were terribly entwined in the net. This is enough proof that even pythons maraud fishing nets in a hope to get some easy food and eventually become victims.

The birds are also not immune to fishing nets, particularly the piscivorous cormorants that often get caught in the nets. On three occasions Small Cormorants *Phalacrocorax niger* were found entangled in the fishing net and in one instance a cormorant had swallowed a hooked fish. Similarly two Woolly-necked storks *Ciconia*

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episcopus were found hanging from a tree trunk by a twine.

On closer examination it was revealed that the birds had swallowed hooked fishes and when the birds flew off with the fish in their bill, the line got entangled in a tree trunk. The storks died a slow and painful death. Twice I found wading ducks, Common teal *Anas crecca* and Comb duck *Sarkidiornis melanotos* caught in discarded fishing nets by their neck. They had got their heads caught in the loops while wading in shallow water. Eventually I could save them by cutting the thread.

The mammalian victims of fishing nets are Smooth coated Indian Otter *Lutra perspicillata* and Gangetic Dolphin *Platanista gangetica*. The dolphins get attracted towards the fish in the net and eventually end up getting caught. These incidences frequently occur between Mandrael and Dholpur, where drowned dolphins have been found [C. M. Vyas Pers. Corn.]. The otters are common at certain places in Gandhisagar reservoir where large scale fishing operations undergo regularly causing otter deaths by drowning.

The fishing nets take a heavy toll of non-target aquatic fauna, as shown in this study. When one takes into account the large scale net-fishing taking place in India, the magnitude of the problem looks serious enough to warrant remedial measures. The illegal activities often associated with fishing in Chambal, like hunting of turtles for trade, quarrying and tree felling in the valley, also call for stringent law enforcement in the protected areas.

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References

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Table - 1

List of the Non-target Animals found caught in the fishing net in Chambal River and their Protection Status in Wildlife Protection Act

Common name	Scientific name	Wildlife Act Schedule
1. Indian Roofed Turtle	<i>Kachuga tecta</i>	Schedule I
2. Indian Tent Turtle	<i>Kachuga tentoria</i>	Not listed
3. Indian Flapshell Turtle	<i>Lissemys punctata</i>	Schedule I
4. Indian Softshell Turtle	<i>Aspideretus gangeticus</i>	Schedule I
5. Marsh Crocodile	<i>Crocodylus palustris</i>	Schedule I
6. Gharial	<i>Gavialis gangeticus</i>	Schedule I
7. Indian Python	<i>Python molurus</i>	Schedule I
8. Small Cormorant	<i>Phalacrocorax niger</i>	Schedule IV
9. Woolly-necked Stork	<i>Ciconia episcopus</i>	Schedule IV
10. Comb Duck	<i>Sarkidiornis melanotos</i>	Schedule IV
11. Common Teal	<i>Anas crecca</i>	Schedule IV
12. Smooth coated Indian Otter	<i>Lutra perspicillata</i>	Schedule II Part 2
13. Gangetic Dolphin	<i>Platanista gangetica</i>	Schedule I

