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**SEA TURTLES**

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# MARINE TURTLE CONSERVATION AND MANAGEMENT: A SURVEY OF THE SITUATION IN WEST BENGAL, 1981/82 AND 1982/83

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## Introduction

In spite of the promulgation of the Indian Wildlife (Protection) Act 1972 and the protection accorded to sea turtles, fishermen and traders from West Bengal and Orissa have been carrying trade on turtles resorting to poaching from the inshore fishing grounds along Orissa-West Bengal, not sparing the turtles even during mating season off Gahirmatha, Orissa State. However, during the last two seasons, the West Bengal and Orissa Forest officials have taken constructive steps, though inadequate, to prevent turtle poaching and marketing. To create public awareness the regional and national dailies have been publishing articles on sea turtles with a stress on conservation.

## Turtle poaching at various centres

### *Midnapore District, West Bengal*

The fishermen from Midnapore District used to arrange organised capture of marine turtles from the fishing grounds of Orissa. During 1981-82 season it was estimated that 15 fishing units, each unit comprising of a motor launch with 6 country crafts were deployed from Digha. Each unit captured about 6000 numbers during the season. During the 1982-83 season the scale of poaching of turtles was reduced to a great extent due to the vigilance by the Forest officials. It was estimated that from mid-December 1982 to end of February 1983 about 10,000 live turtles were clandestinely landed at Bhanshalghat from where they were transported to Calcutta and Tatanagar for marketing. Thus, the 1982-83 season saw a reduction in the catch by almost 90% over the previous season.

### *At Digha*

On 14th and 15th December 1982 a team from Central Marine Fisheries Research Institute visited Digha and adjacent areas to study the situation. On 15.12.'82 at the Digha fish landing centre, live olive ridley were detected in two sheds. The first shed was located on the western side of the landing centre, where 34 turtles (14 males and 20 females) were kept. The second shed was located on the eastern side of the landing centre where 25 live turtles (10 males and 5 females) were dragged along the beach and kept for transport to the market.

## The turtles measured (in cm)

Males :	Carapace length 67-72	Carapace width 56-68
	Plastron length 50-54	Plastron width 42-50
Females :	Carapace length 65-69	Carapace width 54-64
	Plastron length 49-59	Plastron width 40-54

The live turtles weighed between 30 to 40 kg and was for sale by the fishermen to the traders at the rate of Rs. 40 to 50 per animal at the landing centre.

On the same day, Sri. A.K. Basu, Forest Beat Officer, West Bengal Forest Department on a surprise inspection of this centre, confiscated the 59 turtles from the two sheds and arranged for their release into the sea. At Digha beach, on 15.12.1982 in a two km stretch more than 12 dead turtles were noticed. Dogs were eating the flesh from the carcasses which had been freshly washed ashore, apparently 'drowned' as a result of entanglement in the gill nets operated along the coast.

When the team visited Digha on 1st February 1983, 11 live turtles tied by ropes and 57 dead turtles strewn along a 3 km stretch of Digha Beach were noticed. The latter were undoubtedly part of the incidental catch in the gillnet fishery and were discarded in the sea by fishermen and washed ashore, while the live ones were brought to shore in boats for trade. The team visited Digha again in the last week of February '83. At that time neither live turtles nor freshly washed ashore dead turtles were noticed. About 25 decomposed carcasses of olive ridley were seen at the landing centre of which 9 were seen with their flippers tied together with nylon ropes. The measurement in cm were as follows:

Carapace length 57-67 (63.0)	Carapace width 48-61 (57.1)
Plastron length 48-58 (54.1)	Plastron width 45-52 (47.0)

On 20th February '83 at Digha Muhana landing centre, the team noticed about 15 carcasses of olive ridley of which five had their flippers tied together with nylon ropes. The measurements in cm of the specimens were:

Carapace length 63-71 (66.7)	Carapace width 53-65 (58.6)
Plastron length 55-61 (58.3)	Plastron width 48-53 (48.7)

### At Bhankshalghat

Bhankshalghat is located on the banks of a creek 20 km away from Digha and 7 km to the interior from sea coast. Due to the vigilance of the forest officials at Digha, the fishermen resorted to transporting the turtles to Bhankshalghat during nights through the creek in boats and from there to Calcutta by trucks. On 19.12.'83 the team observed 15 fresh carcasses of male and female olive ridley at Bhankshalghat measuring (in cm):

Carapace length 59-70 (64.2) Carapace width 49-64 (57.7)  
Plastron length 49-59 (57.1) Plastron width 45-51 (47.5)

As already mentioned, during 1982-83 season Bhankshalghat was the most active centre for this nefarious trade. The possibility in future of turtles being transported through the creeks to landing centres in the interior cannot be ruled out.

### Turtle sale at Calcutta markets

As a result of the preventive measures taken by Orissa and West Bengal Forest officials during the 1982-83 season the number of turtles transported to Calcutta markets had diminished to a few thousands from about 90,000 to 100,000 during the previous season.

Date	Place	Number of olive ridley noticed in Calcutta markets
20.12.1982	Howrah	165
22.12.1982	Shealdah	58
23.12.1982	Howrah	134
7. 1.1983	Howrah	35
13. 1.1983	Howrah	27
24. 1.1983	Howrah	50

The weight and selling price of turtles varied from 30 to 45 kg and from Rs. 110 to 160 per turtle respectively.

The West Bengal Forest officials were also active in booking offences under the Act of illegal transport of turtles. On 21st December 1982, a truck which was transporting turtles was caught near Narghat and the vehicle and the persons involved were produced before the Subdivisional Judicial Magistrate, Contai. In this case, 90 turtles were recovered and they were released back into the sea at Junput. Totally three such offences were registered against transport of turtles by the West Bengal Forest officials at the Subdivisional Magistrate court, Contai between 17.12.'82 and 28.12.'82. This action no doubt had some deterrent effect but the effort will have to be vigorously pursued in future with wider publicity on conservation programme on turtles to make the system more effective.

**Table 1.** Details of marine fishing villages and fishermen population in Midnapore District, West Bengal

Number of villages	148
Number of fish landing centres	19
Number of fishermen households	5028
Fishermen population	
a. Male	11442
b. Female	9515
c. Children	12970
Total	33927
Educational Status	
a. Primary	7112
b. Secondary	1351
c. Above Secondary	116
Total	8579
Number of fishermen engaged in actual fishing	
a. Full time	6034
b. Part time	2114
c. Occasional	265
Total	8413

**Table 2.** Mechanised and non-mechanised marine fishing crafts and gears in Midnapore District, West Bengal

Number of fishing crafts:	
Mechanised gillnetters	57
Others	15
Total	72
Non-mechanised	
Plank built boats	1130
Dug out canoes	2
Total	1132
Number of fishing gears:	
Drift/Gill nets	437
Fixed bag nets	2752
Hooks and lines	60
Shore seines	97
Scoop nets	82
Others	1864

### Fishermen population and infrastructure facilities

In the All India census conducted during 1980 by CMFRI, information on the fishermen population and the infrastructure facilities available in the major fishing centres along West Bengal Coast has been collected and is briefly as follows.

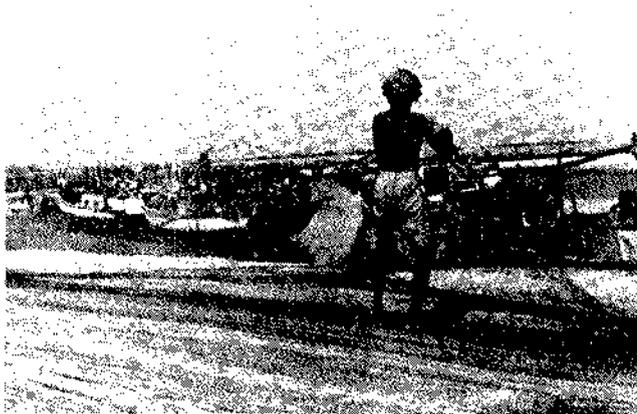
The six districts of West Bengal comprise 303 fishing villages and most of them (148) are in Midnapore District. Fishermen from Midnapore District operate their boats along the Orissa Coast. The total number of fish landing centres in Midnapore District is 19. Of the 14000 fishermen households the maximum number (35%) is in Midnapore District. The total sea going fishermen population in West Bengal is about 84000 of which Midnapore District accounts for 41%. The number of fishermen engaged in actual fishing forms 24% of



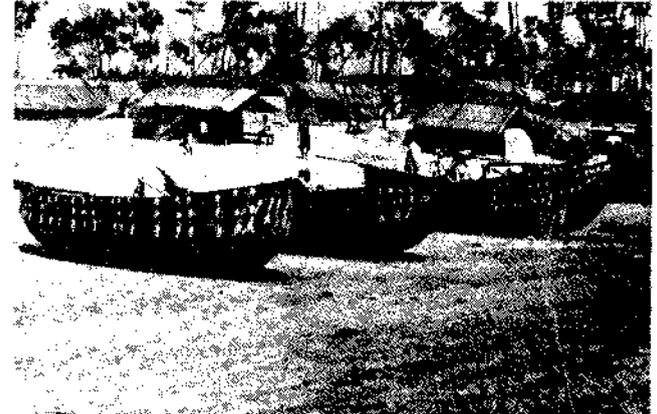
Fish landing centre, Digha a noted place from where hundreds of turtles used to be sent to Calcutta market.



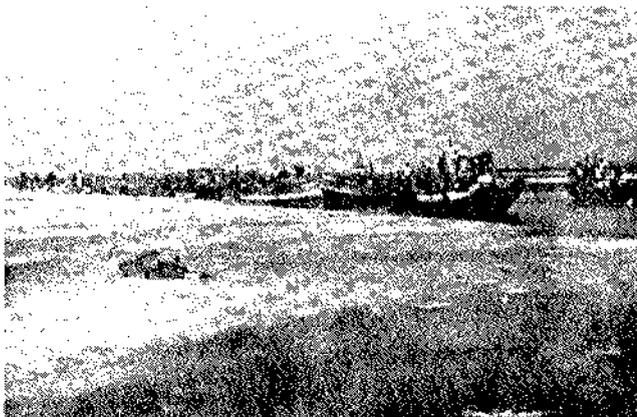
Ice packing of fishes to be transported to Calcutta market.



Gill nets being dried at Digha fish landing centre.



Fishing canoes at Digha fish landing centre.



Fishing trawlers at Digha Mubana fish landing centre



Fish landing centre, Bhankshalghat 7 km from the sea, from where truck loads of turtles used to be sent by road to Calcutta market.



Temporary shed for the olive ridley at Digba fish landing centre for illegal transport to Calcutta market as on 15.12.1982.



Easy way of transporting from fishing boats to turtle shed by cycle rickshaw, the hard beach surface facilitates this transport.



Turtles being lifted bodily from rickshaw to the shed.



Turtles being dragged from the rickshaw to the shed.



Scene of turtles kept supine in the shed enclosure



Turtles awaiting transport at the beach.



One more turtle shed at the western side of Digha fish landing centre located on 15.12.82.



Plight of protected turtles in the hands of illegal traders



Timely and prompt check by Forest officials of Govt of West Bengal.



Turtles being carried as head load to be released back into the sea



Olive ridley on way back to sea owing to the vigilance of forest officials of West Bengal



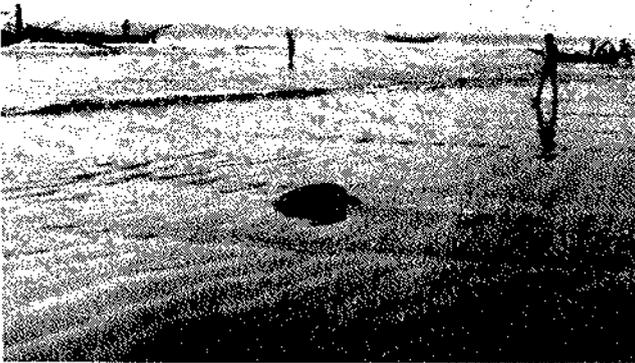
Release of olive ridley in the presence of CMERI and Forest Department officials



Sign board at Forest Department office, Contai notifying Wildlife Protection Act.



Dog licking the blood of freshly washed ashore olive ridley at Digha Beach.



Turtle washed ashore at Digha fish landing centre.



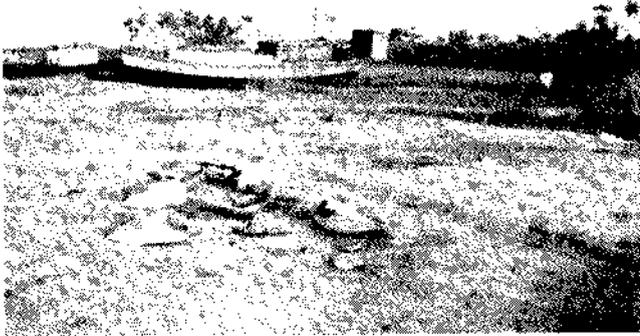
Dogs feeding on the carcasses at Digha Mahana fish landing centre.



At Digha fish landing centre.



At Bhankshalgait.



Discarded carapaces of olive ridley seen during the last week of February '83 at Bhankshalghat



Remains of carapaces at Bhankshalghat - remainer of 1982-83 season



Carcasses at Digba Mithana seen during the last week of February '83.



Carcasses at Digba fish landing centre.



Remains of nylon rope around flippers and carapace to help transport of turtles from Gahiroddha to Digba



Close up view of flippers tied with nylon rope at Digba



