

Survey of nesting beaches in West Bengal – A preliminary report

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In eastern India, olive ridley turtles (*Lepidochelys olivacea*) visit the coast from November till the first week of April. The olive ridley turtles migrate from the Indian ocean and its adjacent areas and pass through the Andhra Pradesh and Tamil Nadu coasts. They then reach the mass nesting beaches in Orissa and follow the same route during their downward migration from the breeding ground. Although, Gahirmatha and other beaches in Orissa are the primary areas of nesting, there is some nesting further north in coastal West Bengal as well. The coast of West Bengal stretches from the Sundarbans in the east to the Digha Shankarpur region in the west. The Sundarbans have the largest contiguous mangrove forests in the world, while the vegetation of the Digha Shankarpur region are primarily *Casuarina*. The entire region is an intensive fishing zone, with large scale trawling related turtle mortalities. The coasts have not been surveyed adequately to identify the density of nesting of sea turtles. This survey is currently being conducted by the Nature, Environment and Wildlife Society, Calcutta in collaboration with the Forest Department of West Bengal.

Study Area

West Bengal has a total of 200 km of coastline. The coastline of the Bay of Bengal extends from the Indo-Bangladesh border which is the deltaic region of the Sundarban in the east to the Digha Shankarpur area upto the border of Orissa in the west. India and Bangladesh are divided by the river Hariabhanga in the extreme east of West Bengal. The coast along the border of West Bengal and Orissa lie just before the Talsari in the west. 24 Parganas and Midnapore districts fall within this zones, comprising 46 fishing villages. Major trawling takes place in different islands of Digha, Shankarpur, Sundarban and Junput.

Methodology

April to May, 2000: A preliminary survey was carried out on the West Bengal coast to identify the key nesting areas, to rapidly assess trawling related mortality and identify the main anthropogenic pressure. To achieve these tasks, the area was broadly divided into two sectors, A. Sundarban sector B. Digha Shankarpur sector. The coastal residents and the fishing communities were interviewed.

June – October, 2000: Creation of a network of organisations in the state who can work together to collect information on sea turtles and implement management plans.

November 2000 – March 2001: Extensive surveys will be carried out on foot along the entire West Bengal coast. Secondary information will be collected from fishing communities and at landing sites. Land use pattern will also be studied.

Problems

The Sundarban is the only sea turtle area in India which is infested with man eating tigers. Although the Forest Department provides armed guards during the survey, there is a high risk factor involved in the study. During the survey in Bijeara, there was clear evidence that a tiger had followed the study team for about 2 kilometres. Pugmarks of 3 different tigers were found in Bijeara, all of which were absolutely fresh. In Kalash, within 3 km, pugmarks of 4 tigers were found; one adult male, one adult female, one subadult female and one cub. Two of these were absolutely fresh. Moreover while reaching the nesting sites, the team has to cross very muddy and slippery patches full of pneumatophores.

Observations

The project was initiated in May 2000. During the first two months, the study team collected information about different sites and the period of nesting, as well as information about mortality from different sources. According to the information collected during this period the following nesting sites were identified along the coast of West Bengal: Bijeara, Kalash Island, Jambudweep and Sand island in the Sundarban Biosphere reserve; Mechua and Chaimari in the Sundarban Tiger reserve.

The sites which have been identified as high mortality areas are Shankarpur fishing harbour, Digha mohona and coasts and Junput fishing harbour.

The fish depots where there is information about the arrival of dead turtles along with fish are Raidighi, Namkhana, Canning and Nayachar.

In the months from July – October 2000, there was no fishing and trawling in the coastal areas due to the monsoon. Moreover nesting does not occur during these months. During these months, the study team collected preliminary information, and visited the sites to promote awareness by organising group meetings with fishermen, local

communities, NGOs and nature activists and developed a network with NGOs and activists and prepared different printed materials for distribution and collection of information.

Intensive survey began from November. During this session, the survey team visited the coastal zones of Digha, Shankarpur and Junput in the second week of November. The beaches were surveyed on foot. Trawl and gill net fishermen, forest guards, and trawler owners and local communities were interviewed. According to them, there was neither any information on sighting in the sea nor any dead turtle could be found on the beach.

The presence of carcasses and crawls indicate the occurrence of some nesting along this coast north of the major nesting beaches of Orissa. However, the density of nesting and the extent of mortality cannot be evaluated until later in the season after further surveys have been conducted in these and additional areas in Mechua and Chaimari in the Sundarban Tiger reserve

The field trip was conducted during mid December. The following information was collected from areas in the the Sundarban Biosphere reserve.

| | Kalash Island | Bijeara Island | Jambu dweep |
|---------------------------------|--|--|---------------------------|
| No. of nests | 4 | 0 | 0 |
| No. of active nests | 2 | | |
| No. of eggs/nest | 96-103 | | |
| Cause of damage of nests | Wild boar/fishing cat | | Wild boar |
| No. of live turtles | 0 | 1 | 0 |
| No. of dead turtles | 6 | 6 | 7 |
| Cause of death | 2 perhaps by tigers; rest trawling related | 1 tiger, 1 perhaps jackal, rest trawling | Probably related trawling |
| Crawls | several | Few | None |