

# GOI - UNDP Sea Turtle Project

## Status Survey of Sea Turtles along the Tamil Nadu Coast

January 2002

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undp



भारतीय वन्यजीव संस्थान  
Wildlife Institute of India



MoEF, Government of India

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## SUMMARY

Five species of sea turtles; Green turtle *Chelonia mydas*, Loggerhead turtle *Caretta caretta*, Olive ridley turtle *Lepidochelys olivacea*, Hawksbill turtle *Eretmochelys imbricata* and Leatherback turtle *Dermochelys coriacea* are distributed along the Indian coast. All of them are reported from Tamil Nadu. Sea turtles are reported to be declining all over the world. This is attributed mainly to the habitat loss, encroachment of nesting beaches by human, development projects, and unscientific fishing practices. Sea turtles are also exploited for their meat and eggs. Hence, the Ministry of Environment and Forests, Government of India has initiated the GOI-UNDP Sea Turtle Conservation Project covering all maritime states of the country. Major objectives of the present project were to; (1) identify important marine turtle areas of Tamil Nadu, (2) determine the nesting season, (3) record the arrival and departure of nesting turtles and population estimate of each species, (4) assess the rate and cause of mortality of different species with viable measures to reduce the mortality, and (5) to assess the impact of mechanised and other marine fishing activities on turtles along the Tamil Nadu coast.

Rapid surveys were conducted all along the Tamil Nadu coast and intensive surveys in select stretches. During surveys along the beach, nests and dead turtles and their shell length were recorded. In select localities, markets and village garbage dumps were monitored to assess the exploitation on sea turtles. The field work was conducted from November 2000 to May 2001. Major findings of the present study are given below.

- All five species of sea turtles reported from India were observed during the present investigation. Sea turtle nesting along the Tamil Nadu coast is sporadic. Important Olive ridley nesting areas of this state are Nagapattinam and Chennai coasts. The estimated number of nesting turtles is 500- 1000/ year. The turtles arrive the nesting area during early December, and could be seen till April. Peak nesting activities of the Olive ridleys were observed during February - March. It appears that the nesting of sea turtles has declined all over the Tamil Nadu coast.
- Higher number of dead turtles were observed along the Nagapattinam coast (4.5 turtles/km). Turtle mortality was due to two major reasons; (1) mechanical injury due to the movement of fishing vessels and incidental catch in the fishing nets, and (2) exploitation by humans for food. The former is wide spread along the Tamil Nadu coast, whereas exploitation for food is high along the southern parts i.e. Tuticorin and further south. Barring the Protected Areas such as Point Calimere Wildlife Sanctuary and Gulf of Mannar Biosphere Reserve, turtle eggs are collected and consumed by the coastal



inhabitants from all over the Tamil Nadu coast. About 95 % (n=87) of the nests were pilfered by the locals.

- The present study shows that the Green turtle catch has declined dramatically in the Gulf of Mannar. In late 1970s it was reported that this species constituted about 89% of the total turtle catch. The present study shows that it is only 44%. On the other hand, the Olive ridley increased substantially (<10% to 52%). The apparent increase in the Olive ridleys caught could be due to the increase in exploitation of this species substituting the Green turtle.
- The composition of sea turtle along Gulf of Mannar and Nagapattinam coast was different. The Olive ridley and Green turtle were observed in Nagapattinam, and the former species constituted 98.1%. In Gulf of Mannar, Olive ridley (59.6%) and Green turtle (35.2%) together formed 94.8%. Other three species were rare and formed only 5.2% of the turtle composition.
- The Nagapattinam coast harbours largely breeding population of Olive ridley, whereas considerable proportion (15%) of this species in Gulf of Mannar was immature ones. The Green turtle population of the Gulf of Mannar consisted predominantly of immature ones.
- The Olive ridleys tagged along the Orissa coast (Tag No. WR 26135, WG 14805) were found from Kanniyakumari, the tip of the Peninsula. These recoveries show that the Olive ridleys migrate from the southern Bay of Bengal, especially the Gulf of Mannar, and the Indian Ocean to Orissa for nesting. The Gulf of Mannar appears to be an important feeding and nursery ground for both Olive ridley and Green turtles.

Measures for sea turtle conservation identified for Tamil Nadu are: (1) Exploitation of sea turtles that exists along the south Tamil Nadu coast needs to be controlled. (2) According to fishermen, the entangled turtles in the fishing (gill) nets are beaten (to death ?) especially along the Nagapattinam-Chennai coast. It is reported that they do so to avoid major damage to their fishing gears. Nature awareness programme focussing the importance of sea turtles may help improving the situation. (3) Over 90% of the sea turtle nests are pilfered by the locals, especially in the unprotected areas. Nest protection and hatchery programme involving locals would be an ideal strategy in the prevailing conditions. (4) Status of the Green turtle in Gulf of Mannar should be assessed, and Action Plan for its conservation worked out. The Tamil Nadu coast should be given a higher priority in sea turtle conservation programmes as the state harbours all five species, and provides both breeding and foraging ground for at least four of them.