

Where do all the hatchlings go ?

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Gahirmatha, one of the three major rookeries in Orissa on the east coast of India, is considered to be one of the largest nesting sites for olive ridleys in the world. However, the population in Orissa has been under severe threat with over 75,000 turtles counted dead along the Orissa coast, with much of the mortality attributed to fishery related causes. While the turtles on this coast face several additional threats, one in particular has not so far been documented or assessed.

Gahirmatha, located near Dhamra (21°N & 87°E) is the northern most of the mass nesting sites in Orissa, and is part of the Bhitarkanika Wildlife sanctuary, at the mouth of the river Maipura. Mass nesting was first reported by Bustard in 1974, and records suggest arribadas in the range of 100 – 500,000 nesting turtles. The current nesting beaches are islands which are fragments of a 10 km spit which was a part of the mainland till 1989. In 1989, a cyclonic storm cut off a 5 km spit from the mainland and nesting has occurred on this spit thereafter. Since 1996, this island, known as Nasi, has changed drastically from year to year. In 1997, it became fragmented into two islands, 1.1 km and 2.8 km long and a few hundred metres wide. During the supercyclone in October, 1999, the islands became narrower and further fragmented (Pandav, 2000).

Since 1992, all arribadas and most of the nesting at Gahirmatha have occurred on these island

References

Pandav, B. (2000) Post cyclone situation in coastal Orissa with special reference to marine turtle

fragments. One side of the fragment faces the sea while the other faces the river mouth. Given the distance of the fragments from the mainland (and therefore no visible silhouettes), and the narrowness of the fragments (therefore no dunes or discernable slope), there appear to be no light cues to enable hatchlings to find seaward direction. During emergence in May, 1999 (following the arribada in March), observations on the islands indicated that hatchlings do head in the direction of the river. It is not unreasonable to hypothesise then that some proportion of the hatchlings do end up in the river mouth. Even assuming that this proportion is less than 50 %, this must be considered an additional source of hatchling mortality

The observation that no light cues are available may be erroneous, and hatchlings might well use other cues for sea-finding, but we should consider this issue important enough to merit an investigation. Unfortunately, the fragmentation of the islands has made them relatively unapproachable during the period when emergence occurs and this problem has not been investigated so far. While this may not be the most pressing problem that turtles face in Orissa, it is one that needs to be recognised by both turtle biologists and conservationists as they seek long term strategies for the conservation and management of ridley populations in Orissa.

conservation. GOI UNDP Sea Turtle Project. Wildlife Institute of India, Dehradun.