Rural people Empowerment in Olive Ridley Sea Turtle *(Lepidochelys olivacea)* Conservation Project at Morjim beach, Goa

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Goa is one of the rich biodiversity states of Western Ghats including diverse variety of marine fauna. The Olive Ridley Sea Turtle *(Lepidochelys olivacea)*, for example, plays a crucial role in the marine ecosystem, occupying a distinct niche. They clean aquatic habitats, control aquatic weeds and are believed to be vitals scavengers of the seas. They can be found in all the tropical and sub-tropical oceans of the earth.

Due to a rapid decline in turtle populations, sea turtles found in India are included in Schedule 1 of the Wildlife (Protection) Act, 1972 sharing place with the Tiger. This is also listed as Vulnerable in IUCN Red List (IUCN 2013) and in Appendix 1 of CITES (Convention on International Trade in Endangered Species of Wild Flora and Fauna). India is a signatory to both of these International Conventions (http:// enwikipedia. org/wiki/Olive Ridley).

Morjim, a two-kilometer-long beach, has been one of the lesser-disturbed beaches in North Goa when compared to other beaches. It is pristine and secluded and has only recently started attracting tourists with Sea turtles as one of the major attractions for visitors (Dongre and Shambu, 2008).

A little-known fact of this beach is that it has been the preferred nesting site for the rare and endangered Olive Ridley Turtle. This remarkable and fascinating creature is a type of sea turtle. Their complex life cycle makes them very difficult to study and understand. They spend their entire life in the sea except for the female of the species. She crawls to the shore on a hospitable beach, and digs a nest in the sand with her hind flippers, laying up to 100-130 eggs in the nest and filling it with sand again before she returns to the sea. The eggs hatch in about 55 days and the hatchlings dig their way out of the nest and crawl to the sea.

The hatchlings are believed to spend much of their early lives in sea weed rafts in the oceans. The periodicity of nesting is believed to be annual from October to March with a few stray cases observed in the month of April (Giri, 2000); the turtle may lay up to ten clutches (nests) in a season. Remarkably the sex of hatchlings is determined by the temperature at which the eggs get incubated.

The Forest Department of Goa initiated the turtle conservation effort from 1996 (Kutty, 2000) and this author is associated with these efforts since inception. Studies conducted have revealed that presently only Olive Ridley Turtles are nesting in

Habitat destruction by shacks just in close environs of the nesting site

Eggs guarded by fencing to prevent from dogs, feral pigs and also from stampeding

Removing of sand to take hatchling outside

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Olive Ridley hatchlings in an container

Hatchlings is coming out of the sand

Successful release of hatchling in Arabian sea

significant numbers on Goa's beaches. The turtle conservation effort initiated by the Forest Department has enlisted the co-operation and support of the local people through education and motivation.

The participation, contribution and cooperation of locals has resulted in the growth and success of the turtle conservation effort. Locals are also employed to keep watch on the beach for spotting any turtles coming ashore to nest which is usually well after midnight. When any turtle is spotted, full protection is afforded so that the turtle can nest and return to the sea.

The clutch itself is protected by erecting a netted enclosure around it to prevent it from being trampled or damaged intentionally or non-intentionally. In the first year there were 5 nestings observed and over the years the number increased to 8 in the next year and finally to 32 clutches in the year 2001.

With increasing tourism and tourism facilities, there were tremendous developments in the coastal regions of Goa. The development of shacks on the beaches led to a lot of disturbance to the turtles intending to nest on Morjim Beach, because of which the number of clutches dropped down to just 3 in the year 2010.

Fresh efforts were made by the Forest Department to employ local people for helping to regulate the development of shacks and movement of tourists. With active participation from the Tourism Department, the CRZ authority as well as the locals, several restrictions were brought in place which includes "lights out" by 8 pm every night for all shacks, prohibition of focus and high mast lights and banning loud music after sunset. As a result the turtle nesting has improved with 15 clutches this year (2012).

Morjim beach is approachable from Mapusa via Siolim, a couple of kilometers along the coast across Siolim beach. A small Information Centre at the site provides information on turtle nesting for tourists.

References:

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