

Turtle Conservation

Community Participation, the Way Ahead



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Located on the Konkan coastline between the Sahyadri mountain range on the East and the Arabian Sea on the West, Velas was a silent, ordinary remote village until 2006, the year when Sahyadri Nisarga Mitra (SNM), a Chiplun based NGO, initiated the famous 'Turtle Festival'. Having stumbled upon mysterious tracks on the beach, the SNM team traced it to an Olive ridley turtle in the year 2002 and successfully protected 50 nests along the 3 km beach of Velas in the season of 2002-03. SNM has had a challenging, yet successful journey of turtle conservation decade along 80 villages from Raigad, Ratnagiri, and Sindhudurg districts of Konkan. **Laxmikant Deshpande** tells us more about this initiative.

Sahyadri Nisarga Mitra (SNM) focussed on *in situ* conservation by patrolling the nesting beaches and protecting individual turtle nests during breeding season while also rescuing turtles injured by fishing nets. Its *ex situ* conservation includes creating turtle hatcheries, preventing trade of turtle eggs in the local markets, and capacity-building of key stakeholders like the Forest Department staff, SNM staff and volunteers, and local fisherfolk. Initiated by a handful of its staff members and well-wishers, SNM has come a long way, conserving 756 nests and safely releasing 32,789 hatchlings so far. The *ex situ* conservation technique of hatchery management provides employment to the local villagers. Hatchery managers clean all waste materials on the beach which may disturb turtle nesting. They patrol the beach daily to look for marine turtle nests during the nesting season, relocate these nests into the hatchery, and then release the hatchlings into the sea on their emergence.

Marine Turtles of India

Of the seven species of marine turtles, five are found in India. Four out of these five are found on the Western coast, and Olive ridley is the dominant nesting species in Maharashtra. Growing to about two feet in length and 50 kg in weight, the Olive ridley gets its name from its olive coloured carapace, which is heart-shaped. It is the smallest of the sea turtles. Mostly carnivorous, it feeds on jellyfish, snails, crabs, and shrimps. It occasionally eats algae and seaweed as well. While male turtles never visit the coastline, females

return to the same beach from where it had first hatched, to lay eggs. Guided by the stellar constellation, marine turtles travel thousands of kilometres in their life span in pursuit of safe grounds for feeding and breeding. After 45-65 days, hatchlings emerge from the nest and crawl towards the ocean during which they become preys of feral dogs, jackals, birds, fiddler crabs, and other predators. It is said that just one out of every 1000 hatchlings survive to reach adulthood.

Olive ridley has found a place in Schedule-I of the Indian Wildlife (Protection) Act, 1972. It is listed as endangered as per the International Union for Conservation of Nature and Natural Resources (IUCN) Red Data Book. Sea turtles are protected under the Convention on Migratory Species (CMS) and Convention of International Trade on Wild Fauna and Flora (CITES). The CMS and the Inter-American Convention (IAC) for the Protection and Conservation of Sea Turtles have put restrictions on illegal collection of eggs. India is a signatory nation to all these conventions.

Turtle Festival

As turtle conservation initiatives grew by leaps and bounds, SNM felt the need of a stronger community support and participation to scale up its activities. The 'Turtle Festival' with the tagline 'Turtle Conservation through Community Participation' was born through intense brainstorming within the SNM team and a review of case studies across the world. The turtle festival offers a rare opportunity to commoners to understand a turtle's lifecycle. SNM's first turtle festival

in 2006 attracted around 150 citizens from Mumbai and Pune. The festival promotes awareness activities like talks and screening of documentaries for the participants. In 2007, SNM was selected by the United Nations Development Programme (UNDP)-implemented Global Environment Facility (GEF) Small Grants Programme for a two-year sponsorship and offered a window of opportunities for it to scale up and streamline the festival management. In these years, SNM provided hospitality training to the households of Velas, strengthened the volunteer base, involved the Gram Panchayat in the festival management, developed awareness modules for the festival participants, involved and trained women self-help groups to provide catering services, involved local schools in awareness activities, developed a website to popularize the festival and communicate its arrangement details to interested citizens.

With every passing year, the turtle festival has been successful in attracting more organizations and individuals, thereby increasing its outreach to more than 3,000 tourists during March and April—the months of surfacing of turtle hatchlings from hatcheries. The festival contributed in building a strong base of volunteers in the Konkan region. These volunteers helped in resolving the local environmental problems and in taking up long-term projects. Since the last three years, Velas Gram Panchayat is responsible for making arrangements for the turtle festival and SNM only plays an advisory role, if required.



Homestay

The homestay model, initiated in 2006 has evolved in many ways since then. Today, around 30 households offer homestay throughout the year. Contrary to commercial hotels, homestays continue their traditional and sustainable practices related to local cuisine, wet waste management, architecture, and other household activities. The villagers do not have to make additional investments for tourists. A stay in operational houses gives tourists a sense of security. Cleanliness, open and lively environment, and prompt service by villagers makes them comfortable. Since tourists are not provided with separate rooms, they blend in the village atmosphere. Moreover, the amount charged by homestay owners is common to all. Ten per cent of the total amount charged from the tourists is effectively utilized for turtle conservation activities. This generates a sense of unity in the village.

Considering the success of running homestays, the Maharashtra Tourism Development Corporation has included 'homestay' as its official model which is an important achievement. A recent survey by SNM indicates a 15 per cent increase in the income of villagers due to turtle tourism. 'Nature Conservation to Support

People's Livelihood' is SNM's philosophy and the turtle conservation initiative is a testimony of it.

Challenges

Over the years, SNM has identified key challenges to turtle conservation and overall management of the coastal ecosystem. These include:

- Changing sand morphology and beach profile. For example, vertical sand mounds blocking turtle paths, long shore transport (natural) of sand due to constructions



- Increasing sea level due to climate change has been responsible for a reduction in habitats suitable for turtle nesting
- Construction activities along the Konkan coastline and violations of the Coastal Regulation Zone (CRZ) Notification, 2011
- Casuarina plantations raised near the high tidal line may obstruct turtle nesting. Casuarina has a shallow root system and stormy winds along with high tidal forces expose the roots of Casuarina causing it to collapse. Also, it has been observed that Casuarina roots are drawn towards turtle nests for its high moisture content interfering with the emergence of the hatchlings.
- Delayed corrective actions, post natural and man-made disasters. For example, late clearing of toppled Casuarina trees from turtle nesting habitats
- Trapping of turtles in gill nets and also because of trawl fishing and ghost fishing (fishermen use nets for fishing lobsters in rocky regions and leave the nets when trapped in rocks)
- Distraction of female turtles caused by illumination along the coastline during the breeding season
- Increasing solid waste generated from tourists and local population; increasing use of the beaches by bulls and horse carts

- Increase in marine pollution due to the release of untreated water into the sea by industries, which is toxic for the turtles
- Invasion by species like *Ipomea biloba*

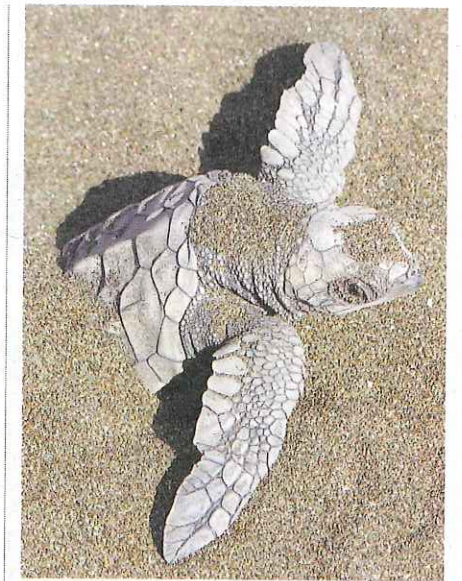
International Update

The United States had implemented a ban on shrimp from countries whose fishing fleets did not have special 'turtle excluder devices', to prevent endangered sea turtles from being killed in the process of shrimping. India, Malaysia, Thailand, and Pakistan claimed that the law was a disguised restriction on free trade and challenged the measure in the World Trade Organization's (WTO) dispute resolution process. The United States argued that the exceptions in Article XX of the General Agreement on Tariffs and Trade (GATT) allowed for the ban. The dispute resolution panel deciding the case said that the shrimp ban was not justified under the Article XX exceptions because environmental protection measures could not be used to undermine the overall multilateral trading system. The United States appealed to the decision, however, under the new appeal procedure that had been created by the revision of the GATT in the Uruguay Round. The WTO appellate body again ruled against the United

States, but with a significant difference from the rationale of the initial dispute resolution panel. The appellate body said that the panel had read Article XX too narrowly within the context of the overall goal of maintaining free trade. Article XX, the appellate body said, was meant only to prevent abuse of environmental protection laws to undermine the multilateral trading system. Despite these reassuring words from the WTO, environmentalists and other members of the American and international public focussed on the result of the case and what it seemed to mean, i.e., an international tribunal had overturned a democratically enacted law for the protection of an endangered species.

The Way Forward

Like the Royal Bengal Tiger, Olive ridley turtle plays a 'flagship' role in the marine and coastal ecosystem. Over the years, SNM has realized the importance of beach management, solid waste management, timely and scientific rescue and rehabilitation of distressed turtles, and active participation of all stakeholders in turtle conservation. Recently, SNM has received support from Gesellschaft für Internationale Zusammenarbeit (GIZ) and Maharashtra State Forest Department



to implement the 'Coastal and Marine Protected Areas' project at Velas, Anjarle, and Kelshi villages. The overall objective of the project is to improve the existing conservation practices and sustainable use of biodiversity in the pilot protected areas while taking into consideration the economic circumstances of the local population. It involves biodiversity research and monitoring, site-based conservation activities, and capacity building of key stakeholders for better management of turtle habitats. In the last six months, the project undertook desk review, rapid biodiversity assessment, preliminary stakeholder analysis, and trust building initiatives among the local stakeholders. Based on these, a detailed three-year action plan has been prepared and submitted to the GIZ and the Forest Department. The project intends to support eco-friendly and sustainable livelihoods such as homestays, tourist guides, making traditional food products, etc., to highlight the importance of biodiversity conservation among the local stakeholders. ■

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