

# Marine Turtle Newsletter

## Workshop on Olive Ridley Turtles in the Indian Ocean (4th March 1999)

Jack Frazier<sup>1</sup> & Manjula Tiwari<sup>2</sup>

<sup>1</sup>Conservation and Research Center, Smithsonian Institution, Front Royal, Virginia, USA  
(E-mail: [kurma@shentel.net](mailto:kurma@shentel.net))

<sup>2</sup>Archie Carr Center for Sea Turtle Research, University of Florida, Gainesville, Florida, USA  
(E-mail: [mtiwari@zoo.ufl.edu](mailto:mtiwari@zoo.ufl.edu))

The largest known concentration of nesting sea turtles in the world is reported from Orissa, India. However, during recent years recurring reports of tens of thousands of dead olive ridley turtles (*Lepidochelys olivacea*) stranding on the coast of Orissa have caused international concern.

A lunchtime workshop on turtles in the Indian Ocean was held on the 4<sup>th</sup> of March 1999, during the 19<sup>th</sup> Annual Sea Turtle Symposium; its aim was to invite representatives from the region to summarize the situation and to provide a background to facilitate discussion and identify ways of addressing the present situation. More than 30 people attended, and of the 22 who "registered," 8 were from India, 8 from the USA and one each from Bangladesh, Sri Lanka, Philippines, Australia, Brazil and Mexico. The discussions were led by Bivash Pandav (Wildlife Institute of India), Chitta Behera (Project SWARAJYA, India), Saiful Alam Paiker (Solar Energy Association of Narikel Jinjira, Bangladesh), Raja Sekhar (Andhra University, India), Prof. P. Mohanty-Hejmadi (Utkal University, India), and B. C. Choudhury (Wildlife Institute of India).

The majority of the deliberations focused on the nesting population in Orissa, India, where hundreds of thousands of olive ridley sea turtles are reported to nest in mass nesting events ("arribadas") that may last for a week. Bivash Pandav (BP), a doctoral student of the Wildlife Institute of India, emphasized two major problems at Gahirmatha, the principal nesting beach: mortality due to fishing activities, and artificial illumination inland of the main beach. There has been an increase in the motorized fishing fleet (both gill netters and shrimp trawlers) off Gahirmatha, with a major increase in strandings of dead turtles. Although there are excellent fisheries laws, he accentuated the need for better enforcement by the Orissa State Fisheries Department. In areas where fishing laws have been enforced, positive results have been seen. For example, patrolling in the coastal waters off Gahirmatha beach recently led to a reduction in the number of turtles stranding there. (A recent update from BP [29 April 1999], however, indicates that the good news was short-lived; 1999 has had the highest number of strandings at Gahirmatha in five years of study). He stressed that there is a urgent need to expand these patrolling activities especially to the south of Gahirmatha, where there are other mass nesting beaches.

BP has observations of dozens of ridleys caught in a net during a single trawl. He also emphasized the need to control the glow from lights at night at the missile testing site, which is on a neighboring island less than 1km inland from Gahirmatha. The artificial illumination at the chemical plant immediately inland of Rushikuliya, the second most important arribada beach, which is located in the southern extreme of Orissa, is also a problem. He explained that while there are laws to regulate coastal development, there are no laws regulating these forms of light pollution, so there is a pressing need to formulate a policy for coastal illumination.

Chitta Behera (CB), Director of the NGO Project Swarajya, re-emphasized the need for enforcement of existing fishing regulations. He also explained that it was important to give TEDs a fair trial. CB clarified that there has been no substantial follow-up to the TED transfer workshop, held in November 1996, at Paradip, Orissa, and organized under the aegis of the State Department of Fisheries, Orissa and Project Swarajya, in collaboration with the National Marine Fisheries Service of the USA (NMFS).

One of the results of this meeting was the recommendation that more such workshops be carried out, not only in Orissa, but along the entire coast of India. It had also been concluded that investigations on TEDs needed to be carried out, with the consequent assembly and distribution of local versions of TEDs. He explained that in Orissa, in collaboration with local fishermen, they had developed the "Turtle Saver Device, TSD," a local version of the TED. Yet, in more than two years that had lapsed, there had been next to no advancement with either workshops or TED development by either the Government of India or the State Government of Orissa.

CB explained that the Ministry of Environment and Forests (Government of India) had sanctioned 5,100,000 Indian rupees for the State Forest Department, Orissa, specifically for sea turtle protection measures, including TED development. Following this budgetary provision, on 20<sup>th</sup> October 1998, the Chief Wildlife Warden (Forest Department), Orissa, convened a meeting with fishermen, trawler operators, NGOs, Coast Guards and other government officials, and among other things he assured them that 1,000 locally made TSDs would be available before 1<sup>st</sup> January 1999. CB stressed that despite this major financial support, and the explicit assurance by the State Forest Department, there had been only two minor demonstrations of TEDs; otherwise, there had been no concrete measures to develop TEDs or implement their use on the Orissa coast.

He explained that there is a fundamental organizational fallacy. The State Fisheries Department, Orissa, which issues fishing licenses to trawlers and gill-netters, is the principal authority for the implementation of the Orissa Marine Fisheries Act. Therefore, they should be the nodal agency in the State for development and implementation of turtle protection measures, including TED development and implementation. However, at present it is the Forest Department that has the main authority - and financial support - for these marine conservation measures. He mentioned that neither the Government of India nor the State Government of Orissa had made specific financial provisions for the State Fisheries Department to be involved in sea turtle protection. To elucidate this, he relayed a comment from the Deputy Director of Fisheries, Orissa, Shri R. S. Mishra, in which it was revealed that their total annual budget for sea turtle conservation was 1,000 rupees (about US\$ 25).

CB emphasized the need to include local fishermen in the TSD program. He explained that there has been practically no effort by the government to involve the local fishermen and trawler operators. Since the fishermen are major users of the marine ecosystem, it is crucial that they participate in the conservation of sea turtles, as well as dolphins and horseshoe crabs, which are also negatively impacted by their commercial activities. He also stressed that there is a surfeit of laws, and no need to create more.

Saiful Alam Paiker, Executive Director of the Solar Energy Association of Narikel Jinjira, Bangladesh, described a problem with a major highway being planned along the coast of Cox's Bazar, Bangladesh. This would cause serious environmental problems, especially to important nesting areas from Cox's Bazar to Teknaf Tip. Although there are laws requiring that such development be weighed against the results of environmental impact assessments (EIA), this regulation had not been observed in this case. He made clear that there is an urgent need for the highway development to comply with the EIA ruling of 1995, and hoped to present a resolution on this at a future meeting.

Raja Sekhar (RS), from the Department of Environmental Studies, Andhra University, India, described the situation in Andhra Pradesh, the state just south of Orissa. Here, as elsewhere in India, shrimp culture presents serious environmental threats. The larvae (called "seed") are collected from the wild in nets for subsequent transfer to rearing ponds. The nets are used near major sea turtle nesting areas, as well as in mangroves, and the new types of nets now in use destroy many other marine organisms. He urged that these nets should be banned. RS described other issues that have wide ranging implications to sea turtles, other marine organisms and their habitats. These include heated water, from 40 to 50 C, released into the bay by a thermal electric plant, as well as the chemical pollution resulting from a fertilizer plant. He advocated that the use of TEDs be mandatory.

Professor Hejmadi-Mohanty (HM), from the Department of Zoology, Utkal University, Orissa, explained that inside the Bhitarkanika Sanctuary (including Gahirmata) the waters are under Forest Department jurisdiction; outside the Sanctuary, the Fisheries Department is in charge. Neither Department is adequately prepared to enforce the laws. However, 197 vessels were seized inside the Sanctuary during 1998. Most of them were unaware of the limits of the Sanctuary, which they are prohibited from entering. She claimed that there has been a drastic reduction in infringements within the Sanctuary, for only 38 vessels had been seized during 1999, to date. Outside the Sanctuary, mechanized fishing vessels are prohibited from the zone within 5 km of the coast, but enforcement is a problem. The Fisheries Department has no tradition in this kind of enforcement, and they must be pressured to take appropriate action. Both the general public and the media are responding with information and lobbying efforts.

HM also tried to explain the delay in TED implementation in India. When the TED workshop was held in Orissa in 1996 (thanks to the assistance of Dr. Pamela Plotkin) it was determined that Indian TEDs would need wider spacing between bars because both shrimp and bycatch are used by the fishermen; a modified Georgia Jumper was proposed. At that time, the political climate was favorable, and in fact many people are convinced that TEDs are needed. However, this fishing gear must be certified by CIFNET, a government agency, and technical difficulties have been causing delays. Nonetheless, it appears that the Fisheries Department and CIFNET have been stalling; 5,100,000 rupees have been transferred to the Government of Orissa to support the TED program, and progress has been very slow. (CB emphasized that in October 1998, at a state meeting, it was decided to supply 1,000 TSDs; to date there has been no action).

HM mentioned that the National Sea Turtle Committee, on which she serves, is deliberating the issue of TEDs. She feels it will be necessary to develop a program to stage the implementation of TEDs. In this respect, it is important to appreciate that not all trawler owners are rich. She stated that it is also important to quantify how much TEDs reduce bycatch (BP clarified that this research is being carried out by the Wildlife Institute of India).

HM pointed out that, nonetheless, there have been important advancements. There have been a number of activities to increase awareness about the need for TEDs, including brochures in both Oriya (the language of Orissa) and English. Also, people in Orissa are becoming more aware of the situation - the public, the media, and the press have criticized the government for their lack of initiative. On the whole, HM felt that progress was certainly being made towards the conservation of sea turtles in Orissa.

She also clarified that gill nets would persist whether TEDs were implemented or not. HM's major recommendations were: 1) enforcement of existing fishing regulations, 2) implementation of TEDs at a national level so that it is mandatory for all states, especially on the east coast of India (it is necessary to prevent trawlers, without TEDs, from other states, from fishing in Orissa waters), and 3) pressure from the Ministry of Agriculture for the Fisheries Department to take appropriate action.

Finally, B. C. Choudhury (BC), Senior Scientist at the Wildlife Institute of India, provided a synthesis with a series of steps needing to be addressed for sea turtle conservation in Orissa, as well as throughout India. He described an important new initiative: in mid 1998, the Ministry of Environment and Forests, Government of India launched "Project Sea Turtle". Although the Project is proposed to encompass all maritime states of India, its immediate focus will be on Orissa. The overall strategy of the sea turtle project is directed by the National Sea-turtle Expert Committee, which includes HM and BC as scientific members; other members include the Chief Wildlife Wardens of all maritime states, representatives from the Indian Coast Guard and the Ministry of Agriculture, Government of India. 1) BC explained the need for an extensive program on TED use and implementation. Strandings and fisheries-related mortality are widespread, and all coastal states in India should have mandatory TED use for trawlers. However, the success of this program will depend on the actions of the respective Chief Wildlife Warden of each state. 2) There should be extension and training programs on TED construction, installation and use, carried out by 5 or 6 centers throughout the country. 3) There should also be centers for TED production and subsidized distribution. 4) Adequate legislation and enforcement needs to be developed. Andhra Pradesh has mandatory TED laws, and West Bengal is drafting legislation. 5) Studies of TED efficiency in catch retention and turtle exclusion need to be carried out. 6) It is necessary to quantify the impact of gill nets, as well as a new, fine filament nets used for prawn fishing in the region, particularly Andhra Pradesh. 7) Nesting areas other than Gahirmatha, notably Devi Mouth and Rushikuliya, need adequate protection. A new category of protected area, emphasizing *participatory* management needs to be developed for these areas. 8) Analyses of impacts for key areas critical to the turtles during some part of their life history, need to be conducted. 9) Local people from different sectors of society, need to be involved in the conservation activities. 10) An action plan for ridley sea turtles needs to be developed.

BC suggested that the Marine Turtle Specialist Group (MTSG) of the IUCN should help develop an olive ridley conservation action plan, with details of activities by all involved agencies in the regions. He explained that it is commonly felt that one agency is enough to implement protection, but he emphasized the need to combine various governmental departments to promote more integrated conservation activities. Also, he stressed that aquaculture operations are directly related to habitat condition, and they must be carefully evaluated.

At the end of the workshop, it was agreed that an important first step would be to send a letter to the President of India, detailing the situation in Orissa, and urging that the Government take appropriate steps to protect the turtles and their habitats (see the resolution submitted by CB and passed by the Plenary session of the 19<sup>th</sup> Annual Symposium on the Biology and Conservation of Sea Turtles).

(Source: <http://www.seaturtle.org/mtn/archives/mtn85/mtn85p15.shtml>)