Editorial
TEDs in India: From conflict to consultation

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The interface between marine fisheries and marine turtles has been a major concern not just for the well being of sea turtle populations all over the world, but also for local and international commerce, artisanal fisheries, by-catch reduction policy, marine fishing ground health and the development of eco-friendly fishing gear. In India, what started with a seemingly innocuous warning of sea turtle deaths in fishing nets along the Orissa coast in the early 1980s has, with the death of over 90,000 olive ridley turtles in the last decade, and the ban on Indian marine products by USA and the resultant WTO case, become an eco-political conflict beyond the realm of biologists and conservation strategists.

Ironically, it was one of the apex fisheries organizations, the Central Marine Fisheries Research Institute (CMFRI), Kochi, who first warned that, unless turtle-safe fisheries practices were adopted, the Orissa coast would become a 'graveyard' of olive ridleys. Initially, this triggered seasonal protection of the offshore congregations of olive ridleys along the Orissa coast by the Indian Navy and Coast Guard. However, this has been ineffective since neither agency has vessels that operate in nearshore shallow waters where mechanized fishing activities contribute most to the large scale mortality of sea turtles. When systematic counts gave alarming figures about turtle mortality, the maritime fisheries organizations refused to accept responsibility, suggesting that the cause of turtle mortality was migration fatigue, pollution, disease and many other improbable factors.

The development of the Turtle Excluder Device (TED) and its gradual acceptance in many parts of the world by the mid 1990s, at least by marine fisheries research and development organizations, led the Ministry of Agriculture, Government of India to review its policy on marine fishing and forced the Ministry of Commerce to examine the prospect of the use of TEDs in India. The trawl operators and maritime state fisheries organizations, however, were completely against TED use, citing heavy loss of fish catch and arguments that TEDs developed outside India were not suitable for Indian offshore waters. In 2000, in response to this latter objection, the Central Institute of Fisheries Technology (CIFT), Kochi, developed an indigenous TED called CIFT-TED. An expert scientific panel of the Ministry of Agriculture also recommended the use of CIFT-TED to safeguard sea turtles in Indian waters. However, the Ministry of Environment & Forests, organizations involved with marine turtle research and maritime state forest departments were vilified by trawler owners in Orissa and any attempt to promote the use of TED fell on deaf ears at the grassroots and was met with scepticism by maritime fisheries organizations.

The Government of India – United Nations Development Programme national sea turtle conservation project (2000 - 2002) made an attempt to bring various agencies together to resolve this conflict. First, a team of fisheries and forest department officials were taken on a study tour to marine turtle conservation programmes in Australia and Malaysia. Here, they were exposed to various management techniques, in particular by-catch reduction. Following this, state fisheries agencies were provided funding support to set up "TED Demonstration Centres" in Andhra Pradesh and Orissa and to organize workshops and discussions at the grassroots level with trawl operators. The independent initiation of the Marine Product Export Development Authority's (MPEDA) programme for free distribution of CIFT-TED was also promoted at these workshops. The TED operation films and leaflets were translated into regional languages and distributed by fisheries officials rather than through wildlife and forest department officials. Numerous workshops and extension programmes have now been conducted in Andhra Pradesh (see Bhavani Sankar & Ananth Raju, pp. 2-5). However, there is still substantial opposition to the use of TEDs in

Orissa, where there is much polarisation between conservationists and fishers.

In December 2002, all stakeholders in marine fisheries were brought together on a common platform and for the first time, some consensus was arrived at for the use of TEDs through proactive demonstrations, promotion and training (see workshop report, pp. 24). Localised improvement of CIFT-TED was also agreed to based on feedback from demonstrations to Andhra trawl owners. Though the TED is not widely accepted, at least the conflicting agencies are now willing to share a common platform and to discuss issues in a rational manner. Successful implementation of the TEDs will depend on the involvement of fisheries organizations, who have to come to terms with the fact that it is in their own interest to think seriously of responsible fisheries practices and to consider the welfare of artisanal fishers.

Implementation of the Turtle Excluder Device in Andhra Pradesh

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The state of Andhra Pradesh (AP) has a coastline of 974 km and fishing is one of the important occupations in this state. Marine waters offer promising scope for all fishers who catch fish both with traditional and mechanized craft. Apart from the target species, the fishermen get by-catch of 50-60%. This by-catch includes low cost fishes, as well as vulnerable and endangered species. The Department of Fisheries, Government of AP is taking precautionary steps to tackle this problem and is implementing the Marine Fisheries Regulation Act as part of its conservation measures. The state observes a closed fishing season from April-May during which period breeding and replenishment occur. There is also a restriction on mesh size to help young fish escape from the cod end, thereby replenishing the fish stock.

The Department of Fisheries has recently taken up the protection of sea turtles. Olive ridley turtles (*Lepidochelys olivacea*) are endangered, and protected under Schedule 1 of the Indian Wild Life (Protection) Act, 1972. There is incidental mortality of olive ridleys in trawl nets, particularly along the northern AP coast. The State Institute of Fisheries Technology (SIFT), Kakinada, which is a training institute in the Department of Fisheries, AP launched a programme in August 2001 (with the support of the Wildlife Institute of India, Dehradun) to prevent the incidental mortality of sea turtles in trawl nets along the coast of AP. The following were the main tasks to be undertaken by SIFT, Kakinada:

- To conduct a two day workshop
- To demonstrate the operation of TED in AP
- To train & encourage fishermen to use TEDs
- To educate fishers on sea turtle conservation
- To serve as a state-wide information centre on turtle conservation

As part of this programme, SIFT, Kakinada has conducted awareness camps, surveys, workshops, and TED demonstrations in different coastal districts of Andhra Pradesh.

Awareness camps

A pre-nesting awareness camp was held during October & November 2001 in coastal districts to communicate the need for conserving sea turtles. In the awareness camps, the faculty of SIFT, Kakinada emphasized the necessity for the use of TEDs. It was also explained that the Government had issued orders to use TED in trawl nets. The fabrication, functioning and assembling of TED were demonstrated.

Table 1: Awareness camps, 2001 – 02

District	No of villages	No. of Participants
Srikakulam	7	525
Vizianagaram	3	340
Visakhapatnam	5	615
East Godavari	7	720