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A SURVEY OF MARINE TURTLE BYCATCH AND FISHERFOLK ATTITUDE AT KALPITIYA, SRI LANKA

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Bycatch is a major threat to all five species of marine turtles that nest and/or forage in Sri Lankan territories (Ekanayake *et al.*, 2015). Fishing communities on the north-west coast of Sri Lanka depend on seasonal, artisanal gill net fisheries targeting pelagic shoaling fish. Previous studies have revealed that these fisheries experience unwanted and expensive interactions with olive ridley turtles (Kapurusinghe & Cooray, 2002; Rajakaruna *et al.*, 2009). The turtles actively seek and feed from gill nets containing captured fish, but in the process often become entangled, causing additional damage with each entanglement. Once turtles are entangled they may drown, but are more often hauled aboard fishing vessels alive and extremely aggressive. In response, fishers either beat the turtles' heads until they are rendered unconscious, or hack off the turtles' flippers to make disentanglement easier. The turtles are then either discarded at sea, or brought back to shore for illegal processing for their meat for local consumption. Harming and killing the turtles, or possessing their body parts, is prohibited under the 1972 Fauna and Flora Protection Ordinance of Sri Lanka (FFPO, 1972; amendment 1993 and

2009). Through these unwanted turtle interactions, fishing families are therefore compromised through the significant costs incurred in repairing damaged gear, as well as at risk of illegal activity under national legislation. Marine turtles are also endangered animals and play a key role as coastal biodiversity. Therefore, it is necessary to reduce unwanted interaction between fisher folk and marine turtles.

The overall objective of the study summarized in this report was to reduce turtle bycatch and mortality due to interactions with fishers and fishing gear, and promote marine turtle conservation among fishing communities in the Gulf of Mannar, off the Northwestern Province (NWP) of Sri Lanka. The activities described below took place between August 2014 and July 2015.

1. A beach survey was conducted along the coast from Chilaw to Kalpitya, to count both the number of dead turtles washed ashore and any remains of turtles killed for consumption, in order to assess the geographic range and frequency of turtle bycatch. Based on initial results, the

survey was then extended further south from Kalpitiya to Palakudawa, along the lagoon and some small islands in the lagoon, to search for any remains of turtles killed for consumption. During the beach survey, 21 entire turtle carcasses and 26 carapaces were counted. Separation of the 26 carapaces from the plastron indicated that the turtle meat was taken for consumption.

2. An attitudinal survey was conducted among 509 fishers from Chilaw to Kalpitiya and also along the lagoon to assess the attitudes of the fishing community towards bycatch reduction and conservation of marine turtles. The survey data confirmed that marine turtle bycatch occurs at a considerable level. More than 50% of participants reported encountering turtles during their fishing activities, ranging from 1-2 turtles per day up to 20 per day. Furthermore, it was confirmed that people still consume the meat of turtle bycatch. However, the attitudinal survey indicated that fishermen have a fair understanding about marine turtles and coastal biodiversity conservation.

3. Awareness programmes for school children and fisher folk were held in the Kalpitiya area. The 36 programmes involved ~3,500 students and 1,200 adults from the coastal fishing communities. In addition to improving participants knowledge about the importance of coastal biodiversity and its conservation, the programme also aimed to increase their capability for environmental conservation and sustainable fisheries. For example, we explained how to release turtle bycatch safely back to the sea.

We expect to see immediate positive outcomes from the project. Two months after conducting a programme, a chairman of a local fisheries society reported that no members of his society had killed turtles along the Puttlam lagoon this year, despite it being a common practice each

June- August when olive ridley turtles move into the lagoon area. I have also recently visited the site and small island in the lagoon, where turtle carapaces are normally found, and did not find any new turtle shells.

Conservation materials such as posters were distributed among fishers in these societies, and are often displayed in their homes. This helps people remember the awareness programme and our message about sea turtle and coastal biodiversity conservation. Furthermore, school children from the fishing villages will potentially change their attitude towards conservation of sea turtles and coastal biodiversity when they become fishermen. Children in this area often begin fishing at the age of 16 years or younger. So the effect will should become more apparent in the near future.

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