

Dolphin-human interactions, Chilika

Coralie D’Lima is researching Irrawaddy dolphin-human interactions at Chilika lagoon, Orissa, India in an effort to safeguard the dolphin population.

Location: Chilika lagoon, Orissa, India

Species: Irrawaddy dolphin (*Orcaella brevirostris*)

Researcher: Coralie D’Lima

The Irrawaddy dolphin inhabits inshore coastal, freshwater isolated and semi-isolated habitats in south and south-east Asia, where it frequently competes with humans for space and resources. It is globally classified as ‘Data Deficient’ by IUCN (2007) standards and five of the seven known subpopulations worldwide are listed as “Critically Endangered”. This represents almost half of all the subpopulations of cetaceans which are “Critically Endangered” worldwide. Fisheries by-catch and tourism related mortality are the two main factors which serve as direct human threats on the Irrawaddy dolphin. They are also the two main platforms on which the dolphins and humans interact.

Despite the negative interaction with humans, the Irrawaddy dolphin has developed a seemingly mutualistic relationship with fishing communities in the form of co-operative fishing. Detailed reports of this behaviour have been published for the Irrawaddy dolphin population in Myanmar. At Chilika lagoon, presumed co-operation is seen with respect to various types of fishing techniques. Our attitudinal surveys indicate that traditional fishers see the Irrawaddy dolphin as linked inextricably with their fishing activities, and have a deep mythic and cultural link with the animal. Fishers talk of a time when they could call out to the dolphins, to drive fish into their nets. These reports are not unlike other well established co-operative fishing interactions known to occur between fishers and other species of dolphins. The importance of this mutualism to the behaviour, life and survival of the Irrawaddy dolphin at Chilika lagoon however, remains unclear. Similarly, the economic significance of co-operative fishing is also unknown.

At Chilika, the Irrawaddy dolphin is the flagship species and serves as an important alternative source of income for the locals through dolphin tourism. However, boat based tourism can also impact dolphin behaviour and cause accidental deaths of these animals. Thus, a deeper understanding of the impact of tourism on dolphins is required to allow for the proper conservation and management of the Chilika subpopulation.

Finally, a continuous monitoring of the population status and vital rates, with a focus on reasons for human-related mortality of dolphins would indicate whether the interactions with humans are biologically



Children from Shimla school learn about the dolphins that inhabit Chilika lagoon. Educational outreach is an important aspect of many field projects.

sustainable. It would also allow for a comparison of population estimates from previous work conducted by Dipani Sutaria, in addition to estimates from

“At Chilika, the Irrawaddy dolphin is the flagship species”

photo-identification data collected this year (personal, ongoing work).

Background

The study herein will therefore focus on human-Irrawaddy dolphin interaction with special focus on how foraging behaviour is affected by fishing and tourism at Chilika lagoon. This will allow for an expansion and assessment of the effectiveness of currently used management strategies.

Project aims (short-term)

- To continue photo-ID, in order to refine population estimates

- To study trends in dolphin population dynamics
- To study dolphin behaviour, particularly co-operative foraging
- To analyse the impact of tourist boats on dolphin behaviour
- To analyse attitudes and perceptions of the fishers and tourist boat owners towards the Irrawaddy dolphin and its conservation
- Quantification of human induced threats
- To conduct workshops/educational sessions (based on scientific knowledge) in order to educate local people, and enable/facilitate them to participate in dolphin conservation

Project aims (long-term)

- Projection of the dolphin population with the help of a simulation model, a careful analysis of the efficacy of currently used management strategies as well as potential alternative management scenarios
- Expansion of the current management plan to include alternative management scenarios (as tested above), in consultation with government, scientific, local and international stakeholders
- Implementation of revised management plan with the help of all stakeholders