

Irrawaddy dolphin - India

WDCS funds vital research projects around the world. **Dipani Sutaria** talks about her work with Irrawaddy dolphins in the Chilika Lagoon, India.

Location: - Chilika Lagoon, Orissa, India
Species: - Irrawaddy dolphin
Researcher: - Dipani Sutaria

Chilika, designated a Ramsar site for its rich biodiversity, is a wetland of international importance for migratory birds and also home to the only known population of Irrawaddy dolphins in India. The Chilika Development Authority, reports more than 225 fish species from Chilika along with a variety of aquatic and non aquatic flora and fauna and more than 150,000 fisher folk depend on fisheries from Chilika for their main source of livelihood. The lagoon is not a designated protected area or a sanctuary but during the months of October to February the Nalabana Island, becomes a sanctuary for migratory birds and fishing is not allowed here.

The Irrawaddy dolphin population in Chilika is physically isolated from the closest known coastal population found in the Sunderbans of West Bengal. The primary cause of mortality for this population of dolphins is floating gill nets and hook line fisheries in combination with decreasing habitat. Secondary causes of concern are boat strikes from increasing unmanaged tourism activities. The dolphins are considered by many to be a blessing from God and more recently also provide income through dolphin watching tours. They are culturally and economically important to the local community, but still face the combined threats of declining habitat quality, and direct disturbance from increasing human disturbance. These are threats that are universal to most endangered local animal populations and if we succeed in initiating a science based community movement to conserve the dolphins and Chilika, it will provide insight into positive action in conservation processes.

This project started in 2004, since then we have checked for the presence of a coastal population and then focused on the Chilika population of *O. brevirostris*. To date, we have carried out 18 boat



Researchers track a group of three Irrawaddy dolphins through the maze of fishing nets that criss-cross the near-shore of Chilika Lagoon.

based surveys and 446 interviews covering 51 villages in Chilika. The last part of the project involves presenting the work to the local community and decision makers and obtaining their input towards an assessment. Recently, the Orissa State Government, released ecotourism plans for the future without approaching the local community or experts in the

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field. We wish to become part of this process by involving the local fishing and non fishing community in the economic development of the region.

We plan to carry out two more months of field work this season. An increased effort to involve the community as a unit towards conservation in Chilika; getting involved in future ecotourism plans while being aware of the socio political processes will be the core of the work this year. Two boat based photo identification surveys along with in-depth data collection focusing on bottom substrate in the lagoon will also be carried out.

Objectives

- Dolphin Component -Population size, Movement

patterns, Habitat use, Threat

- Human Component -Socio-economic importance of dolphins and involvement of fisher community in the policy making process

Methods

- GIS and Mark recapture techniques using photo-identification
- Interviews

The Team

Principal investigator: Dipani Sutaria

Field Assistant 1: Loba Fakir (daughter of a fisherman-village Balbhadrapura)

Field Assistant 2: Raja Mohanty (son of a crab trader-village Balbhadrapura)

Boat driver: Jagannath Das (boat mechanic –village Barkul)

My field assistants are from the village Balbhadrapura from Chilika. They have been trained by me in boat survey techniques and interview survey work. This year I will motivate them to form a core Chilika conservation group.

Results

- 68 dolphins photo-catalogued
- No movement of dolphins out of the lagoon
- Dolphin distribution in Figure 1 [Depth 0.8m - 4m;Salinity 0 - 30 ppt]
- Sighting Encounter higher throughout the year in Satpada
- Four Tourist Associations in Satpada (25km2)/ 360 9HP long tail engine boats/~500 fishing families involved, still increasing...



The Irrawaddy dolphins here are endangered and fatalities are sadly still common.

- 75-90% decrease in fishing income with a 100% increase in tourism in the past five years in Satpada
- Primary threat-Hook Lines, Seine nets, Mono-Multifilament (5-16cm mesh) nets
- Secondary threat- Unmanaged boat traffic

Conservation Management Issues

- Uncontrolled Tourist boat traffic
- Low priority to dolphin watching guidelines
- High density of Gill netting in north, central and south
- Conglomerate of administrative services at decision making level [Dept's-Fisheries, Revenue, Water, Development, Forest-Wildlife]
- The State Wildlife Department has little jurisdiction over the 'water'
- Economic importance of fishing; No optional source of income
- Ongoing conflicts between shrimp culture mafia and traditional fishermen
- Low importance of sustainable fisheries knowledge
- Complicated socio-political forces at the village level

Ongoing Conservation Initiatives

- Mapping dolphin distribution and movement in relation to fisheries and tourism using GIS
- Fines on Gill and Seine Netting in Satpada region (Orissa Marine Fisheries regulations Act)
- Fines on tourist boats observed chasing dolphins
- Ongoing training in dolphin watching guidelines by Chilika Development Authority, funded by WDCS
- Providing booklets regarding ongoing projects and pamphlets about sustainable fisheries ■

For further information on WDCS funded projects on Irawaddy dolphins in Chilika Lagoon, India, please see Coralie d'Lima's 'Population projection and management of Oracella brevirostris in Chilika lagoon'



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Irawaddy dolphins can be a challenge to research as they surface infrequently and only for a very short period of time.