

Annual Population Estimation of Irrawaddy of dolphins in Chilika lagoon - 2013

Chilika lagoon is the natural abode of highly endangered Irrawaddy dolphins (*Orcaella brevirostris*). The present distribution range of this species is only in Asia i.e. from Chilika to Indonesia within South East Asia and South Asia. The total population of these animals in the world is estimated to be less than 7500 (highest 6400 reported from Bangladesh) and the population in Chilika is considered to be the highest single lagoonal population.

Chilika Development Authority has initiated many conservation measures for the protection and conservation of Irrawaddy dolphins in Chilika in close coordination with Wildlife wing of State Forest Department such as: (1) Survey and identification of dolphin habitat in the lagoon for proper management, (2) Development of dolphin watching protocol for safe watching of dolphins, (3) Sensitization and training of tourist boat operators, (4) Widening and deepening of Magarmukh channel for free movement of dolphins from Outer channel to the main lagoon, (5) Acoustic survey of underwater behavior of dolphins through deployment of hydro phones in collaboration with Tokyo University.

The annual population estimation survey of Irrawaddy dolphins in Chilika lagoon was conducted on 7th & 8th January 2013 but lack of visibility due to bad weather and higher Beaufort (due to high velocity of wind) the survey was suspended. It was again carried out on 18th & 19th January 2013. The annual population estimation survey of Irrawaddy dolphins in Chilika lagoon was conducted following line Transect method. The total number of survey transect were 18 in numbers. The transect survey method is followed world wide for population of aquatic mammals. The sampling of dolphin/group of dolphin in each transect was carried out by a team of three experienced persons. Each team was equipped with binoculars, GPS, Rangefinder and data recording sheets etc. In total, 130 participants from different organizations such as Scientists from wildlife wing, Honorary Wildlife Wardens, Chilika Wildlife Division, officials from WWF- India New Delhi & WWF-India state office, representative from NGOs, BNHS, Mumbai, Feedback Bhubaneswar, Researchers & academicians from the University and colleges, Wildlife Society of Odisha, Geovitech, Bhubaneswar, RPRC, Electronika Lab, SPMU, ICZM Project, Odisha, Researchers from the Office of Chief Wildlife Warden, Odisha, Peoples for Animals Chilika Development Authority, Officials from Animal Resource Development Department,

Local NGOs, Members of local Motor Boat Associations etc. participated in the census operation this year.

10 nos. of teams were deployed in the main lagoon (Central Sector and Southern sector) and 8 nos. of teams were deployed in the Outer channel and Northern Sector of the lagoon to cover 18 transects. Briefing to the participants was held at Wetland Research & Training Center, Chandraput and Visitor Centre, Satapada in the afternoon of 18th January, 2013. The survey was carried out from 6.30AM to 4.00PM on 19th January, 2013 in the dolphin habitat of the Chilika lagoon. This year the local Motorboat Associations also cooperated in the census and did not operate the boats during the period of census on 19th January 2013 till completion of the census in the Outer channel and Northern sector. The tourist boats started operating only after the census was over. There has been increase in the number of dolphin as compared to the estimated figure of last year. This year Irrawaddy dolphin population of Chilika lagoon is estimated to be 152 out of which 118 are adults, 16 sub- adults and 18-calves & neonates. As per the population estimation carried out in 2013 there have been a increase of population by 4.6% in comparison to last year. The number of calves and neonates observed during the current year's survey is 18.

The significant observation of 2013 population estimation are the sighting of dolphins in Northern sector during the survey. 8 numbers of dolphins were sighted from Northern sector which is an indication of the expansion of their habitat. Another significant observation is the increase in the number of calves and neonates, which is 38.9% increase over the last year's figure.

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Sector	Adults	Sub-adults	Calves/Neonate	Total
Central Sector	23	5	7	35
Southern Sector	25	4	6	35
Outer channel	63	6	5	74
Northern Sector	7	1	-	8
Total	118	16	18	152

For your kind appreciation the figure of population estimation for last ten years is presented below.

ANNUAL IRRAWADDY DOLPHIN POPULATION ESTIMATION SURVEY 2003-2013

Year	Adult	Sub-adult	Calf	Total
2003	70	11	8	89
2004	103	10	11	124
2005	102	8	1	111
2006	119	7	5	131
2007	115	15	5	135
2008	115	17	6	138
2009	111	18	17	146
2010	129	14	15	158
2011	131	21	4	156
2012	118	16	11	145
2013	118	16	18	152

CHIEF EXECUTIVE
CHILIKA DEVELOPMENT AUTHORITY