



After tigers, it's the turn of river dolphins to become endangered. The plummeting numbers have been blamed on poaching, pollution and the fishing nets in which they get entangled, says Siba Mohanty

who's killing our dolphins?

ganga's mount

Who are they?

Dolphins are marine mammals that are closely related to whales and porpoises. There are almost forty species, varying in size from 1.2 metres and 40 kg up to 9.5 m and 10 tonnes. They evolved about 10 million years ago. They are considered to be amongst the most intelligent of animals, and their friendly appearance and playful attitude have made them popular in human culture. The name 'dolphin' derives from the ancient Greek word *delphis*, related to *delphys*, meaning womb. So the name can be interpreted as 'a fish with a womb'.

Mating: Happens belly to belly and though many species engage in lengthy foreplay, the actual act is usually only brief, but may be repeated several times within a short timespan. Dolphins are known to have sex for reasons other than reproduction, sometimes also engaging in acts of a homosexual nature. Occasionally, they will also show sexual behaviour towards other animals, including humans.

Myth: Common in Greek mythology, a ship spotting dolphins riding in their wake considered them a good omen for a smooth voyage. In Hindu mythology, the Ganges river dolphin is associated with Ganga, the deity of the river.

Books: Dolphins are also common in contemporary literature, especially science-fiction novels: *Johnny Mnemonic* by William Gibson; *The Dragonriders of Pern* series by Anne McCaffrey; *In the Known Space Universe* by Larry Niven; *The Hitchhiker's Guide to the Galaxy*; David Brin's *Uplift* series; Robert Anton Wilson's *Illuminatus* Trilogy; *The Music of Dolphins* by Karen Hesse; *Into the Deep* by Ken Grimwood

When the last tiger count showed there was a drastic fall in the number of the big cats, it sparked fears of the animal being wiped out from its habitats. Now, the same fears are being raised about the Ganges river dolphins as, according to a recent survey, their number has come down drastically over the last couple of years.

Considered one of the most intelligent creatures and top predators of the riverine ecosystems, the Ganges river dolphins are the only freshwater species available in India other than the facultative Irrawaddy ones. Once found in abundance along the Ganges-Brahmaputra belt, these creatures are now in danger of becoming extinct with poaching, pollution, dams, mining and deforestation.

Ironically, the Ganges river dolphins (*Platanista gangetica*) enjoy high levels of protection, both in India and abroad. The International Union for Conservation of Nature (IUCN) has placed it on its Red List under the endangered category, while it is a Schedule-I animal under the Wildlife Protection Act, 1972.

However, the first-ever survey of the river dolphins in India, which covered 5,244 km of the Ganges and the Brahmaputra across Assam, Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand, Rajasthan and West Bengal, found less than 1,800 of these mammals in the entire belt. The survey, conducted by the World Wildlife Fund (WWF) during 2001-05, also found them confined to 34 stretches of the two rivers and their 16 tributaries.

While some of habitats of the dolphins offer hope, others give cause for concern. Along the stretch of the Ganges between Allahabad and Ballia/Chapra (in Bihar), about 300 of these Susus (as they are popularly known because of the peculiar noise they make) were sighted. Between Patna and Farakka, their population was esti-

seven facts

Dolphins can swim and sleep at the same time; the brain is awake for eight hours. The left side then sleeps for eight hours. When it wakes up, the right side sleeps for eight hours.

Dolphins are capable of imitation and memorisation.

The common dolphin averages 2.5 m in length and 74 kg in weight.

A dolphin can detect underwater sounds from 15 miles away.

Dolphins jump out of the water to conserve energy.

Dolphins have belly buttons

Dolphins are bald — their skin contains no hair follicles, sebaceous or sweat glands

mated at 224, while in Ghagra river — between the Kailashpuri barrage and Deurighat in Uttar Pradesh — their numbers stood at 295. The Yamuna also showed a decent population of 104 in the stretch between Chambal region and Allahabad. The Chambal river in Madhya Pradesh has about 90 dolphins.

Sandeep K Behera, coordinator (freshwater species), WWF-India, who is also known as the Dolphin Man, warns that river dolphins are fast depleting in Assam, mainly in the Brahmaputra and Kuls, while there is a similar trend in the Son, Kosi and Ganges rivers in Bihar.

There are only 190 dolphins in six stretches of the Brahmaputra in Assam and these face the threat of poaching. The survey team also could not find even one dolphin between the Madhya Ganga barrage at Bijour and the Bimgoda barrage near Haridwar. This is a 100-km loss in the mammal's distribution range. The situation in the Yamuna, above the confluence of the Chambal river — where dolphins were historically sighted around the year — is similar.

Binn, a migrant fishing community of Bihar, is also responsible for the large-scale hunting of dolphins, whose oil is used as bait for catching fish and to cure rheumatism, burns and asthma.

The decline in dolphin populations is also attributed to pollution, particularly in the Ganges, because of short-sighted and non-relenting development policies. The basin of this river is home to about 450 million people at an average of 550 persons per sq km. In the deltaic zone, the number virtually doubles to 900 per sq km. "Just imagine the kind of pressure this puts on the river," says Behera.

There are about 30 cities, 70 towns and several thousand villages along the banks of the Ganges. "Over 1.3 billion litres of sewage generated by these human habitations goes into the

river, along with thousands of animal carcasses. Add another 260 million litres of industrial wastewater and 9,000 tonnes of pesticides every year. Six million tonnes of chemical fertilisers are also released into the river," says Behera.

As if the population load were not bad enough, the fragmentation of dolphin habitats has added to the threat. "The Ganges river system is interrupted in many places by numerous water development projects. This not only restricts dolphins' mobility but also fragments their habitats and thus, results in their population getting genetically isolated," adds Behera.

The IUCN has cautioned that if the ambitious Ganga-Brahmaputra interlinking canal and the subsequent dam projects are complete by 2016, the impact would be disastrous. "In that case, the population of river dolphins may reduce by 50 per cent," says an IUCN official.

The high rate of siltation, low flow of water and effluent discharge have only worsened the quality of habitats. The Chambal river in Madhya Pradesh and Rajasthan faces the brunt of excessive sand excavation and stone and lime quarrying, leading to heavy siltation.

The Irrawaddy dolphins (*Orcaella berrinrostris*), which are a little smaller than the Ganges river ones, are also facing such a situation. They have a bulging forehead and a shorter beak and are found only in South and South-East Asian countries. In India, they are found only in Orissa's Chilika lagoon, which boasts of the world's

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single largest population, estimated at about 135. These dolphins can live in estuarine, marine and freshwater conditions.

The Chilika Development Authority will carry out a genetic study on these endangered mammals. While these dolphins face a serious threat from growing eco-tourism in the brackish water lagoon, they have a friend in the local fishermen. They are attracted by noise that the fishermen create to attract them near their boats as the dolphins attract fish. However, the increasing use of mechanised boats, gillnets and traps are killing them. In five years, about 45 of them have been found dead, prompting CDA to adopt a Dolphin Protocol in Chilika.

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