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1. Why the first-ever satellite tagging of a Ganges dolphin is significant**Introduction**

The first ever Ganges river dolphin (*Platanista gangetica*) was tagged in Assam recently, in what is being deemed as a historic milestone for Project Dolphin, the movement aimed towards conserving India's National Aquatic Animal.

The tagging exercise will help in understanding the species' seasonal and migratory patterns, range, distribution, and habitat utilisation, particularly in fragmented or disturbed river systems, according to the press release by the Ministry of Environment, Forest and Climate Change.

Ganges river dolphin

There are some 40 extant species across multiple families that are referred to as dolphins. The family Platanistidae comprises two extant species of Indian river dolphins — the Indus river dolphin and the Ganges river dolphin, both of which were considered to be the same species till the 1970s.

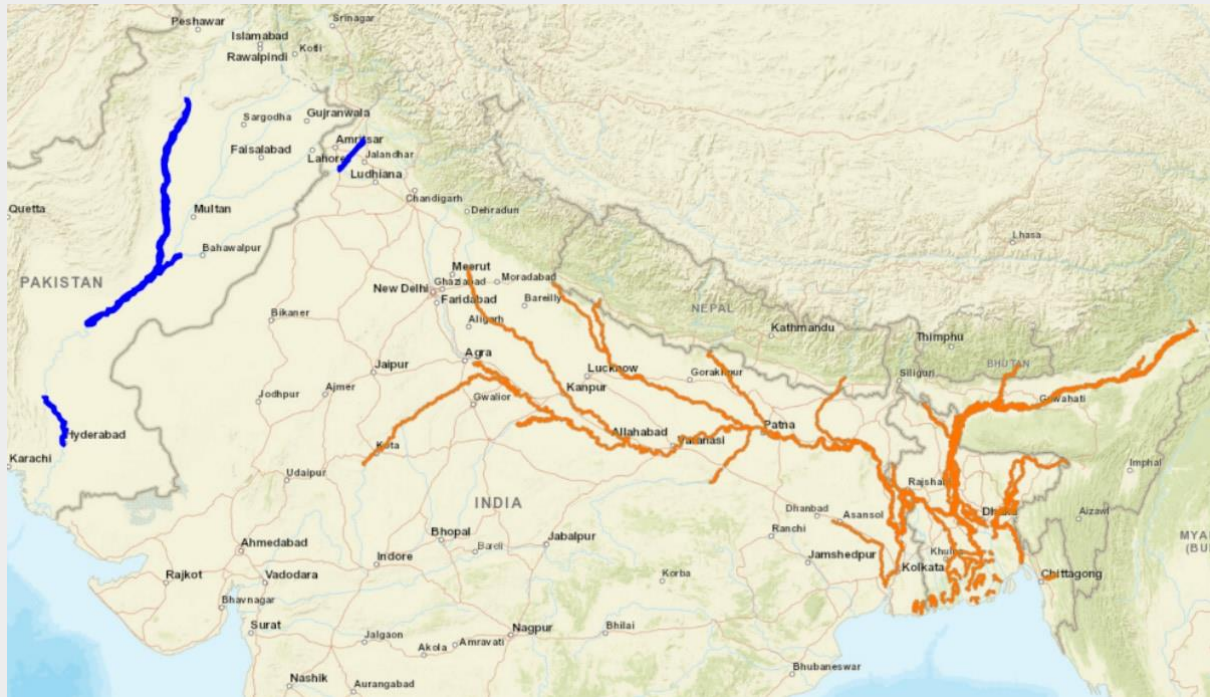
The Conservation Action Plan for the Ganges River Dolphin, 2010-2020, describes male Gangetic dolphins as being about 2-2.2 metres long, and females as a little longer at 2.4-2.6 m. An adult dolphin could weigh between 70 kg and 90 kg. They feed on several species of fishes, invertebrates, etc.

Ganges river dolphins are frequently found alone or in small groups, and are known to be extremely shy around boats, making it hard for scientists to observe them.

They go by a number of local names across their range including susu, soon, soans, or soos in Hindi, shushuk in Bengali, hiho or hihu in Assamese, and bhagirath, shus or suongsu in Nepali. Culturally, the species is often associated with Ganga and is occasionally depicted as the vahana (vehicle) of Goddess Ganga.

Behind declining population

The Ganges river dolphin was once found across the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Bangladesh and India, and the Sapta Koshi and Karnali Rivers in Nepal. (See Map). There was a time when Gangetic dolphins could be spotted as high upstream in the Ganges and its tributaries as the Himalayan foothills.



Distribution of Indus (blue) and Ganges (orange) river dolphins.

However, according to the World Wildlife Foundation (WWF) the species is now extinct in most of its original distribution ranges, with only 3,500 to 5,000 individuals alive today. Both the Indus and Ganges dolphins have been listed as 'Endangered' in the International Union for Conservation of Nature (IUCN) Red List since the 1990s. This classification indicates that the species has "a very high risk of becoming extinct in the wild".

Behind the species' declining population and endangered status are a number of factors. These include:

- Construction of dams and barrages in rivers, which restrict these dolphins' movement and migration patterns, food supply, and breeding behaviours;
- Riverine pollution, which makes these dolphins' habitats unlivable for the species and others it depends on for food;
- Poaching for these dolphins' oily blubber, or accidental entanglement in fishing nets; and
- Habitat shrinking, as rivers dry up, and become less navigable.

Attempts at conservation

This is why, since the 1980s, various efforts have been made to conserve the elusive species, and restore its population to pre-20th century levels. But so far, these efforts have not borne much fruit.

1. WILDLIFE ACT PROTECTION

After the launch of Ganga Action Plan in 1985, the government in 1986 included Gangetic dolphins in the First Schedule of the Indian Wildlife (Protection) Act, 1972. This was aimed at checking hunting and providing conservation facilities such as wildlife sanctuaries for the species. For instance, the Vikramshila Ganges Dolphin Sanctuary was established in Bihar under this Act.

2. CONSERVATION PLAN

The government prepared The Conservation Action Plan for the Ganges River Dolphin 2010-2020, which "identified threats to Gangetic Dolphins and impact of river traffic, irrigation canals and depletion of prey-base on Dolphins populations". The idea was to holistically identify factors that were leading to the species population declining, and address these issues.

NATIONAL AQUATIC ANIMAL: In 2009, then Prime Minister Manmohan Singh, declared the Gangetic river dolphin as the National Aquatic Animal of India, in what was an attempt to boost awareness of the species and community participation in its conservation.

3. PROJECT DOLPHIN

This is the latest effort to aid the species' conservation, launched by Prime Minister Narendra Modi in 2020. While announcing the project, Modi said that this project will be on the lines of Project Tiger, which has been successful in reviving the tiger population in the country.

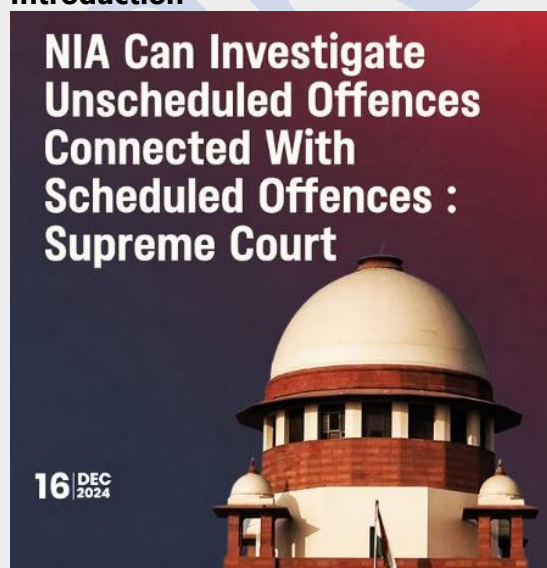
The latest dolphin tagging exercise is among the many initiatives made under the project, which according to its website "involves a systematic status monitoring of the target species and their potential threats, in order to develop and implement a conservation action plan." The lightweight tags are designed to emit signals that will be picked up by satellites when these species surface, which "will contribute to evidence-based conservation strategies that are urgently needed for this species," Virendra R Tiwari, director of the Wildlife Institute of India said.

Notably, Project Dolphin views the Gangetic river dolphin as an "umbrella species" whose conservation "will contribute to the wellbeing of associated habitat and biodiversity, including humans".

Relevance: GS Prelims; Environment

2. Supreme Court expands the reach of NIA's powers: What was the case?

Introduction



The Supreme Court recently expanded the National Investigation Agency's (NIA's) powers of investigation.

A Bench of Justices B V Nagarathna and N K Singh held that the NIA has the power to investigate offences "connected" to the main Scheduled Offence that is already under investigation — even if the connected offence was committed by a separate person who is not an accused in the Scheduled Offence.

The National Investigation Agency Act, 2008 (NIA Act) allows the agency to investigate certain Scheduled Offences upon the direction of the

Central Government. The NIA Act includes a list or "Schedule" of laws that contain offences

that the NIA may investigate, including offences under the Unlawful Activities (Prevention) Act, 1967 (UAPA) and the Anti-Hijacking Act, 1982.

Here is why the above case came before the SC, and how the apex court expanded the NIA's powers.

Facts of the case

In January 2020, an FIR was registered by a police Special Task Force in Mohali, Punjab against a man named Sukhbir Singh for the offences related to drug trafficking and illegal arms possession under the Narcotic Drugs and Psychotropic Substances Act, 1985 (NDPS Act). During interrogation, Singh stated that the car he was caught in belonged to one Ankush Vipran Kapoor. When the police arrested Kapoor from his shop, they found heroin, an illegal narcotic drug, at the location. He was granted bail by the Punjab & Haryana High Court in July 2021.

Parallel to this case, Sukhbir Singh has been under investigation in Gujarat since 2018 for allegedly smuggling and distributing 500 kgs of narcotics transported from Pakistan. In June 2020, the Ministry of Home Affairs (MHA) transferred the Gujarat investigation to the NIA. The NIA re-registered the case, and added the offences of conspiracy to raise funds for terrorist acts under Sections 17 and 18 of the UAPA, which are also Scheduled Offences under the NIA Act. The NIA then took custody of Sukhbir Singh from the Punjab Police after learning about his arrest. Singh once again named Kapoor as someone who was involved in drug smuggling activities.

In May 2023, the NIA moved the Punjab & Haryana HC to cancel the bail granted to Kapoor. The HC agreed, taking note of the 500 kg of heroin recovered in Gujarat and the link to Kapoor, stating that an investigation is required along with custodial interrogation. Kapoor approached the Supreme Court challenging both the bail cancellation order, and the MHA order transferring the investigation to the NIA.

What Kapoor & the Centre argued

Under Section 8 of the NIA Act, "While investigating any Scheduled Offence, the Agency may also investigate any other offence which the accused is alleged to have committed if the offence is connected with the Scheduled Offence". This allows the NIA to investigate non-Scheduled Offences if it can show that there is a "connection" with the Scheduled Offence under investigation.

Before the SC, Kapoor argued that he was not being investigated for a Scheduled Offence under the NIA Act as offences under the NDPS Act are not included. He also argued that there was no link between the petitioner and the alleged crime committed in Gujarat, so the offences registered under the UAPA (which are Scheduled Offences) could not be invoked against him. The Centre on the other hand, argued that the ongoing investigation into the Scheduled Offence under the UAPA was connected to the crime alleged against Kapoor in Gujarat. It argued that Kapoor is a part of a terror network smuggling drugs into Gujarat, and transporting them to Punjab for purification and further distribution. Further, it claimed that the link between Kapoor and Sukhbir Singh shows that Kapoor is also connected to the NIA's investigation.

Supreme Court's verdict

The court found no reason to interfere with either the bail cancellation order, nor the MHA's order transferring the Gujarat investigation to the NIA.

The court acknowledged that the plain-meaning phrase "the accused" used in Section 8 of the NIA Act indicates that the NIA can only investigate connected offences committed by the particular accused under investigation — such as Sukhbir Singh in Gujarat. However, the court held that Section 8 must be given a "purposive and meaningful interpretation" that allows the NIA to investigate connected offences, even if a different person committed it.

The court clarified that "the nexus or connection between any other offence and the Scheduled Offence is of critical importance", and that this connection must be present before the NIA can investigate any other offence committed by an accused in connection with the Scheduled Offence. In the present case, the court held that "there is a connection, nexus and a link" between the Scheduled Offences investigated by the NIA under Sections 17/18 of the UAPA, and the offences alleged against the Kapoor under the NDPS Act.

Kerala HC on "connection" with Scheduled offence

The Kerala High Court in December 2023 had expanded on how this "connection" with a Scheduled Offence can be understood in a case involving the murder of an RSS and BJP activist. The police concluded that members of the Popular Front of India (before it was declared an unlawful association under the UAPA in September 28, 2022) had conspired to murder the activist.

The investigation continued even after this finding, and it was eventually transferred to the NIA on September 16, 2022, based on allegations that "office bearers and activists of PFI and its affiliates in Kerala have conspired to instigate communal violence and radicalise its cadres to commit terrorist acts in the State and various other parts of the country", according to the judgment. In December, the NIA filed a report claiming that the murder was a part of a larger conspiracy hatched by senior PFI leaders and levied charges under the UAPA.

The petitioners, the PFI members accused in the murder case, argued that the initial murder case could not have been investigated by the NIA as there was no connection between the murder and the Scheduled Offence under the UAPA. The HC held however, that this connection must be considered with a "wider perspective", and stated that the PFI leaders had been named as accused persons in both the murder case and the Scheduled Offence under the UAPA and the two have to be considered connected offences.

Relevance: GS Prelims & Mains Paper II; Governance

3. Mumbai remains under smog blanket: Factors behind city's deteriorating air

Overall view

For the third consecutive day, Mumbai was shrouded in a blanket of smog with the overall air quality index (AQI) touching 187.

Amid the city, as well as the extended metropolitan region, engulfed in smog for the past few days, let's have a look at the factors contributing to the deteriorating air quality conditions.



Low humidity, high vertical wind speed

Currently, Mumbai is experiencing dry weather, owing to low moisture content, but with temperature falling, as evidenced by little to no sweating among citizens.

This dry or low humidity level coupled with high speed of horizontal as well as vertical uplift is amongst a crucial factor that has resulted in hazy skies in the city without significant elevation in ground level AQI.

Typically, when Mumbai's humidity levels are high, there are small droplets of water vapour in the air on which tiny Particulate Matters (PM) piggyback and remain hanging in the air to deteriorate the air quality.

However, right now, the moisture is low resulting in low humidity in the city. Along with this, not only the horizontal winds but also the vertical wind speed — which is also known as eddy diffusion — is very high. It is an unusual situation. The combination of these factors including the high vertical speed, means that the layer of pollution is pushed higher up from the surface. The layer of pollutant cloud keeps getting pushed higher until it reaches the inversion layer which does not allow it to go further up. So the pollution cloud hangs in the atmosphere just below the inversion layer in the sky, making it look hazy from the ground.

Emissions from vehicles, construction sites, industries etc.

Besides the meteorological factors, emissions from open burning, construction sites, vehicles etc further affect Mumbai's smog-laden air shed as the pollutants from these sources remain trapped in the atmosphere for a longer duration, during winters.

Apart from traditional sources like emissions from industries and open fire burnings, increased construction projects, suspended particulate matters from tyres of vehicles going to and from construction sites, emissions from vehicles have emerged as the major polluting factors. Even small scale sources like bakeries can add up to contribute to the deterioration.

Relevance: GS Prelims & Mains Paper III; Environment