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MAGAZINE NOTES

The Ganges River Dolphins: One of a Kind!

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ENVIRONMENT

SCIENCE & TECH

GS3

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The Ganges River Dolphins: One of a Kind!

 **Science Reporter** Chapter 3 · 3 min read ·

Source: Science Reporter, Vol. 63, No. 03, March 2026 | CSIR-NISCPR

The Ganges River Dolphin (*Platanista gangetica*) — India’s **National Aquatic Animal** — is one of only four freshwater dolphin species in the world. Once abundant across the subcontinent’s river networks, it now faces existential threats. A 2025 population census brings both hope and urgency.

TAXONOMIC AND BIOLOGICAL PROFILE

PARAMETER	DETAIL
Scientific name	<i>Platanista gangetica</i>
Common names	South Asian River Dolphin; Susu (Ganga); Bhulan (Indus)
Family	Platanistidae
Subspecies	<i>P. g. gangetica</i> (Ganges-Brahmaputra); <i>P. g. minor</i> (Indus — Pakistan)
National status	Schedule I, Wildlife (Protection) Act, 1972
IUCN status	Endangered
CITES	Appendix I (no commercial trade permitted)
CMS	Appendix II (conservation cooperation needed)
National Aquatic Animal	Declared 2009

POPULATION CENSUS 2025: KEY NUMBERS

A comprehensive population survey coordinated by the Wildlife Institute of India (WII) and Ministry of Environment, Forest & Climate Change (MoEFCC) assessed the full range:

RIVER SYSTEM	POPULATION
Mainstream Ganges	3,275
Ganges tributaries	2,414
Brahmaputra mainstream	584
Brahmaputra tributaries	51
TOTAL (India)	6,324

This represents an improvement from earlier estimates and suggests that conservation measures are beginning to stabilise populations in some stretches.

UNIQUE BIOLOGY: WHY “ONE OF A KIND”

1. Functional Blindness:

- Ganges Dolphins are effectively **blind** — their eyes lack a crystalline lens
- They navigate entirely through **echolocation** (biosonar) — emitting clicks and interpreting returning echoes
- This makes them highly sensitive to underwater noise pollution (boat motors, sonar)

2. Obligate Freshwater Habitat:

- Unlike marine dolphins, *Platanista* is strictly freshwater — cannot survive in saline or brackish water
- Confined to the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems

3. Indicator Species:

- Acts as a **flagship and umbrella species** for Gangetic ecosystem health
- Presence indicates clean water, healthy fish stocks, and good river flow
- Their decline signals broader river ecosystem degradation

KEY THREATS

THREAT	MECHANISM
Dam construction	Fragmentates habitat; prevents seasonal migration; alters flow regime
Fishing net entanglement	Accidental bycatch — major mortality source
River pollution	Industrial effluents, agricultural runoff, sewage reduce fish prey base
Sand mining	Destroys riverbed habitat; increases siltation
Boat traffic	Propeller injuries; noise disrupts echolocation
Climate change	Altered monsoon patterns; reduced river discharge

PROJECT DOLPHIN (2020–PRESENT)

Announced by PM Narendra Modi on **Independence Day 2020 (August 15)** — modelled on the success of Project Tiger:

COMPONENT	DETAILS
Coverage	Both river dolphins (Gangetic) and marine dolphins (Irrawaddy, Humpback)
Nodal ministry	MoEFCC
Key partners	WII Dehradun, state forest departments, fishing communities
Community role	Dolphin Mitra programme — local fishermen as conservation monitors
Population monitoring	Annual surveys; photo-ID cataloguing; first satellite tagging in Assam (WII, 2025)
Habitat protection	Dolphin Sanctuaries — Vikramshila in Bihar is India's only dedicated dolphin sanctuary

Vikramshila Gangetic Dolphin Sanctuary, Bihar:

- 50 km stretch of Ganges between Sultanganj and Kahalgaon
- Established 1991
- Highest dolphin density in India

UPSC RELEVANCE

GS3 — Environment & Ecology:

- Freshwater biodiversity conservation
- Indicator species and their role in environmental monitoring
- Flagship species vs. umbrella species vs. keystone species distinction
- Project Dolphin as a conservation model (compare with Project Tiger, Project Elephant, Project Snow Leopard)

GS2 — International Relations:

- CITES Appendix I: legal obligations on trade and trafficking
- CMS (Bonn Convention): India's obligations for migratory species — relevant because Gangetic dolphins undertake seasonal migrations within river systems
- Indus Dolphin (*P. g. minor*): conservation co-operation opportunity with Pakistan

Key Distinctions:

- *Platanista gangetica* (Ganges Dolphin, India) ≠ Amazon River Dolphin (*Inia geoffrensis*) ≠ Irrawaddy Dolphin (*Orcaella brevirostris*, found in Chilika Lake and Odisha coast)
- Gangetic Dolphin: **blind** (echolocation only); Irrawaddy Dolphin: has functional eyesight

FACTS CORNER

- Scientific name: *Platanista gangetica* | Family: Platanistidae
- IUCN: Endangered | CITES: Appendix I | Schedule I WPA 1972
- India population (2025): **6,324** (WII census)
- Unique trait: functionally blind — navigates by echolocation
- National Aquatic Animal: since 2009
- Project Dolphin: launched August 15, 2020 (Independence Day)
- Vikramshila Sanctuary (Bihar): India's only dedicated dolphin sanctuary; 50 km Ganges stretch
- First satellite tagging: Assam, 2025 — by WII, MoEFCC



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