

Census of Ganga River Dolphins in India

Introduction

River dolphins are important indicators of freshwater ecosystem health. The **Gangetic dolphin (Platanista gangetica)** is **India's only riverine dolphin** and is found in the **Ganga-Brahmaputra-Meghna** and **Karnaphuli-Sangu** river systems. These dolphins are **endangered**, primarily due to habitat degradation, pollution, and accidental entanglement in fishing nets. To assess their population and aid conservation efforts, the first-ever **Gangetic dolphin census** was conducted over four years, revealing a total of **6,327 dolphins** in the **Ganga and its tributaries**.

1. Key Findings of the Census

- **Total Gangetic Dolphins Counted: 6,327** (Ganga and its tributaries)
- **Total Indus River Dolphins Counted: 3**
- **Distribution of Gangetic Dolphins:**
 - **Ganga Mainstream: 3,275**
 - **Ganga Tributaries: 2,414**
 - **Brahmaputra Mainstream: 584**
 - **Brahmaputra Tributaries: 51**
 - **River Beas: 3**
- **State-wise Dolphin Population:**
 - **Uttar Pradesh - 2,397**
 - **Bihar - 2,220**
 - **West Bengal - 815**
 - **Assam - 635**
 - **Jharkhand - 162**
 - **Rajasthan & Madhya Pradesh - 95**
 - **Punjab - 3**

2. Why Was the Census Conducted?

- River dolphins **grow slowly** and inhabit **threatened ecosystems**.
 - **Major threats:**
 - Accidental entanglement in fishing nets
 - Water pollution and habitat degradation
 - **Project Dolphin (Launched on August 15, 2020):**
 - Aims to **conserve marine and riverine dolphins**.
 - Involves **forest and fisheries departments, fishermen, and local communities**.
 - **Survey Scope:**
 - Covered **58 rivers**.
 - **28 rivers surveyed by boat, 30 rivers surveyed by road**.
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3. How Was the Census Conducted?

- **Challenges in Dolphin Counting:**
 - Dolphins spend most of their time **underwater**, surfacing **only briefly** for air.
 - Unlike land animals, they **do not leave biological samples** (pug marks, DNA traces).
- **Previous Population Estimates:**
 - Late 20th century: **4,000 - 5,000**
 - 2008 Study: **1,800**
 - Recent estimates: **3,500 - 4,500 (considered guesstimates)**
- **Method Used for Census:**
 - **Visual & Acoustic Surveys** were conducted.
 - Two teams on a **boat moving at a constant speed** recorded sightings.
 - **Key Data Collected:**
 - Distance from the boat
 - Whether adults or neonates
 - Whether the same dolphin was sighted multiple times
 - **Acoustic Survey:**
 - Used a **hydrophone (underwater microphone)** to capture dolphin echolocation sounds.
 - **Signal processing** helped identify unique individuals.
 - **Final Count:** Combined **both methods** with **mathematical models** for accuracy.

4. Why Are Both Visual and Acoustic Surveys Necessary?

- **Dolphins are nearly blind** and navigate using **echolocation** (like bats).
- **Visual surveys alone** may miss individuals that surface briefly.
- **Acoustic surveys** allow scientists to **identify dolphins even if they are not seen**.
- **Combining both methods ensures a more accurate population estimate.**

5. Major Threats to River Dolphins

- **Accidental Deaths (4%-5% of Population Per Year)**
 - Dolphins **get entangled in fishing nets** and suffocate as they **cannot surface for air**.
 - **Large-meshed gillnets** (nylon/polythene monofilament) are especially dangerous.
- **Poaching & Opportunistic Killing**
 - Some fishermen **intentionally kill trapped dolphins**.
 - **Dolphin oil** (extracted from blubber) is used as **bait for catfish** (India & Bangladesh).
- **Pollution & Habitat Destruction**
 - **Industrial discharge and agricultural runoff** reduce water quality.
 - **Dams & water diversions** alter river flow, affecting dolphin movement and food supply.
- **Conservation Status**

- **IUCN Red List: Endangered**

6. Conservation Efforts & Recommendations

- **Government Initiatives**
 - **Project Dolphin:** Aims to improve **habitat conservation and community participation**.
 - **Ganga Rejuvenation Plan:** Focuses on **cleaning the river and maintaining ecological flow**.
- **Fishing Regulation & Awareness**
 - Ban on **nylon monofilament nets** in key dolphin habitats.
 - Promoting **dolphin-friendly fishing practices**.
- **Scientific Monitoring & Research**
 - **Regular population assessments** using advanced tracking technologies.
 - Encouraging **community-based conservation** with **local fishermen and riverbank communities**.
- **Public Engagement & Eco-tourism**
 - **Awareness campaigns** to reduce accidental killings.
 - **Sustainable eco-tourism** in dolphin habitats to promote conservation funding.

Conclusion

The first-ever census of Gangetic dolphins has provided **valuable insights** into their population and distribution. While the current count of **6,327 dolphins** is an encouraging number, threats like **fishing nets, pollution, and habitat destruction** continue to pose risks. **Government initiatives like Project Dolphin, stricter fishing regulations, and community-driven conservation efforts are crucial** for the survival of this endangered species. A **combination of visual and acoustic surveys** has improved dolphin counting methods, paving the way for better conservation strategies in the future.

Frequently Asked Questions (FAQ) on Gangetic Dolphin Census

1. What is the total number of Gangetic dolphins found in the census?

The census recorded **6,327 Gangetic dolphins** in the Ganga and its tributaries.

2. How many Indus river dolphins were found?

Only **3 Indus river dolphins** were found, all in the river Beas.

3. Which states have the highest dolphin population?

- **Uttar Pradesh** - 2,397
- **Bihar** - 2,220
- **West Bengal** - 815
- **Assam** - 635

4. Why was this census conducted?

- To **assess the population** of Gangetic dolphins.
- To support **Project Dolphin**, launched in 2020 for dolphin conservation.
- To monitor threats like **fishing net entanglement and habitat degradation**.

5. How was the census conducted?

- **Visual Surveys**: Scientists on boats counted visible dolphins.
- **Acoustic Surveys**: Hydrophones (underwater microphones) recorded dolphin echolocation sounds.
- **Mathematical models** were used to combine both methods for accuracy.

6. Why are both visual and acoustic surveys necessary?

- Dolphins **surface for air only briefly**, making visual surveys unreliable.
- **Acoustic surveys detect dolphins underwater**, even if they are not seen.
- Combining both **ensures an accurate count**.

7. What are the major threats to Gangetic dolphins?

- **Accidental entanglement in fishing nets** (4%-5% of dolphins die this way).
- **Pollution** from industrial and agricultural waste.
- **Dams and water flow changes** affecting habitat.
- **Poaching** (dolphin oil is used as bait for catfish).

8. What is the conservation status of the Gangetic dolphin?

- **Endangered** (IUCN Red List).

9. What steps are being taken for conservation?

- **Project Dolphin** (focus on habitat protection and community participation).
- **Fishing regulations** to ban harmful nets.
- **Ganga rejuvenation initiatives** to improve water quality.
- **Scientific monitoring** using modern tracking techniques.

10. How can the public help in dolphin conservation?

- **Avoid using harmful fishing nets** in dolphin habitats.
- **Spread awareness** about the importance of river dolphins.
- **Support eco-tourism** that promotes conservation efforts.

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