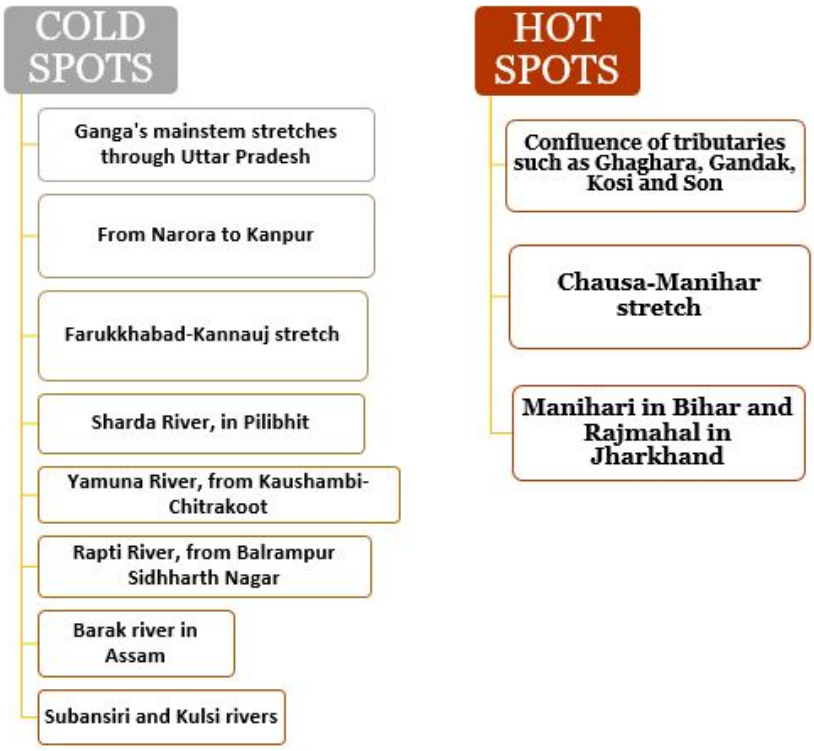
Survey of India's river dolphins

Why in News?

Prime Minister Narendra Modi recently released the results of the first-ever comprehensive population estimation of riverine dolphins – Gangetic and Indus dolphins, done in India.

- **Done by** - Wildlife Institute of India
- **Nodal Ministry** - Union Environment Ministry.
- **Duration** - 2021 and 2023.
- **Coverage** - It covered the main channels and tributaries of the Ganga and Brahmaputra rivers, as well as the Beas River in Punjab.
- The survey spanned Ganga and its tributaries in Uttar Pradesh, Bihar, Jharkhand, West Bengal, Madhya Pradesh, and Rajasthan.
- Brahmaputra including its tributaries Subansiri, Kulsi, Beki, Kopili, and Barak were surveyed.
- **Key Findings -** It estimated an average of 6,324 Gangetic dolphins, ranging from 5,977 to 6,688. The survey only found three Indus River dolphins in the Indus basin, all in the Beas River in Punjab.
- It thus estimated an average of 3,275 dolphins on Ganga's main stem, 2,414 in its tributaries, 584 in Brahmaputra's main stem and 51 in its tributaries.
- In Beas, it only found 3 Indus River Dolphins, considered a separate species from the Gangetic dolphins.
- The highest number of Gangetic dolphins, 2,397, was found in Uttar Pradesh.
- This was followed by 2,220 in Bihar, 815 in West Bengal, 6235 in West Bengal, 162 in Jharkhand, 95 in Rajasthan and Madhya Pradesh, and three in Punjab.



- **Methodology -** River dolphins live in opaque, turbid waters and briefly appear on the surface, making any estimates of their population tricky.
- According to the population estimation report, dolphins surface only for 1.26 seconds and dive for 107 seconds.
- A combination of visual and acoustic surveys is used. The acoustic survey uses multiple underwater microphones or hydrophones to capture 'dolphin clicks.'
- **Echolocation -** Dolphins, being functionally blind, navigate by making clicking sounds that travel through water and bounce back after hitting objects. This process is called echolocation.
- Hydrophones record underwater dolphin clicks to counter observer error and reliably triangulate dolphin occurrence.
- Since multiple hydrophones are used, they can pick up clicking sounds made by different individuals.
- For deep and wide channels, the double observer method is used, where two teams positioned on different decks cover different angles around the vessel on its left and right flank.
- These teams scan for dolphins surfacing around them as the boat travels at 8-10 km/hour.
- This allows for efficient detection and helps avoid double counting individual dolphins, given that the boat travels faster than the dolphins.
- **Tandem method -** Used for channels less than 600 metres wide and 3 metres deep, while
    - A single boat method is used for channels with a width smaller than 300 metres and a depth lower than 2 metres.

Reference

The Indian Express | Comprehensive survey of India's river dolphins

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