

Atal Setu Nhava Sheva Sea Link

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Why in News?

The Prime Minister of India inaugurated the **Mumbai Trans Harbour Link (MTHL)** officially known as **Atal Setu Nhava Sheva Sea Link**, a monumental 22 km sea bridge.

■ This mega-infrastructure project aims to revolutionize travel between Sewri and Chirle, promising a significant reduction in travel time.

What are the Key Highlights of MTHL?

- About:
 - Atal Setu is the longest bridge in India and also the longest sea bridge in the country.
 - The bridge is about **21.8 km long six-lane bridge** having about 16.5 km length over sea and about 5.5 km on the land.
 - The bridge has been named after former prime minister Atal Bihari Vajpayee.
 - The bridge originates from Sewri in Mumbai and ends at Nhava Sheva in Uran taluka in Raigad district.
 - The project is financed by the Japan International Cooperation Agency (JICA), covering 80% of the total project cost, while the remaining portion is shared between the state and central governments.

Note

 Earlier Dr. Bhupen Hazarika Bridge was the longest bridge in India, over the River Brahmaputra, in Assam. The 9.15 Km long river bridge.



Technologies Incorporated:

- MTHL incorporates various innovative technologies, such as Reverse Circulation Drilling (RCD) piling, Orthotropic Steel Deck (OSD) bridge girders, and Open Road Tolling (ORT) system.
 - **RCD** is used for the first time in India, an innovative technology employed **for pile foundation laying**, it minimizes noise disturbances compared to the traditional vertical drilling method.
 - **OSD** is a construction method that **combines strength and flexibility**. This technology allows the bridge's steel deck to withstand heavy loads, such as vehicles, while maintaining a lightweight structure.
 - MTHL became the **country's first project to adopt the ORT method** of collecting tolls without requiring vehicles to stop or slow down.

Benefits:

- According to a study conducted by Mumbai Metropolitan Region Development Authority (MMRDA) and JICA, the MTHL will **bring down the average travel time** between Sewri and Chirle from 61 minutes currently to less than 16 minutes.
- Close to 40,000 vehicles are expected to use the link every day in the opening year (2024).
- The project is expected to **facilitate greater economic integration of Navi Mumbai** with **Mumbai**, with benefits extending to Panvel, Alibaug, Pune, and Goa.
- The bridge also reduces the distance between Mumbai and Pune Expressway.

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