



New Pamban bridge an engineering wonder : PM

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Context

- Prime Minister Narendra Modi on Sunday inaugurated the new Pamban railway bridge, which connects the **Rameswaram island off the Tamil Nadu coast with Ramanathapuram on the mainland.**
- Constructed by Rail Vikas Nigam Ltd. at ₹531 crore, the **2.08-km bridge** over the Palk Strait features a 72.5-metre **vertical lift span** that can be **raised to a height of 17 metres**, facilitating smooth ship movement underneath while improving rail connectivity.
- The new bridge will **replace the century-old original Pamban Bridge** and is considered an engineering marvel with the tag of becoming **India's First Vertical Lift Railway Sea Bridge**. Built with stainless steel reinforcements and **Polysiloxane Paint (to prevent corrosion)**, the bridge is designed to withstand harsh marine conditions.
- Its expected lifespan is up to **58 years**. It has an automated electro-mechanical lift system, which will help the bridge rise to 17 meters, allowing smooth ship passage.
- The new bridge has been built parallel to the old Pamban Bridge, India's first sea bridge which was opened in 1914. The new bridge will replace the old structure.
- The Rail Vikas Nigam Ltd (RVNL) has built the 2.10-km-long bridge. The new sea bridge is the country's first 'vertical lift span' bridge, featuring a 'vertical lift span' of 72.5 metres in the middle, which can lift upwards 17 metres in 5 minutes, 30 seconds to allow ships to pass under it.
- The old bridge, on the other hand, was a cantilever bridge. It was opened manually, requiring 14 people for its operation. In contrast, the **new bridge is fully automatic.**



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