

3rd subsea hub in Andhra Pradesh

Prelims: Current events of national and international importance| Economy

Why in News?

Andhra Pradesh, particularly Visakhapatnam, is emerging as a new international subsea cable gateway due to rapid data-centre and AI infrastructure development.

- Vishakhapatnam is expected to become India's third major subsea connectivity hub, after Mumbai and Chennai.
- **Subsea hub** - It is a seabed facility used in offshore energy or telecommunications to distribute power, collect data, or manage fiber-optic network routing.
 - These systems reduce reliance on surface platforms by placing heavy equipment directly on ocean floor.
- **I-2SEA Submarine Cable System** - 3,600-km cable connecting Southeast Asia with India's east coast
 - **Companies involved** - Microsoft, Lightstorm, Singtel and other consortium partners
 - **Landing locations** - Visakhapatnam and Chennai
 - Expected service - Q4, 2029
- **America-India Connect** - Google's global subsea cable system at Visakhapatnam

Visakhapatnam locational advantages

- **Strategic diversification** - Reduces excessive dependence on existing Mumbai and Chennai cable gateways.
- **Geopolitical resilience** - Provides an alternative route in case of disruptions in West Asia or other vulnerable routes.
- **Ageing infrastructure** - Several existing east-coast cables are 8-15 years old, with capacity and end-of-life concerns.
- **Data-centre ecosystem** - Andhra Pradesh and Telangana are attracting large investments in data centres and AI infrastructure.
- **International connectivity** - Direct links with Singapore, Malaysia, Australia, Middle East and Europe.

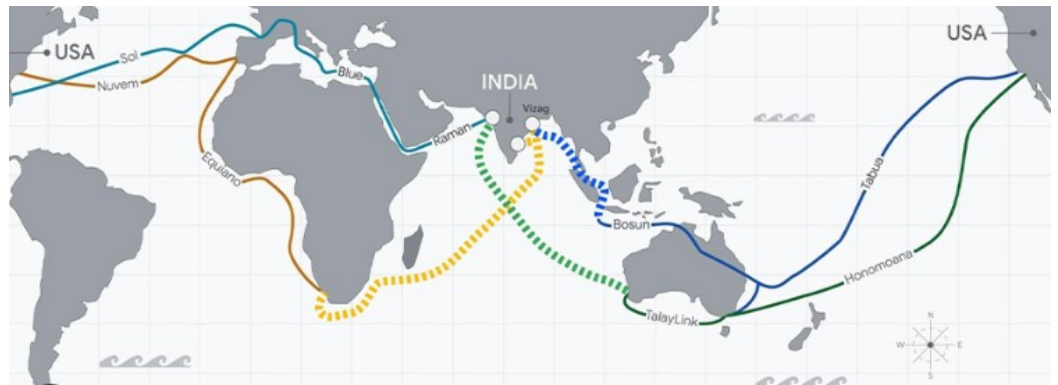
Terrestrial connectivity

- Subsea cables need extensive terrestrial fibre networks after reaching the shore.
- Proposed corridors could connect Machilipatnam-Mumbai-Hyderabad and Chennai-Hyderabad-Mumbai.

- Rapid global AI expansion is creating shortages of optical fibre, raw materials and fibre components.

Google's Visakhapatnam Data Centre

- Primarily intended for AI inference, rather than energy-intensive AI training initially.
 - Google plans greater use of renewable energy.
- Focus on serving Indian enterprises and government agencies.
- Air-cooling technologies are being considered to minimise water consumption.



Reference

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