

4. Inland Waterways- Economy

'Green' growth on inland waterways. India is attempting to double its water-based cargo capacity by 2030 through the Jalvahak incentive scheme and the development of 111 National Waterways. While the sector has seen 700% growth in the last decade, overcoming depth issues and infrastructure gaps through the IWDC's collaborative model between the Centre and States is critical to reducing India's high logistics costs.

1. Current Status of Inland Waterways in India

Extensive Network- India possesses a total inland waterways network of 20,236 km, consisting of 17,980 km of rivers and 2,256 km of canals suitable for mechanized vessels.

National Waterways (NWs)- Under the National Waterways Act, 2016, India has declared 111 National Waterways.

Exponential Growth- Cargo movement has surged by over 700%, rising from 18.07 Million Metric Tonnes (MT) in 2013-14 to 145.5 million MT in 2024-25.

Future Targets-

1. 2030 Goal- 200 million MT of cargo movement.
2. 2047 Goal- 500 million MT of cargo movement.

2. Significance of Inland Waterways

Logistics Cost Reduction- India's current logistics costs are 14% of GDP, compared to the global average of 8-10%. Waterways offer a significantly cheaper alternative to road and rail.

Decongestion- Shifting heavy bulk cargo to rivers alleviates the extreme pressure on India's saturated highway and railway networks.

Eco-Friendly Transport- Lower fuel consumption per tonne-km reduces the carbon footprint, aligning with India's Sustainable Development Goals (SDGs).

Regional Economic Boost- Enhanced connectivity promotes trade and industrial clusters in regions adjoining major river systems like the Ganges and Brahmaputra.

3. Comparative Analysis- Modes of Transport

Feature	Inland Waterways	Road Transport	Rail Transport
Cost Efficiency	Highest (Lowest fuel cost per tonne)	Lowest (High fuel/maintenance)	Moderate
Environmental Impact	Minimal Emissions	High Emissions	Moderate Emissions
Capacity	Massive (Bulk cargo suited)	Limited per vehicle	High
Last Mile Connectivity	Low (Requires Multimodal)	Highest	Moderate
Infrastructure Need	Terminals/Dredging	Extensive Highway Network	Dedicated Tracks/Stations

4. Challenges in Boosting Navigability

Infrastructure Deficiencies- A lack of modern terminals, automated jetties, and night-navigational aids prevents 24/7 seamless operations.

Depth and Seasonality- Many rivers face seasonal fluctuations in water levels; siltation requires constant, expensive dredging to maintain the "Least Available Depth" (LAD).

Market Dominance- Overcoming the established monopoly of road and rail transport requires significant behavioral shifts and financial incentives for cargo owners.

Regional Imbalance- Infrastructure development is currently concentrated in specific belts (like NW-1 and NW-2), leaving other potential waterways underdeveloped.

5. Key Government Initiatives

Jalvahak Scheme- * Provides direct incentives to cargo owners for distances exceeding 300 km.

1. Offers a reimbursement of up to 35% of total operating expenditure.

Jal Marg Vikas Project (JMVP)- A flagship project for the capacity augmentation of NW-1 (Ganga-Bhagirathi-Hooghly river system) with World Bank assistance.

Sagarmala Project- Integrating inland rivers with coastal shipping and major ports to ensure a seamless "port-led" development.

Freight Village Development- Creating integrated logistics hubs (e.g., Varanasi) to facilitate easy transfer between rail, road, and water.

6. Institutional Framework

Inland Waterways Authority of India (IWAI)-

1. Status- Autonomous body constituted in 1986 under the IWAI Act, 1985.
2. Headquarters- Noida, Uttar Pradesh.
3. Responsibility- Development, maintenance, and regulation of National Waterways.

Inland Waterways Development Council (IWDC)-

1. **Established-** 2023.
2. **Objective-** To ensure the comprehensive development of the Inland Water Transport (IWT) ecosystem, including cargo, passenger movement, and river cruise tourism with active State participation.

Source- <https://www.thehindubusinessline.com/economy/logistics/green-growth-on-inland-waterways/article70663840.ece/amp/>

