Inland Water Transport in India - Economy

National Waterway-57 (Kopili River) in Assam has been operationalised, boosting Inland Water Transport under Maritime India Vision 2030 and PM Gati Shakti. Now, four National Waterways in Assam- Brahmaputra (NW 2), Barak (NW 16), Dhansiri (NW 31), and Kopili (NW 57), are fully operational.

Key Facts Related to Inland Waterways and Transport in India

1. Definition and Scope of Inland Waterways

Inland waterways refer to stretches of water such as navigable rivers, lakes, and canals (excluding the sea) that are used for transporting goods and passengers. To qualify as an inland waterway, the channel must be capable of supporting vessels with a minimum carrying capacity of 50 tonnes when fully loaded.

2. Criteria for Declaring a National Waterway

The National Transport Policy Committee (1980) recommended that a waterway should have a minimum channel width of 45 metres and a minimum depth of 1.5 metres. The stretch should be at least 50 km long for continuous navigation, with certain exceptions for urban waterways and intra-port areas.

3. Institutional Framework

The Inland Waterways Authority of India (IWAI) was established in October 1986 as the nodal agency for developing and regulating inland waterways for shipping and navigation. National Waterways fall under the jurisdiction of the Central Government, while other inland waterways are under State Government control.

4. Inland Water Transport (IWT)

IWT refers to the transportation of cargo and passengers through navigable rivers, canals, backwaters, and creeks. It is recognised as a cost-effective, fuel-efficient, and environmentally sustainable mode of transport. India has a network of 14,500 km of navigable waterways.

Legislative Framework Governing IWT

1. The Inland Waterways Authority of India Act, 1985 created IWAI to oversee the development and regulation of inland waterways.
2. The National Waterways Act, 2016 declared 111 inland waterways as National Waterways, significantly expanding the scope of IWT.
3. The Inland Vessels Act, 2021 modernised regulations for inland vessels, improving safety, efficiency, and operational standards.
4. The upcoming National Waterways (Construction of Jetties/Terminals) Regulations, 2025 aims to encourage private investment and speed up terminal construction.

Growth of IWT in India

1. The number of operational National Waterways increased from 3 in 2014–15 to 29 in 2024–25, marking a growth of 767%.
2. The total operational length of National Waterways rose from 2,716 km (2014–15) to 4,894 km (2023–24).
3. Cargo traffic surged from 18.07 MMT (2013–14) to 133 MMT (2023–24), recording a CAGR of 22.10%.
4. IWAI targets raising IWT's freight share from 2% to 5% by 2030, handling 200+ MMT of cargo.
5. By 2047 (Maritime Amrit Kaal Vision), the goal is to exceed 500 MMT of cargo through inland waterways.

Role of Inland Waterways in Maritime India Vision 2030

1. Eco-Friendly Transport

IWT emits only 32–36 g of CO_2 per ton-km, compared to 51–91 g by road, making it the least polluting mode of large-scale transport. IWT causes minimal noise and water pollution, aligning with India's Panchamrit climate goals.

2. Cost-Effectiveness

The cost of IWT is just ₹0.25–₹0.30 per ton-km, significantly lower than ₹1.0 by rail and ₹1.5 by road.

3. Fuel Efficiency

IWT moves 105 ton-km per litre of fuel, outperforming rail (85 ton-km) and road (24 ton-km).

4. Logistics Advantages

Expanding IWT can reduce logistics costs from 14% of GDP to 9%, saving around USD 50 billion annually and improving India's global competitiveness.

5. Tourism and Livelihoods

River cruise tourism and ferry services (e.g., Ganga, Brahmaputra, Kerala backwaters) support eco-tourism, create jobs, and advance Blue Economy objectives.

6. Strategic Connectivity

IWT offers last-mile connectivity to remote and eco-sensitive regions such as the North-East and Sundarbans, with minimal land acquisition and displacement. It enhances disaster resilience and national security by enabling rapid transport of goods and personnel during emergencies.

7. Maritime India Vision (MIV) 2030

A strategic blueprint to position India as a global maritime hub with a focus on port-led development and blue economy growth. Outlines 150 initiatives under 10 core themes, including port infrastructure upgrades, efficiency improvement, shipbuilding, inland waterways expansion, technology integration, and environmental sustainability.

Key Challenges in Unlocking IWT Potential

1.Seasonal Navigability

Non-perennial rivers and fluctuating water levels in the dry season hinder year-round operations.

2.Infrastructure Deficit

Shortage of terminals, jetties, navigational aids, and vessels; poor integration with other transport modes.

3.Inadequate Depth

Many waterways fail to maintain the minimum draft, restricting large cargo vessel movement.

4.Low Utilisation

Only 3.5% of India's trade uses waterways, compared to China (47%), Europe (40%), and Bangladesh (35%).

5.High Siltation

Frequent silt build-up demands costly and regular dredging.

6.Environmental Concerns

Dredging and port projects can harm aquatic habitats and disrupt local communities.

7. Poor Last-Mile Connectivity

Limited road/rail linkages discourage industries from shifting to IWT.

Key Initiatives to Boost IWT

1. Jalvahak-Cargo Promotion Scheme (2024): Provides 35% reimbursement of operational costs to cargo owners shifting from road/rail to IWT.
2. Extension of Tonnage Tax (2025–26): Designed to encourage tax certainty and stimulate private investment.
3. Port Integration: Multi-modal terminals are being integrated to improve cargo transfer efficiency.
4. Digitisation: Development of a unified digital portal for vessel and crew registration to improve transparency and logistics planning.

Mega Infrastructure Programs

1. Sagarmala Project for port-led development.
2. Jal Marg Vikas Project to improve navigation on NW-1 (Haldia–Varanasi).
3. PM Gati Shakti for integrated transport planning.
4. Eastern and Western Dedicated Freight Corridors to complement IWT freight flows.

Measures to Improve IWT

1. Integrated Infrastructure, strengthen multi-modal connectivity under PM Gati Shakti and Sagarmala, linking IWT with rail, road, and coastal shipping.
2. Revival of Dormant Waterways, Adopt sustainable dredging, environmental compliance, and green vessels for reactivating waterways in states like Bihar, Odisha, and West Bengal.
3. Private Sector Participation, Encourage PPP models for vessel manufacturing, terminal building, and cargo operations through tax breaks and Inland Waterways Development Funds.
4. Technological Modernisation, Expand River Information Systems (RIS), GPS tracking, and e-platform logistics solutions.
5. Cargo Integration, Link IWT with PM MITRA Parks, Mega Food Parks, and industrial hubs to generate steady cargo flows.
6. Passenger Expansion, Develop cruise tourism through the Cruise Bharat Mission and regular ferry services on major National Waterways.
7. Community Development, Skill training for riverine populations, preservation of traditional navigation, and promotion of local livelihoods through schemes like the Riverine Community Development Scheme.

Conclusion

Inland Water Transport (IWT) offers India a cost-effective, low-carbon, and high-capacity transport alternative that complements road, rail, and coastal networks. With sustained investment, environmental safeguards, and policy support under Sagarmala, PM Gati Shakti, and Maritime India Vision 2030, IWT can play a pivotal role in reducing logistics costs, boosting competitiveness, and supporting India's USD 5 trillion economy goal.

Source: https://www.pib.gov.in/PressReleasePage.aspx?PRID=2151729