



India's Maritime Energy Transition:

Policy Direction, Evidence and the Way Forward

IMO – DNV study on Potential Demand and Pricing of Alternative Marine Fuels in India

Directorate General of Shipping

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Why Alternative Maritime Fuels Matter for India



- The global shipping sector is entering a decisive transition decade
- Climate commitments, fuel regulations, and market signals are converging rapidly
- Fuel choices are becoming a strategic factor in trade competitiveness
- Early action will shape future shipping routes, port relevance, and investment flows
- India is located at a strategic crossroads of major global trade routes
- The transition presents an opportunity to move from fuel consumer to fuel enabler
- This opportunity is not automatic — it must be planned, enabled, and coordinated

95%

By trade volume

70%

By trade value

111

No of Inland
Waterways



National Green Shipping Policy

Maritime Vision for a Green Future

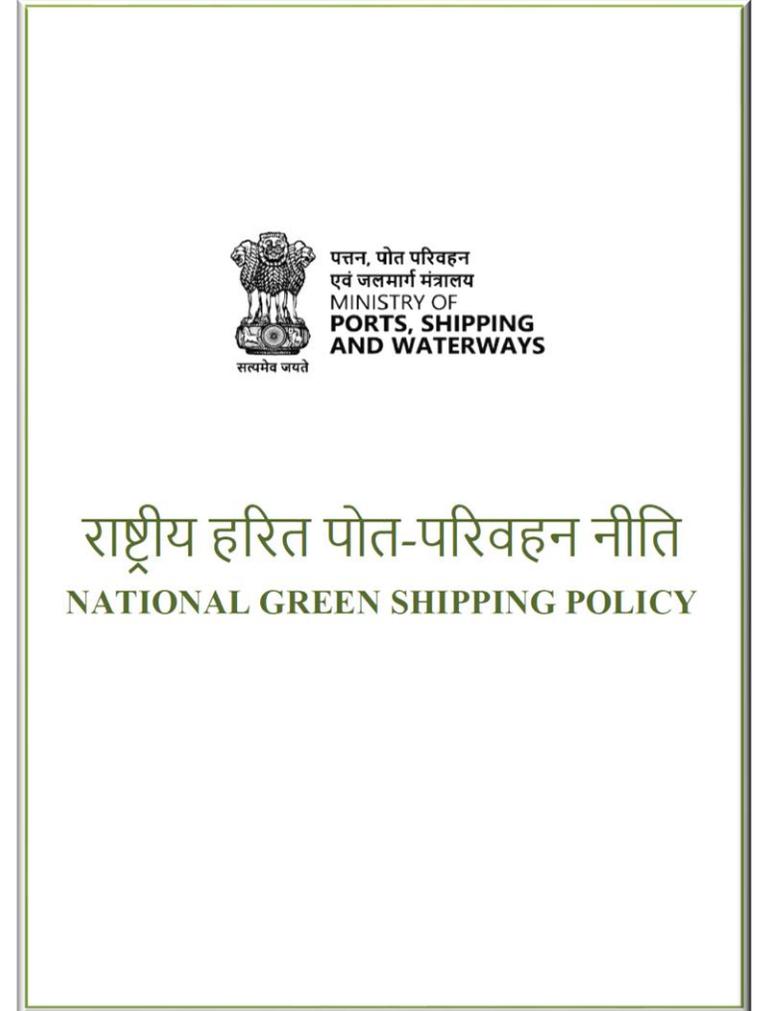


The NGSP is India's strategic response to the global decarbonisation mandate, a policy blueprint designed to secure maritime growth while transitioning towards clean energy, sustainable ships and climate-resilient ports.

Key Transition Pillars:

- Green Ships
- Green Ports
- Green Fuels
- Green Technology
- Green Recycling
- Green Financing
- Green Skill Development & Capacity Building

**Maritime INDIA @ Net Zero – Multi Stakeholder
Workshop convened on 14 -15 January 2026 at India
Habitat Centre, New Delhi**





National Green Shipping Policy – The 7 Pillars (1/2)



Building a Holistic Green Maritime Ecosystem

Pillar 1: Green Ships

Lifecycle-based decarbonization of India's fleet through energy-efficient, fuel-flexible and low- to zero-emission vessels, supported by green ship certification and lifecycle emissions accounting.

Pillar 2: Green Ports

Port-led decarbonisation by integrating clean energy, electrification and efficient operations, positioning Indian ports as competitive, low-carbon logistics gateways.

Pillar 3: Green Fuels

A safe, phased and technology-neutral transition to alternative marine fuels, guided by lifecycle performance, bunkering safety and infrastructure readiness.



National Green Shipping Policy – The 7 Pillars (2/2)



Decarbonization to Implementation Enablers

Pillar 4: Green Ship Recycling

Advancing safe, environmentally sound and circular ship recycling aligned with the Hong Kong Convention, strengthening worker safety, material recovery and digital transparency.

Pillar 5: Green Finance

De-risking maritime decarbonisation by mobilising affordable, long-term capital through blended finance, risk-sharing instruments and ESG-aligned investment frameworks.

Pillar 6: Green Skill Development & Capacity Building

Preparing the maritime workforce and institutions for new fuels, technologies and regulatory requirements, ensuring a just, inclusive and execution-ready transition.

Pillar 7: Green Technology & Innovation

Accelerating adoption and indigenisation of advanced maritime technologies through digitalisation, pilot projects and innovation sandboxes to enhance efficiency, safety and competitiveness.



Maritime INDIA @ Net Zero

14 – 15 January 2026, India Habitat Centre (Hybrid)



Maritime INDIA @ Net Zero was jointly organised by the Directorate General of Shipping (DGS) and NCoEGPS at TERI as a **high-level multi-ministerial action plan and governance workshop** to translate the National Green Shipping Policy (NGSP) vision into **phased, implementation-ready national pathways** aligned with India's climate commitments.

Way Forward

- **Conduct focused stakeholder webinars** to validate priority actions and implementation sequencing
- **Undertake inter-ministerial consultations** to finalise roles, timelines and coordination mechanism
- **Final submission of consolidated roadmap and action matrix to NITI Aayog** for strategic guidance and national rollout





IMO – DNV Study on Alternative Maritime Fuels



What the Study Examines

- Joint analytical study by **DNV in collaboration with IMO**, undertaken with **DGS and MoPSW**
- Assesses **potential demand, pricing and competitiveness** of alternative marine fuels in India
- Uses **vessel traffic data, route analysis and port-call patterns** to assess realistic bunkering behaviour
- Evaluates alternative fuels through a **delivered-cost and total-voyage-cost lens**, not fuel availability alone
- Anchored in **India's port ecosystem**, rather than theoretical diversion of passing traffic

Why the Findings Matter for India

- Confirms that **credible near-term demand lies with cargo-calling vessels**, not passing traffic
- Identifies **container shipping** as the most predictable and scalable early adopter segment
- Shows that **price competitiveness, operational reliability and approval clarity** determine bunkering decisions
- Highlights India's opportunity to build **clustered, multi-port bunkering hubs**, rather than isolated pilots
- Provides an evidence base to prioritise **ports, fuels and pilots** under *upcoming NGSP and Maritime INDIA @ Net Zero*



Pollution Prevention – Marine Dumping

New Shipping Laws 2025



- Protection of the marine environment is a **core element of maritime governance**, alongside decarbonisation
- **Marine dumping** refers to the deliberate disposal of wastes or other matter at sea from vessels, platforms or other man-made structures
- Unregulated dumping can pose serious risks to **marine ecosystems, biodiversity and coastal livelihoods**
- In India, activities related to dumping at sea are addressed through **national environmental laws, coastal regulations and project-specific environmental clearances**
- The policy emphasis remains on **pollution prevention, waste minimisation and environmentally sound management**, rather than routine disposal at sea



London Convention and London Protocol – India’s Position



- The **London Convention** and the 1996 London Protocol establish the **global framework to regulate dumping of wastes at sea**
- The Convention regulates dumping through a **permit-based approach**, whereas, the Protocol adopts a **more stringent “reverse list” approach**, prohibiting dumping except for a limited set of permitted materials.

India’s Position and Key Considerations

- **India is not a Party** to the London Convention (1972) or the London Protocol (1996)
- Marine dumping is addressed through **domestic environmental laws and project-specific approvals**
- **Jurisdictional scope is a key consideration:**
- India’s **CRZ framework** applies up to **12 nautical miles**
- The Convention and Protocol extend to the **EEZ (up to 200 nautical miles)**
- Protocol ratification would require **major legal and institutional alignment**, including expanded jurisdiction and dedicated permitting, monitoring and reporting systems
- India continues to **engage constructively at IMO**, while assessing national readiness and priorities



संगच्छध्वं संवदध्वं सं वो मनांसि जानताम्।

*“Move together,
speak together,
may your minds
be in harmony.”
(Rigveda 10.191.2)*



सत्यमेव जयते

Ministry of Ports,
Shipping & Waterways
Government of India

