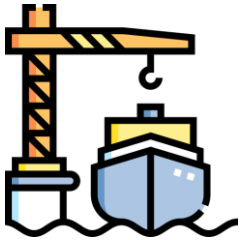
HKC @ One : Strengthening Global Governance for Sustainable Ship Recycling

Directorate General of Shipping

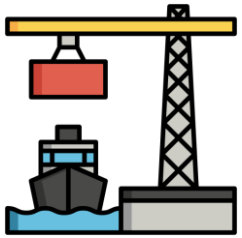
30th June 2026

India’s Maritime Sector

INDIA’S MARITIME ECOSYSTEM



60+
SHIPYARDS
Small and Large

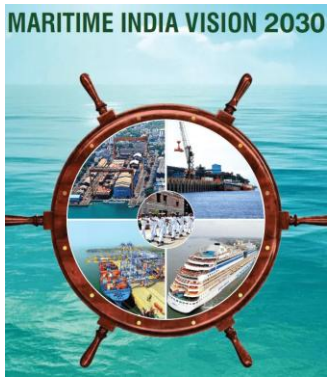


200+
PORTS
Major and Non-major

11,098
KM COASTLINE

1500+
VESSEL FLEET

3.2Lakh+
SEAFARERS



A UNIFIED NATIONAL MARITIME VISION

Blue Economy

The Blue Economy constitutes 95% of India's trade volume and 65% of India's trade value

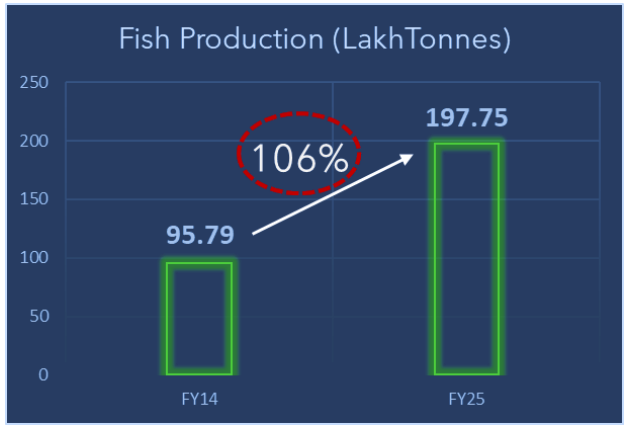
~4% Contribution to National GDP
Potential: 10% by 2047

95% India's Trade by Volume via Sea
70% by value

₹80L Cr MIV 2030 + Amrit Kaal Vision Roadmap
Combined policy investment

Strategic investments in the Blue Economy could raise this contribution from 4% to 10% of GDP by 2047

Fisheries & Aquaculture



- India is the world's **2nd** largest fish producer, contributing **8%** to global fish output
- Seafood exports have more than doubled in a decade from **₹30,213** crore in 2013-14 to **₹62,408** crore in FY 2024-25
- The Fisheries sector has created **58 lakh** employment opportunities, supporting approximately **3 crore** fishers and fish farmers at the primary level.

Coastal & Cruise Tourism

India's coastal tourism sector is projected to grow to **₹1.2 lakh crore**, with the government identifying **13** coastal districts for priority development.

The Cruise Bharat Mission is developing coastal cruise circuits in **Gujarat, Goa, Mumbai, Kochi, and Chennai** positioning India as Asia's emerging leisure maritime hub.

Marine Biotechnology & Deep Ocean

- **Samudrayaan:** India is developing crewed submersibles to reach **6,000 m**, enabling a first-of-its-kind manned deep-sea research station.
- India's 6,000 m **deep-sea station** aims to set a global benchmark, envisioned as a permanent international research hub by 2047, akin to the International Space Station
- India's **333** cultivable seaweed species position it strongly for expansion, with current ~1% global production highlighting a significant opportunity to scale up in marine biotech, pharmaceuticals, and biofuels.

Maritime Transformation – 2 Foundational Pillars

Technology & Sustainability

Technology Integration - Digital Platforms

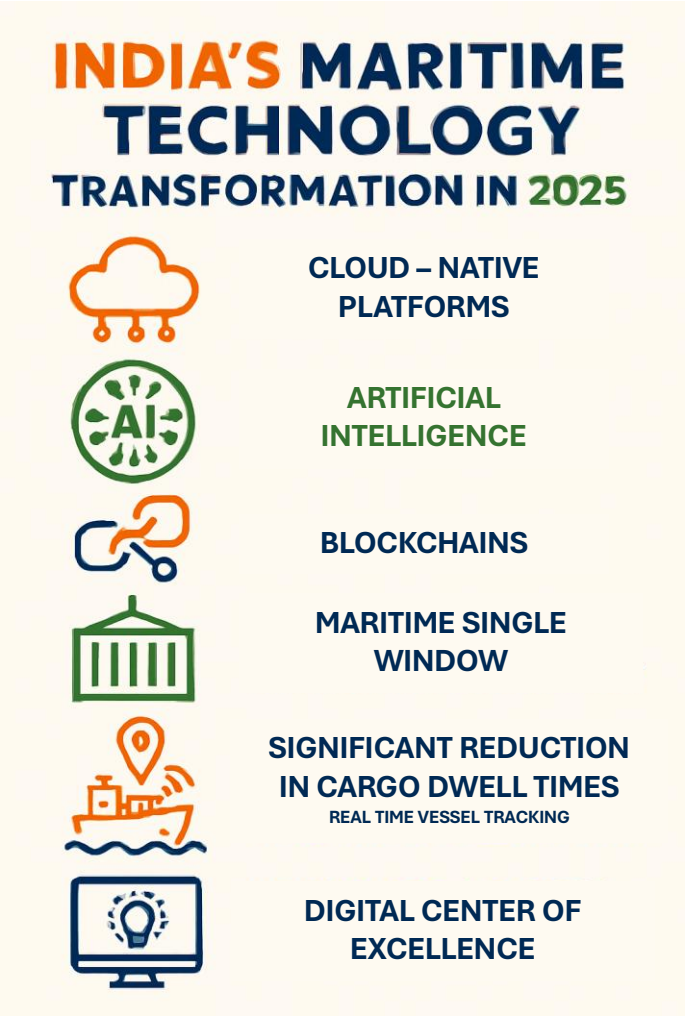
1. Flagship platforms: e-Samudra, SAGAR SETU, Maritime Single Window (MSW).
2. e-Samudra integrates 60+ maritime services (MTO registration, shipbuilding aid).
3. AI-powered exams & simulations for seafarer training.
4. Real-time vessel/cargo monitoring via Command & Control Centre.
5. Digital Centre of Excellence (DCoE) promotes AI, IoT, blockchain.
6. Reduced cargo dwell time; enhanced port efficiency.
7. Swachh Sagar Portal

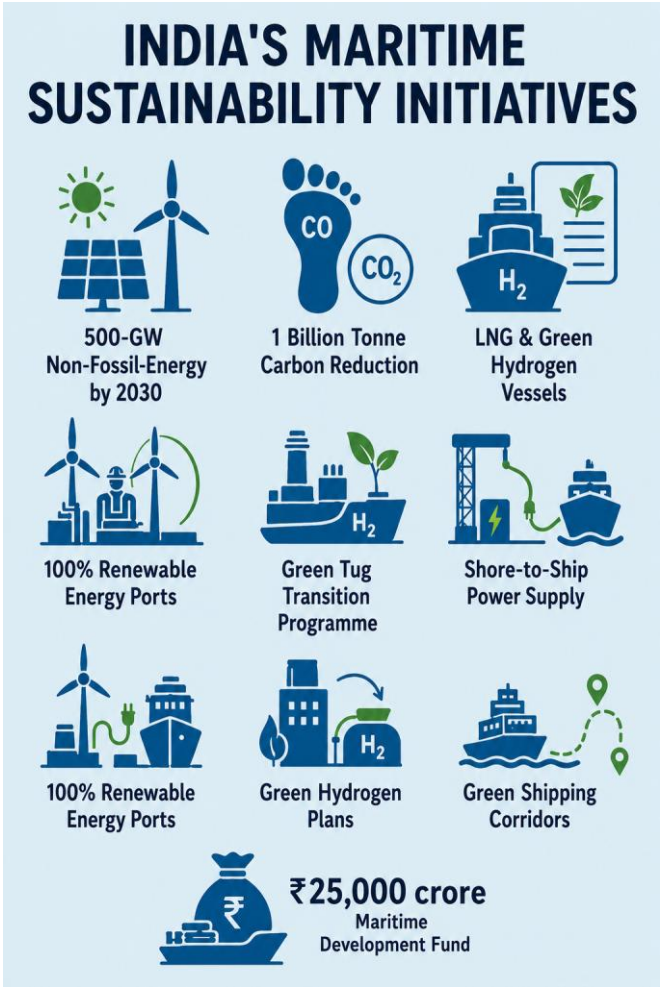
Sustainability Initiatives - Green Shipping Agenda

1. Targets: 500 GW non-fossil energy (2030), 1 billion-ton carbon cut, net-zero by 2070.
2. Policies encourage LNG, green hydrogen, biofuel vessels.
3. Mandates shore power, waste, and renewable port integration.

Sustainability Initiatives - Key Programmes

1. Harit Sagar Guidelines support 100% renewable energy, AI/IoT logistics in ports.
2. Green Tug Transition: 50% hybrid/electric tugs by 2030.
3. Green hydrogen plant at Deendayal Port scaling to 10 MW; 5 million tonnes by 2030 goal.





National Maritime Decarbonization Policy Framework

PILLAR 1: GREEN SHIPPING

- Lifecycle-based decarbonization of India's fleet
- Energy-efficient, fuel-flexible and low- to zero-emission vessels
- Green ship certification and incentives
- Lifecycle emissions accounting and transparency

PILLAR 2: GREEN PORTS

- Port-led decarbonization through clean energy integration
- Electrification, shore power and energy efficiency in operations
- Sustainable infrastructure and green logistics
- Positioning Indian ports as competitive, low-carbon gateways

PILLAR 3: GREEN SHIP RECYCLING

- Safe, environmentally sound and circular ship recycling
- Alignment with Hong Kong Convention
- Strengthening worker safety
- Enhancing material recovery and resource efficiency

PILLAR 4: GREEN FINANCE

- Mobilising affordable and long-term capital for green maritime projects
- Blended finance and risk-sharing mechanisms
- ESG-aligned investments
- Incentivising clean technologies and innovation

PILLAR 5: GREEN SKILL DEVELOPMENT

- Preparing future-ready maritime workforce and institutions
- Training for new technologies, alternative fuels and digitalisation
- Strengthening capacity for safety, sustainability and compliance
- Supporting seafarer transition and career progression

PILLAR 6: GREEN FUELS

- Promoting a safe and phased transition to alternative marine fuels
- LNG, biofuels, methanol, ammonia, hydrogen and other future fuels
- Developing bunkering infrastructure and reliable supply chains

PILLAR 7: GREEN TECHNOLOGY

- Accelerating adoption and indigenisation of advanced maritime technologies
- Digitalisation, automation, AI/IoT and data-driven decision making
- Innovation sandboxes, pilot projects and collaborative R&D
- Enhancing efficiency, safety and competitiveness

PILLAR 8: POLLUTION PREVENTION

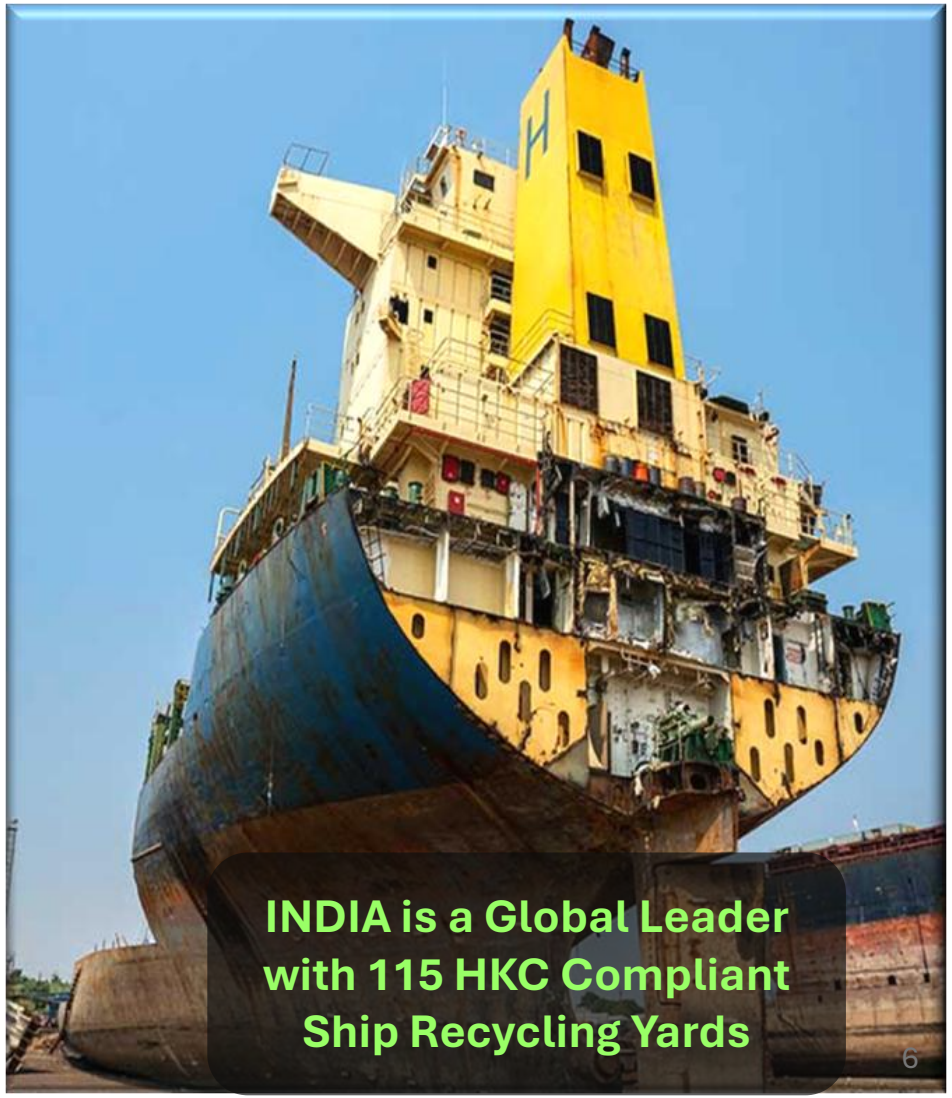
- Strengthening waste management and port reception facilities
- Promoting circular economy and resource efficiency
- Ensuring MARPOL compliance and environmental standards
- Cleaner operations to protect marine ecosystems
- Preventing marine pollution and building a sustainable blue economy

Ship Recycling

- Process of dismantling end-of-life ships to recover **steel and other valuable materials**.
- India is a **global leader**, with Alang–Sosiya in Gujarat being the **world's largest ship recycling cluster**.
- Governed internationally by the **Hong Kong Convention (HKC)**, which entered into force on **26 June 2025**.
- Integral to the **circular economy**, reducing the demand for virgin raw materials. 97-98% Materials recoverable

India's Role & Importance

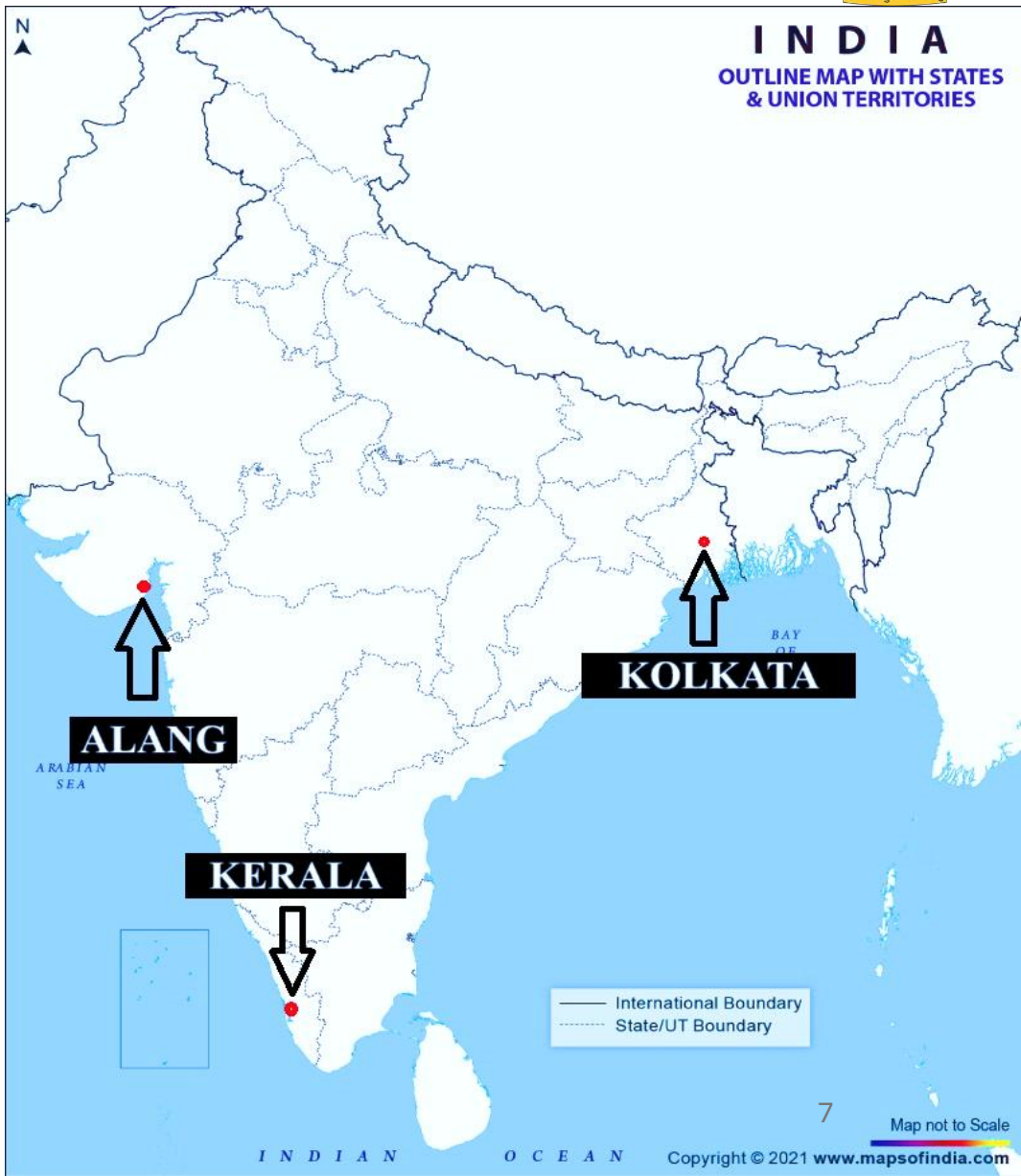
- Handles **30% - 35% of global ship recycling tonnage** annually. (~500 vessels annually)
- Provides **20 - 25% of India's ferrous scrap requirement**, reducing dependence on imports.
- India is the **only country with 100+ HKC Compliant Recycling Yards.** Supplies input material for the **Green Steel ecosystem**, boosting India's low-carbon transition.
- Generates **direct employment for 15000+ workers** and **indirect livelihood opportunities** for thousands more in logistics, scrap processing, and allied services.
- Strengthens India's position in **global maritime sustainability.**



Ship Recycling Statistics in India

Yard	Total Number of Plots	Operational Plots	HKC Compliant yards
Alang, Bhavnagar (Gujarat)	150	128	115
Steel Industries Limited (Kerala)	1	1	0
Amar Iron Udyog, Kolkata (West Bengal)	1	1	0

Timeline	No of Vessels	Total LDT
March 1983 – March 2026	8956	71328850.09
FY 2025 - 2026	119	1087447.01



Regulatory Framework for Ship Recycling in India

1. **Ship Breaking Code, 2013**

   Consolidated guidelines for hazardous waste disposal, worker safety, and environmental protection. (Superseded by Ship Recycling Act)

2. **Recycling of Ships Act, 2019**

   Mandates facility certification and prohibits hazardous materials in line with line with HKC standards.

3. **Ship Recycling Rules, 2021**

   Provides a comprehensive legal framework for governing ship recycling recycling activities.

4. **Ship Recycling Regulation, 2026**

   Ensures both Indian and foreign ships comply with international standards. standards.

Hong Kong International Convention
for the Safe and Environmentally Sound Recycling of Ships

Inventory of Hazardous Materials

All **in-service ships to comply** with:

- Flying the flag of a state party to the Convention, or
- Calling at a port in a country that is a party to the Convention.

When?

- **New builds**: From **26 June 2025**.
- **Existing ships**: By 26 June 2030, however, we strongly recommend the **next harmonised survey** after 26 June 2025.

What is required?

- A **valid Inventory of Hazardous Materials (IHM)**.
- An **International IHM Certificate**, valid for **5 years**, issued by the **RO** or **flag State**.

Final Survey

All **in service ships going for recycling** to comply if:

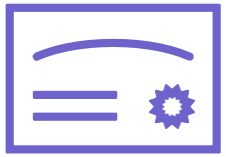
- flying the flag of a state party to the Convention, or
- being recycled in a country party to the convention.

When?

- Any **ship going for recycling** on or after **26 June 2025**

What is required?

- **IHM part I** and valid **certification**
- IHM **parts II & III**
- a **ship specific recycling plan** from an authorised recycling facility
- An **international ready for recycling certificate**. Valid for **3 months**. Issued by **RO** or **flag State**.



Ship Recycling Facility Certification

All **recycling facilities** operating in countries party to the convention.

When?

SRF certification need certification from **26 June 2025.**

What is required?

- **Ship Recycling Facility Plan**
- Produce **ship specific recycling plans**
- Access to appropriate **medical and waste treatment facilities**.
- Be **authorised** by their competent authority
- Hold a valid **Document of Authorisation for Ship Recycling** (DASR).

ISO Compliance

Strengthening India's Global Credibility

Enforcing ISO management systems ensures ship recycling operations at Alang are **system-driven, auditable and internationally benchmarked**, complementing HKC compliance and supporting EUSRR recognition.

Key ISO Standards for Ship Recycling Yards

ISO 9001 – Quality Management: Streamlined processes, documentation and continual improvement.

ISO 14001 – Environmental Management: Pollution control, waste handling and eco-monitoring.

ISO 30000 – Ship Recycling Management: Integrates HKC principles for safe and compliant recycling.

ISO 45001 – Occupational Health & Safety: Worker safety, risk control and preventive culture.

Impact of Enforcement

- Builds **credibility and transparency** in global markets.
- Enhances **environmental, health and safety performance**.
- Improves **audit readiness** for IMO and EU inspections.
- Positions **Alang as a benchmark for responsible recycling**.

ISO 9001
Quality Management System (QMS)

ISO 14001
Environmental Management System (EMS)

ISO 30000
Ship Recycling Management System (RSMS)

ISO 45001
Occupational Health & Safety Management System (OHSMS)

Ship Recycling Portal

An upcoming unified national digital platform under DGS to implement the Hong Kong Convention (HKC) and Recycling of Ships Act (2019), ensuring real-time, transparent and accountable governance of India's ship recycling ecosystem.

Importance of Portal

- **Transparency** : Digitally traceable inspections, certifications & audits
- **Accountability** : Role-based actions with time-stamped compliance trails
- **Real-time Monitoring** : Central oversight by DGS & State Authorities
- **Global Credibility** : Auditable records for IMO, foreign Flag States & shipowners
- **Stakeholder Integration** : Connects DGS, GMB, ROs, yards, service suppliers

Core Functional Modules

- Yard Registration & Licensing
- **Inventory of Hazardous Materials Inventory**
- **RRC Certification Registry**
- SRP Submission & Approval
- **Inspection, Audit & ISO Compliance Tracking (ISO 9001, 14001, 30000, 45001)**
- Incident & Non-Conformity Reporting
- Worker Training & Competency Records
- GISIS / IMO Reporting Integration

Ferrous Scrap Development Fund

A central fund managed by the **Ship Breaking Scrap Committee** under the Ministry of Shipping, aimed at driving **safe, sustainable, and welfare-linked ship recycling**.
It supports both Central and State-level interventions, primarily focused on yard infrastructure, worker welfare, environmental safety, and skilling.

Purpose of the Fund

- Channel ship recycling-linked revenue into **visible welfare outcomes**
- Supplement GMB's efforts in developing **Alang–Sosia** as an HKC-aligned cluster
- Improve overall **eco-system quality** around ship recycling operations

Focus Areas:

Yard Infrastructure Upgradation (capital expenditure only)	**Welfare Projects** Worker housing, sanitation, trauma & medical response units, fire safety
Skill Development Structured training, certification, and capacity building	**Environmental Infrastructure** ETPs, incinerators, hazardous waste yards
Community & Social Facilities Crèches, canteens, rest zones, gender-focused spaces	**Secondary Steel Sector Support** (as approved)
Research & Consultancy Safety protocols, green practices, ESG studies	**Other activities** (as approved by the Committee)

How it Works:

DPRs to be prepared by SMB → Grants released post Committee approval & MoPSW clearance → Monitored by DGS; utilisation certificates & audits mandatory → Non-recurring capital grants only: no O&M funding

Four Pillar Approach

Cabinet approves ₹ **69,725** crore Package to Revitalize India's Shipbuilding and Maritime Sector

01

Shipbuilding Financial Assistance scheme

Allocation: ₹24,736 crore

- Overcome cost differential vis-a-vis foreign shipyards.
- **Credit note for new builds against ship scrapping in India ₹ 4001 crore allocated**
- Establish National Shipbuilding Mission

02

Maritime Development Fund

Allocation: ₹25,000 crore

Enable long-term financing to maritime sector through equity & debt-based funding:

- Maritime Investment Fund
- Interest Incentivization Fund
- Credit Guarantee Fund

03

Shipbuilding Development Scheme (SbDS)

Allocation: ₹19,989 crore

- Greenfield cluster creation
- Brownfield capacity expansion to **4.5 million GT**
- Risk outlay for shipyards
- Setting up of India Ship Technology Centre (ISTC) as Apex body under IMU

04

Legal, Policy and Process Reforms

- Demand aggregation
- Large Ships as infrastructure
- Taxation issues
- Flagging reforms

Data Source : PIB Press Release 24 SEP 2025 3:08PM

Ship Recycling Credit Note

- Introduced under **Ship Building Financial Assistance Scheme**
- Incentivizes ship owners to **recycle in India** and **build new ships in Indian shipyards**

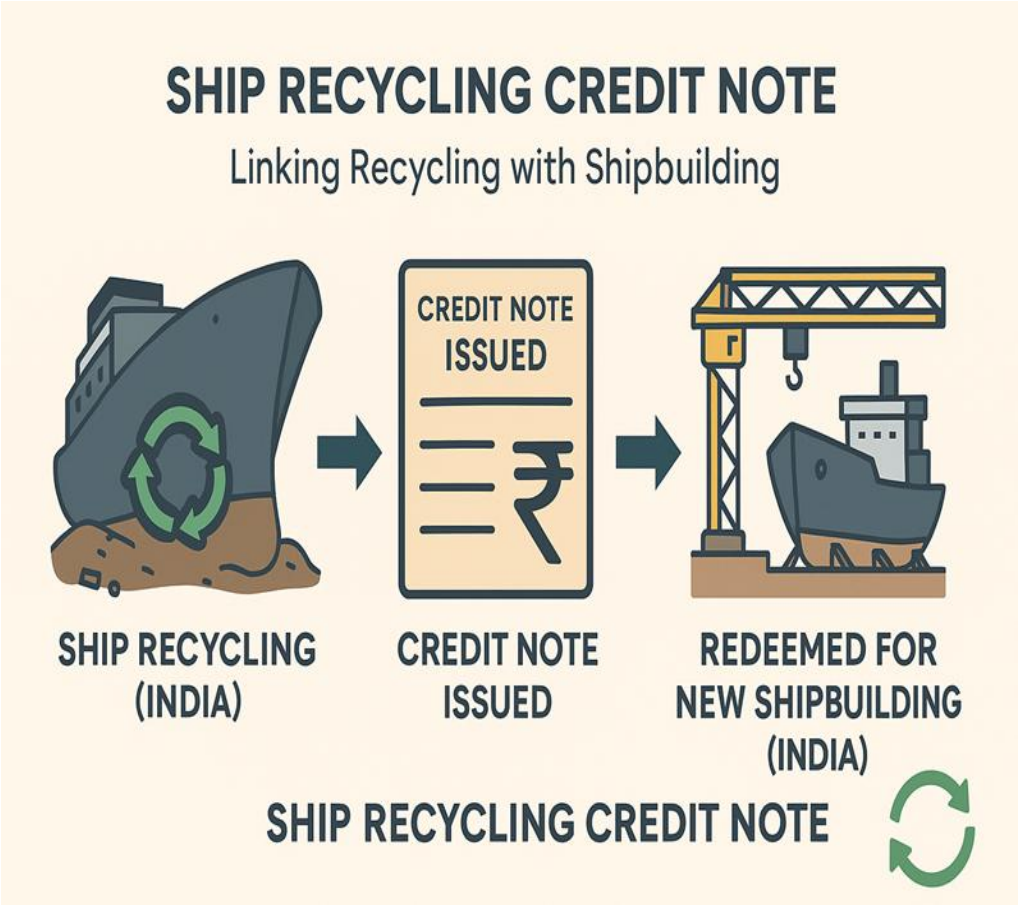
Allocation of : ₹ 4,001 crore
(under SBFA)

How It Works

- When a vessel is recycled in a certified Indian yard, the ship owner receives a **Credit Note for 40% of scrap value.**
- The Credit Note remains valid for 3 years.
- The credit note can be redeemed up to 5% of the fair price of the new vessel being built in an Indian shipyard

Benefits

- Encourages **safe and HKC compliant ship recycling** in India
- Provides direct **business boost for Indian shipyards**
- Attracts **new players** to India's ship recycling and shipbuilding ecosystem
- Strengthens India's **circular economy** : recycling feeds into new shipbuilding
- Positions India as a leader in **Green and Sustainable Maritime Growth**



Green Steel

- "Green Steel" is defined by its CO_2 emission intensity — less than 2.2 tonnes CO_2 emission per tonne of finished steel (tfs).

- Greenness is expressed as a percentage reduction below the threshold of 2.2 2.2 tonnes CO_2 emission per tonne of finished steel

- The certification done via NISST (National Institute of Secondary Steel Technology) under the Bureau of Energy Efficiency (BEE) Measurement, Reporting and Verification (MRV) methodology.

Star Rating System

- Five-Star: < 1.6 tCO_2e/tfs ★★★★★
- Four-Star: 1.6 – 2.0 tCO_2e/tfs ★★★★
- Three-Star: 2.0 – 2.2 tCO_2e/tfs ★★★
- > 2.2 tCO_2e/tfs → Not eligible for green rating
  (Threshold reviewed every 3 years)

Digitalization in Maritime

DIGITAL MARITIME SERVICES & GOVERNANCE

e-SAMUDRA
- Integrated digital platform
- 15 modules | 60+ maritime services
- Paperless governance & seamless service delivery

MARITIME SINGLE WINDOW (MSW)
- Single window for all maritime clearances
- Integration with ports, customs, PHO & immigration
- Reduced documentation & clearance time

LICENSE & CHARTERING PORTAL
- End-to-end digital chartering approvals
- Foreign flag charter permissions
- Faster approvals & transparency

24×7 GRIEVANCE REDRESSAL SYSTEM
- Real-time grievance lodging & tracking
- Automated workflow & resolution monitoring

CRISIS RESPONSE MANAGEMENT MODULE
- Digital platform for maritime emergencies
- Integrated coordination with DGS, Navy, Coast Guard, MEA & stakeholders

RPSL DIGITAL MODULE
- Automated licensing, inspections & compliance
- Integration with MTIs & stakeholders
- Transparent monitoring & reporting

HUMAN CAPITAL & KNOWLEDGE ECOSYSTEM

DIGITALISATION IN MARITIME TRAINING
- LMS, simulators & immersive learning
- Centralised attendance system
- AI-enabled adaptive learning
- Digital Training & Assessment Records (TAR)

EXAMINATION REFORMS
- End-to-end digital exam lifecycle
- Online registration & eligibility check
- CBT / hybrid exams with online proctoring
- Digital certificate validation

TRAINING ECOSYSTEM PLATFORM
- Integrated cloud-based training ecosystem
- Faculty development & LMS integration
- Simulator integration
- Skill development & competency enhancement

MARITIME KNOWLEDGE CLUSTER (MKC)
- National knowledge-sharing platform
- Research, innovation & collaboration
- Industry–academia–government partnership

SMART MARITIME INFRASTRUCTURE & FUTURE TECHNOLOGIES

INTEGRATED VESSEL TRAFFIC MANAGEMENT SYSTEM (iVTMS)
- Implemented across all major ports
- AIS, Radar, VHF, CCTV & weather integration
- Real-time vessel traffic monitoring & safety enhancement

JUST-IN-TIME ARRIVAL
- Synchronises vessel arrival with berth availability
- Reduces fuel consumption & emissions
- Improves berth utilisation & efficiency

DIGITAL TWIN TECHNOLOGY
- Real-time virtual model of port operations
- Pilot implemented at VOC Port, Tuticorin
- Supports predictive decision-making & optimisation

LRIT
- Long Range Identification & Tracking
- Enhanced maritime domain awareness
- Vessel monitoring & casualty reporting support

GEOSPATIAL PLATFORM
- GIS-enabled monitoring for port security & sustainability
- Supports ISPS compliance & safety initiatives

INDIA GLOBAL MARITIME SAFETY PORTAL (IGMSP)
- AI-enabled maritime safety platform
- Safety analytics, incident reporting & knowledge repository
- 200+ safety learning videos

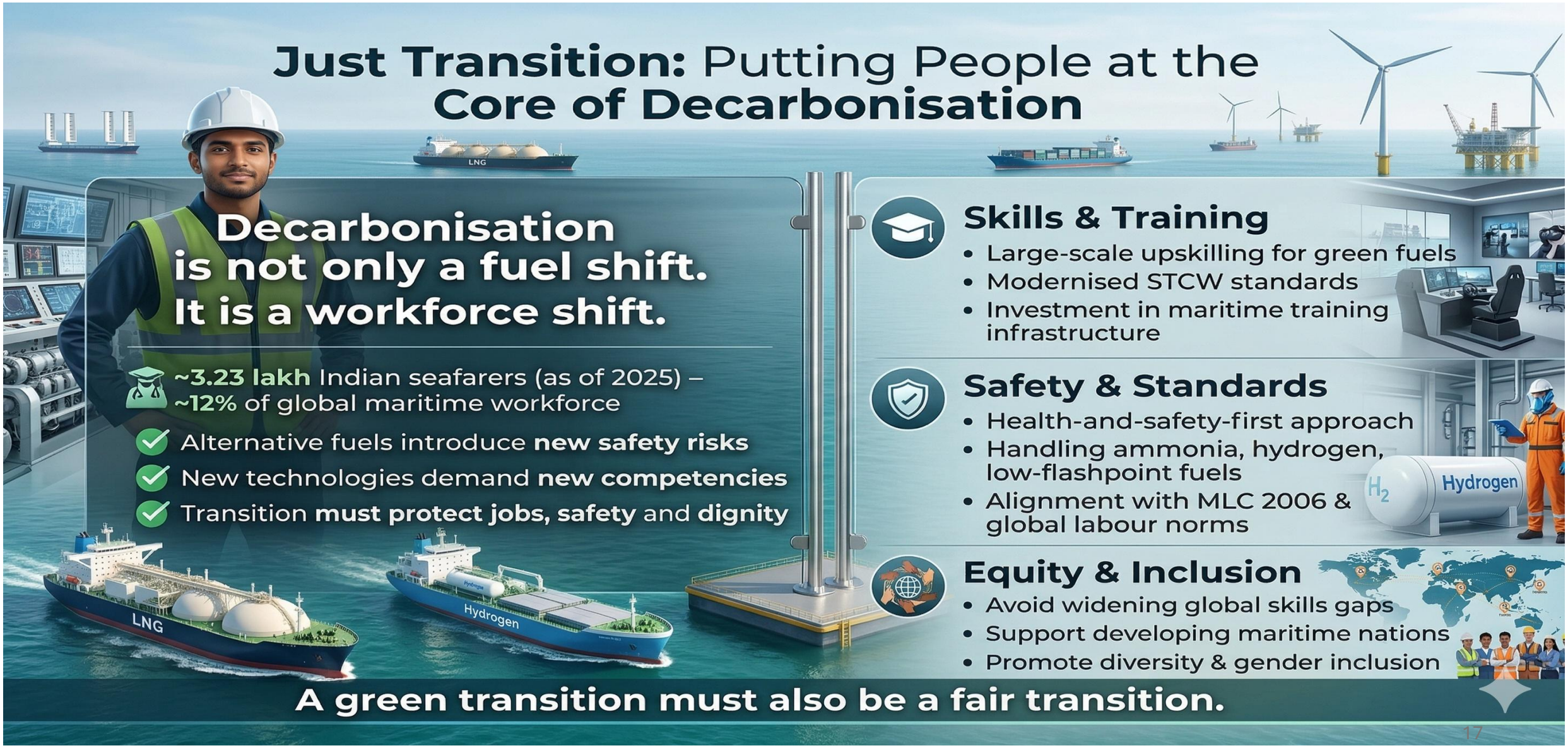
SWACHH SAGAR PORTAL
- Port Reception Facilities (PRF)
- Electronic BDN & Ballast Water Reporting
- Single Use Plastic Reporting
- MARPOL Compliance Monitoring
- Cleaner Ports, Cleaner Oceans

SHIP RECYCLING PORTAL
- HKC implementation platform
- Yard licensing & IHM management
- Inspection & compliance monitoring
- IMO reporting integration
- Sustainable ship recycling ecosystem

COMPREHENSIVE SHIPBUILDING PORTAL
- Industry directory
- Innovation centre
- Technical library
- Training & certification
- Shipbuilding ecosystem support
- Strengthening Make in India

Just Transition in Maritime

Human element is of paramount importance in the maritime industry as human skills, judgement and welfare drive maritime safety.



Suraksha Sarvapratham

Safety First

DGS is focused on promoting safety on vessels and is set to launch a campaign called the Suraksha Sarvapratham, ensuring that the seafarers are able to discharge their duties in a risk-free manner.

- To reduce accidents and minimize risks aboard ships.
- Detailed documentation of incidents that occur at sea and during port operations.
- Systematic recording and analysis of incidents will help identify patterns, understand root causes, and implement preventative strategies.
- Instill a culture of safety among seafarers.
- Web-based learning management systems for training.
- Free online courses will be developed.
- To create a safer working environment for seafarers by reducing the frequency and severity of accidents at sea and in ports.
- Comprehensive incident documentation, strict adherence to safety protocols, and innovative AI-based safety videos-– to establish Safety Culture.

SAFER VESSELS | EMPOWERED SEAFARERS | SMARTER SYSTEMS | STRONGER SAFETY CULTURE | SAFETY FIRST, ALWAYS

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

सागराः सुपन्थानः सन्तु