



GOA COASTAL STATE WORKSHOP

2nd MARCH 2026

SESSION DEBRIEF REPORT

2nd March 2026 | Novotel, Panjim, Goa

Organized by:



**CAPTAIN OF PORTS DEPARTMENT
GOVT. OF GOA**

Directorate General of Shipping (DGS), Ministry of Ports, Shipping & Waterways, Government of India

In collaboration with: Captain of Ports Department, Government of Goa

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1. Executive Summary

The Goa Coastal State Workshop, held on 2nd March 2026 at Novotel, Panjim, Goa, marked a milestone as the first physical **Coastal State Workshop** conducted in India under the national initiative of the Directorate General of Shipping (DGS), Ministry of Ports, Shipping & Waterways (MoPSW), Government of India. The full-day workshop, spanning approximately 7.5 hours of substantive content, brought together senior government officials, maritime industry leaders, academic institutions, and key stakeholders to deliberate on Goa's maritime ecosystem across six thematic pillars aligned with Maritime India Vision 2030 (MIV 2030) and Maritime Amrit Kaal Vision 2047 (MAKV 2047).

The workshop was inaugurated by Shri Shripad Yesso Naik, Hon'ble Minister of State for New & Renewable Energy, Government of India, in the distinguished presence of Dr. Pramod Sawant, Hon'ble Chief Minister of Goa, and Shri Digambar Kamat, Hon'ble Minister for Captain of Ports, Public Works & Legal Metrology, Government of Goa. Shri Pradeep Sudhakar, Chief Ship Surveyor-cum-Joint DG, Government of India, and Captain Octavio A. Rodrigues, Captain of Ports, Government of Goa, provided institutional leadership throughout the proceedings.

The six pillars addressed during the workshop were: (1) Maritime Safety & Emergency Response, covering casualty data, incident case studies, and the new liability framework under the Merchant Shipping Act 2025; (2) Shipbuilding & Ship Recycling, detailing India's ambitious ₹69,725 crore four-pillar policy framework and Goa's unique position contributing ~25% of India's shipbuilding capacity; (3) Maritime Training, Skilling & Zero Corruption, highlighting Goa's 6 Maritime Training Institutes and plans for a deep-sea diving school; (4) Maritime Crewing & Employment, showcasing Goa's 42,974 cumulative seafarers and welfare initiatives; (5) Decarbonisation, Sustainability & Environment, featuring Mormugao Port's status as India's first accredited green port with 100% solar power; and (6) Coastal Shipping & Inland Navigation, outlining ₹6,395 crore in investment commitments and strategic infrastructure plans.

Special industry presentations were delivered by Marinetek India (nautical tourism vision), the Shipyard Association of Goa (industry challenges and recommendations), Captain of Ports Department (comprehensive Goa maritime development status), ESRI India (GIS solutions for maritime operations), Ganpat University (GIME-GIAMC initiative), and IWAI (Jalyan Navik portal clarifications). The workshop was livestreamed on YouTube via the DG Shipping channel, ensuring transparency and broader stakeholder access.

The workshop identified 14 key challenges across pillars - from the absence of designated ports of refuge and inverted GST duty structures affecting shipbuilders, to bridge height constraints in Goa's rivers and limited R&D investment. A total of 20 actionable recommendations were formulated, encompassing infrastructure development, regulatory reforms, technology adoption, and institutional strengthening. The event set the framework for ongoing engagement, with online follow-up workshops planned every six months across all coastal states of India.

This workshop takes place against the backdrop of landmark new legislation - the Merchant Shipping Act 2025 and the Coastal Shipping Act 2025 - which together represent the most significant overhaul of India's maritime regulatory framework in decades.



2. Event Overview

Table 1. Event Overview

Parameter	Details
Event Name	Goa Coastal State Workshop
Date	2nd March 2026
Venue	Novotel, Panjim, Goa
Organizers	<ul style="list-style-type: none"> Directorate General of Shipping (DGS), MoPSW, Government of India Captain of Ports Department, Government of Goa
Knowledge Partner	Deloitte Touche Tohmatsu
Format	6 Thematic Pillars + Special Industry Presentations + Interactive Q&A
Significance	First physical Coastal State Workshop conducted nationally

Background

This workshop forms part of DGS's national initiative to engage with each coastal state individually, recognizing that each state has unique maritime strengths, challenges, and opportunities. The state-centric approach ensures that national policies under Maritime India Vision 2030 and Maritime Amrit Kaal Vision 2047 are tailored to local contexts and implemented effectively at the grassroots level.

The workshop takes place against a transformative legislative backdrop, with two landmark pieces of legislation recently enacted: the Merchant Shipping Act 2025, which comprehensively overhauls India's maritime regulatory framework across liability, marine incidents, investigation, wreck and salvage; and the Coastal Shipping Act 2025, which simplifies licensing for Indian-flagged vessels, integrates coastal and inland waterways, and establishes a National Database for Coastal Shipping.

Thematic Structure: Six Pillars of Maritime Excellence

- Pillar 1: Maritime Safety & Emergency Response
- Pillar 2: Shipbuilding & Ship Recycling
- Pillar 3: Maritime Training, Skilling & Zero Corruption
- Pillar 4: Maritime Crewing & Employment
- Pillar 5: Decarbonisation, Sustainability & Environment
- Pillar 6: Coastal Shipping & Inland Navigation

3. Distinguished Guests & Key Participants

The workshop was graced by a distinguished assembly of government leaders, senior officials, industry experts, and academic representatives, reflecting the high priority accorded to Goa's maritime development.

Chief Guest & Dignitaries

- **Shri Shripad Yesso Naik** – Hon'ble Minister of State, Ministry of New & Renewable Energy, GoI (Guest of Honour / Inaugurator)
- **Shri Digambar Kamat** – Hon'ble Minister for Captain of Ports, Public Works & Legal Metrology, Goa (Special Guest)

Senior Government Officials

- **Shri Pradeep Sudhakar** - Chief Ship Surveyor-cum-Joint DG, Government of India
- **Shri Octavio A. Rodrigues** - Captain of Ports, Government of Goa
- **Captain Harinder Singh** - Nautical Surveyor cum DDG (Technical), DG Shipping
- **Captain Anish Joseph** - Deputy Nautical Adviser cum Sr DDG (Technical), DG Shipping
- **Shri Ravi Kumar Moka** - Ship Surveyor cum DDG (Technical), DG Shipping
- **Shri Gopi Krishna** - DG Shipping (Ship Recycling)
- **Shri Praveen Nair** - DG Shipping (Training Branch)
- **Shri Vineet Pandey** - Deputy Director (Maritime), IWAI
- **Shri Constantino, Radio** - Officer, Department of Captain of Ports

Industry & Academic Leaders

- **Shri Shivram Kamat** - Director, Institute of Maritime Studies
- **Dr. Ravi Gupta** - Founder & CEO, Elets Technomedia
- **Shri Rajiv Ranjan** - Project Head, Elets Technomedia
- **Shri Gautam Datta** - Managing Director, Marinetek India
- **Shri Priyesh Kamat** - President, Shipyard Association of Goa
- **Dr. Saurabh Dave** - Senior Pro-Chancellor, Ganpat University
- **ESRI India Representative** - GIS Solutions for Maritime Operations

The workshop was also attended by young cadets from Ganpat University, representing the future of India's maritime workforce.

4. Inaugural Session

The Inaugural Session formally commenced the Goa Coastal State Workshop with ceremonial proceedings and keynote addresses that established the strategic context for the deliberations. This session set the tone for the workshop with welcome addresses, and a powerful inaugural address by Shri Shripad Yesso Naik.

Address by Shri Shivram Kamat, Director, Institute of Maritime Studies

The session commenced with the opening address delivered by Shri Shivram Kamat Director, Institute of Maritime Studies. The address was delivered in the presence of dignitaries including Shri Shripad Yesso Naik Hon'ble Minister of State, Ministry of New & Renewable Energy, Pradeep Sudhakar, Chief Ship Surveyor-cum-Joint DG, Government of India, and Captain Octavio A. Rodrigues Captain of Ports, Government of Goa, along with representatives from government agencies, maritime institutions, and industry stakeholders.

In his address, Shri Kamat highlighted that the development of the maritime sector in coastal states aligns with India's national development vision during the Amritkal period, wherein the country's extensive coastline is envisaged to serve as a catalyst for economic growth, trade facilitation, and enhanced global maritime connectivity.



Figure 1. Welcome Address by Shri Shivram Kamat, Director, Institute of Maritime Studies

He further noted the growing potential for Goa to move towards higher value maritime services such as ship design and specialized marine solutions. Emphasizing the importance of maritime education, he highlighted the need to strengthen existing maritime training institutions in the state to meet the rising global demand for skilled professionals.

Shri Kamat concluded by stating that with Goa's strong maritime heritage, institutional base, and skilled human resources, and with appropriate policy support and stakeholder collaboration, the state has the potential to emerge as a model maritime training hub contributing to India's maritime growth.

Welcome & Opening

The session began with the introduction of dignitaries on the dais, followed by a pre-inaugural address by Dr. Saurabh Dave, Senior Pro-Chancellor, Ganpat University. Dr. Dave highlighted Goa's strong maritime legacy and seafaring ecosystem, and outlined the University's commitment to strengthening maritime education and industry-aligned skilling.

He detailed the establishment of the Goa Institute of Maritime Excellence (GIME) under a Public Private Partnership with the Captain of Ports Department, Government of Goa. The institute is envisioned as a comprehensive maritime training hub offering pre-sea and post-sea programmes, upskilling initiatives, and specialised courses. He informed that over 100 cadets have already been enrolled under the new entrant training programme and outlined plans for advanced facilities, including deep-sea diving training and expanded undergraduate and postgraduate maritime education programmes. Emphasis was placed on quality training, industry readiness, research integration and enhanced participation of women in maritime careers.

The ceremonial lamp-lighting marked the formal inauguration of the workshop.



Figure 2. Inaugural Session - Lamp Lighting Ceremony with Hon'ble CM and dignitaries

Inaugural Address by Shri Shripad Yesso Naik

The Inaugural Address was delivered by **Shri Shripad Yesso Naik**, Hon'ble Minister of State, Ministry of New & Renewable Energy, Government of India. In his address, the Hon'ble Minister contextualised Goa's maritime development within India's broader vision under Maritime Amrit Kaal Vision 2047:

He stated:

"It gives me immense pleasure to inaugurate the Goa Coastal State Workshop. Goa has a long and proud maritime heritage. For centuries, our coastline has supported trade, livelihood, fisheries, and cultural exchange. As India advances towards becoming a leading maritime nation, Goa has a unique opportunity to strengthen its position in coastal shipping, ship building services, tourism and maritime employment. This workshop is particularly significant because it adopts a state-centric approach.

Each coastal state has its own strengths and challenges and Goa's maritime ecosystem anchored by its ports, ships and skilled seafaring community can contribute sustainably to India's blue economy.

The Hon'ble Minister highlighted the importance of adopting a state-centric approach, recognising that each coastal State possesses distinct strengths and developmental considerations. He emphasised that Goa's ports, shipbuilding capabilities and skilled seafaring community position the State to contribute meaningfully to India's Blue Economy.

He further reiterated the Government of India's commitment to port modernisation, coastal shipping promotion, maritime infrastructure enhancement and employment generation. Stressing

collaborative implementation, he called for strengthened coordination between government, industry and academia to ensure sustainable and resilient maritime growth.

The Inaugural Session effectively set the policy tone for the workshop, reinforcing structured Centre - State engagement and alignment with national maritime priorities.



Figure 3. Hon'ble Minister Shri Shripad Naik addressing the gathering

Brochure Launch

A workshop brochure outlining the six pillars of maritime excellence was formally released during the Inaugural Session by the dignitaries. The document has been prepared in alignment with the framework of the Directorate General of Shipping and the Captain of Ports Department, Government of Goa. It provides a structured overview of the thematic areas, key focus segments, and intended outcomes of the Goa Coastal State Workshop.



Figure 4. Brochure Launch by dignitaries

Token of Gratitude

Tokens of appreciation were presented to the distinguished guests in acknowledgment of their participation and guidance. The Inaugural Session concluded with a brief tea and networking break prior to the commencement of the technical deliberations.



Figure 5 . Token of Gratitude presentations

5. Pillar 1: Maritime Safety & Emergency Response

The first thematic pillar focused on strengthening maritime safety architecture, emergency preparedness, and the evolving liability and compensation framework. The session comprised two structured presentations covering operational response mechanisms, casualty trends, regulatory reforms, and international liability conventions.

5.1 Maritime Casualties & Response - Captain Harinder Singh

Captain Harinder Singh, Nautical Surveyor cum Deputy Director General (Technical), Directorate General of Shipping (DG Shipping), presented an overview of India's maritime incident response framework, recent casualty trends, and key operational learnings from major incidents along the Indian coastline.

DG Communication Centre (DG COM)

The DG COM Centre functions as the national single-point coordination hub for all reported maritime incidents and casualties in Indian waters. Operating on a 24x7 basis, the Centre receives distress alerts including Ship Security Alert System (SSAS) signals, and notifications from vessels, ports, MRCCs, and other maritime stakeholders.

Upon receipt of an incident report, DG COM undertakes real-time situational assessment based on severity, jurisdiction, environmental sensitivity, and navigational risk. It coordinates response measures with the Indian Coast Guard, Indian Navy, port authorities, and concerned State administrations.

During cyclones and large-scale emergencies, DG COM assumes the role of the primary coordination node, centralizing decision inputs and ensuring unified and calibrated response actions.

Maritime Casualty Trends (2023 - 2025)

The data compiled by the Casualty Branch of DG Shipping indicates a steady increase in reported incidents over the last three years as detailed mentioned below,

Table 2. Maritime Casualty Trends (2023-2025)

Year	Total Incidents	Marine Casualties	Non-Operational
2023	153	74	79
2024	186	78	108
2025	214	105	109

Key findings: 40% increase in total incidents from 2023 to 2025; 34.6% rise in marine casualties (78 to 105) in 2025; 34 seafarers lost to marine casualties; 66 non-marine deaths.

"This year alone we have lost 100 seafarers... like losing a seafarer every third day."

On the preventive side, over 3,200 Port State Control (PSC) inspections were undertaken in 2025. India's PSC detention rate has reduced from 4.5% in 2019 to 2.1% in 2025, reflecting strengthened inspection and compliance regimes.

Fishing Vessel Collisions (2023–2025)

Fishing vessel collision incidents remain an area of concern, particularly in coastal States with significant fishing communities. Between 2023 and 2025:

Table 3. Fishing Vessel Collisions (2023–2025)

Year	Collisions	Fatalities	Injuries
2023	8	2	6
2024	9	2	2
2025	10	5	0
Total	27	9	8

Key operational challenges include:

- Delayed incident reporting (in certain cases up to 196 hours)
- Low detectability of small wooden fishing boats, especially in adverse weather
- Weak onboard communication systems
- Inadequate insurance coverage

The need for capacity building, improved reporting mechanisms, zone-based monitoring, and a structured insurance framework for fishing vessels was emphasized.

Case Study 1: Maersk Frankfurt Fire (19 July 2024, Off Goa)

A major fire broke out aboard the Panama-flagged container vessel approximately 33 NM off the Goa coast. Cargo including cyanide containers caught fire (bays 14–22). One Filipino able seaman lost his life. The Indian Coast Guard deployed surface assets; DG Shipping dispatched ETV Water Lily from Mumbai. Coordinated response involved Coast Guard, Navy, DG Shipping, Goa Port, and New Mangalore Port. No marine pollution reported.

"This incident presented a significant gap – we did not have a port of refuge in India."

The vessel eventually sailed to Port Jebel Ali to discharge containers, highlighting India's critical need for designated ports of refuge.

Case Study 2: MSC Elsa 3 Sinking (24–25 May 2025, Off Kerala)

The MSC Elsa 3 listed and sank ~14 miles off Kerala coast at ~52m depth. Carried 643 containers including 13 IMDG containers, 367 tonnes HFO and 64 tonnes diesel. All 24 crew safely evacuated. ~66 containers washed ashore; 720 metric tonnes of plastic nurdles recovered. 367 metric tonnes of fuel oil recovered through hot tapping and saturation diving by September 2025. Diesel tanks submerged 5m below seabed remain unrecovered. Tamil Nadu government claim: ~₹1,000 crore; admiralty court figure: ₹9,531 crore.

Case Study 3: Bana 503 – Fire & Explosion (Off Kerala)

Fire and explosion resulted in 4 seafarer fatalities and 6 injuries. Crew rescued by Indian Coast Guard, transferred to INS Suvarna. Naval helicopters deployed to connect tow lines. Port Jebel Ali charged ~\$50 million (~INR 500 crore) to vessel owner.

Other Notable Incidents

- Inter Asia Tenacity – Fire on container ship off Kerala coast
- Fula – Tanker explosion off Kandla

The clustering of multiple major incidents within a short period led to high-level inter-ministerial review and ultimately informed the initiation of Coastal State Workshops to strengthen preparedness and coordination.



Figure 6. Pillar-1 Captain Harinder Singh presenting Maritime Safety]

Key Takeaways & Solutions

- Establishment of a unified response framework integrating Central and Coastal State authorities
- Streamlining customs and immigration processes for rapid salvor mobilization
- Pre-approval of hazardous waste management agencies at ports

- Designation of ports/places of refuge
- Development of national salvage capability to reduce dependence on foreign assets
- Strengthening Port State Control and compliance mechanisms
- Institutionalized multi-agency emergency drills

DG Shipping Initiatives

- Coastal State Advisory Framework (submitted for inter-ministerial coordination)
- MS Notice mandating emergency tug deployment for ports handling >10 MMT cargo
- Development of a Maritime Compensation Fund
- Deployment of Emergency Towing Vessels: Water Lily (West Coast) and Ocean Bliss (East Coast)
- Alpha Tag vessel identification programme
- Mandatory salvage and marine pollution response contracts under revised entry norms contract

5.2 Liability & Compensation Framework - Captain Anish Joseph

Captain Anish Joseph, Deputy Nautical Adviser cum Senior Deputy Director General (Technical), DG Shipping, presented the structured liability and compensation regime applicable to maritime incidents, with reference to international conventions and domestic legislative reforms.



Figure 7 Pillar 1 - Captain Anish Joseph presenting Liability & Compensation Framework

International Convention Framework

India's liability regime is aligned with key International Maritime Organization (IMO) conventions, including

- LLMC 1976 – tonnage-based limitation unique to shipping
- CLC 1992 – persistent oil from tankers
- Bunker Oil Pollution Convention 2001
- Fund Convention 1992 (second tier) – India is a party
- Supplementary Convention (third tier) – India NOT yet a party
- Nairobi Wreck Removal Convention 2007
- Salvage Convention
- HNS Protocol 2010 (not yet in force)

These conventions establish structured compensation mechanisms, permit direct action against insurers in specified cases, and operationalize the “polluter pays” principle while ensuring insurability of maritime trade.

Insurance Framework

Under the Port Entry Rules 2012 (now proposed as Coastal Waters Entry Rules), vessels calling at Indian ports are required to maintain valid Protection & Indemnity (P&I) insurance. Coverage is accepted from International Group (IG) P&I Clubs and approved non-IG insurers recognized by the Government of India. This framework ensures financial security for pollution response, wreck removal, and third-party claims.



Merchant Shipping Act 2025 – Key Provisions

The Merchant Shipping Act 2025 strengthens the domestic legal framework by:

- Bunker Convention incorporated into domestic regime
- Wreck Convention formally integrated

- Part 13: mandate for salvage framework
- ~50 rules being legislated, ~10 on marine incident response/liability
- Port Entry Rules 2012 renamed to "Coastal Waters Entry Rules"
- Mandatory salvage contract and marine pollution response contract
- Age norms: 10+ years must have recognized class (reduced from 15–20 years)

The presentation concluded with an invitation to stakeholders to participate in upcoming focused workshops on casualty response and liability mechanisms, including engagements with the International Group of P&I Clubs.

6. Special Presentation: Marinetek – Nautical Tourism Vision

Shri Gautam Datta, Managing Director of Marinetek India and a former Army officer (Retd. Colonel), delivered a presentation on positioning Goa as a structured nautical tourism destination. He highlighted the role of enabling infrastructure in unlocking maritime-led economic value.

Marinetek, headquartered in Finland and operational across more than 50 countries, has executed several internationally recognized marina and waterfront infrastructure projects, including the Palm Jumeirah Marina and leading marina developments in Phuket and other global coastal destinations. The company specializes in floating concrete pontoon systems and integrated marina solutions.

The Nautical Tourism Opportunity

The presentation highlighted the significant gap between India and developed maritime economies in terms of private recreational vessel usage. Currently, less than 1% of Indian waterway users comprise private boats, whereas in developed countries such as the United States, private and recreational vessels constitute approximately 80 - 90% of total waterway traffic.

This disparity reflects a substantial untapped opportunity in the recreational and leisure maritime segment.

"The kind of tourism that super yachts or luxury boats bring is completely different from charter flights tourism."

The speaker noted that high-value nautical tourism generates differentiated economic outcomes, including increased per capita expenditure, marina-linked services, maintenance ecosystems, and premium hospitality demand.

International benchmarks such as Greece, Croatia, Maldives, and Thailand were referenced to illustrate how structured marina infrastructure has catalyzed coastal economic transformation.

In the context of Goa, it was observed that beach tourism remains seasonal (approximately three months of peak activity), whereas nautical tourism has the potential to operate across a longer annual cycle - sea-based activity during fair weather months (October - April) and river-based operations during the monsoon season, given Goa's extensive inland waterways.

Infrastructure Requirements

The presentation highlighted that infrastructure is the foundational enabler for nautical tourism development. Key requirements identified include

- Marinas and yacht berths
- Tourism board jetties
- Sea plane terminals (PMO priority)
- Floating villas and hospitality
- Floating pedestrian bridges

It was highlighted that without planned docking and berthing systems, growth in private vessel ownership and organized leisure boating will remain constrained.

Marinetek Projects & Capabilities

Marinetek India has executed and is executing multiple floating infrastructure projects within India. Illustrative examples cited include:

- Floating dock in Panjim and Old Goa
- Floating concrete pontoon systems with 50-year design life
- Cochin Water Metro (inaugurated by PM) – floating concrete docks
- Sea plane terminal docks
- Srinagar, J&K – 8 water terminals under construction

Vision for Goa

A phased and integrated approach to nautical tourism development in Goa was proposed, leveraging the State's five principal river systems - Mandovi, Zuari, Chapora, Baga, and Sal.

Key components of the proposed vision include:

- Creation of distributed docking nodes across riverine corridors
- Development of a heritage waterway trail linking Old Goa and Divar Island
- Exploration of a sea plane network to enhance multimodal tourism connectivity
- Gradual scaling through pilot marinas and tourism jetties, followed by structured expansion

The approach emphasized calibrated development aligned with environmental sensitivity and carrying capacity considerations.

Recommendations

The following policy-level recommendations were articulated:

- Lateral benefits to fishermen and communities from marina infrastructure
- Government-backed marina/docking system builds investor confidence
- Attract private hospitality, charter operators, water sports businesses, yacht clubs
- Training for private vessel licensing parallel to commercial maritime training

Overall, the presentation positioned nautical tourism as a complementary pillar within Goa's broader maritime development strategy, contingent upon the creation of enabling infrastructure and supportive policy alignment.



Figure 8. Marinetek – Gautam Datta presenting Nautical Tourism vision

7. Pillar 2: Shipbuilding & Ship Recycling

The second pillar covered India's ambitious shipbuilding vision and the growing ship recycling sector with an overview of the multi-component ecosystem of India's maritime sector across ports, shipping, and inland waterways.

7.1 Shipbuilding Overview – Shri Ravi Kumar Moka

Shri Ravi Kumar Moka, Ship Surveyor-cum-Deputy Director General (Technical), Directorate General of Shipping, presented a structured overview of the shipbuilding sector. His presentation outlined the current regulatory framework, institutional mechanisms, and key technical considerations governing ship construction in India, while highlighting areas for capacity enhancement and alignment with national maritime objectives.

India's Maritime Sector Statistics

It was highlighted that the Indian maritime sector functions as a multi-component ecosystem encompassing ports, shipping, and inland waterways

Table 4. India's Maritime Sector Statistics

Parameter	Value
GDP	\$4.19 trillion
Trade by volume (maritime)	94%
Trade by value	75%
Maritime GDP contribution	4 - 5%
Major ports	12
Non-major ports	217
Cargo handled (FY 2025)	1,593 million MT
Indian flag vessels	1,545 (~13.5 Mn GT)
Active seafarers	~3.2 lakh
Waterways (operational)	111 (29 operational)
Maritime employment	74 lakh (target: 1.5 crore by 2047)

India's Shipbuilding Position

India ranked 16th globally with 0.6–0.7% global share. Indian EXIM cargo on Indian ships: dropped from 41% (1988) to 5%. Only 7% of Indian flag ships built in India; 94% built by China, Korea, Japan. 61 total shipyards. Global market expected to reach \$260+ billion by 2029; 3+ year backlogs in China (3.8 yrs) and Korea (3.9 yrs); ~4,600 vessels in global order book; 40% of fleet above 20 years needs replacement.

National Vision Targets

At present, India's shipbuilding capacity stands at approximately 0.5 million GT (2024), ranking 16th globally. Targets under national vision documents include:

Table 5. National Vision Targets

Parameter	MIV 2030	MAKV 2047
Global Ranking	Top 10	Top 5
Annual Production	0.6 Mn GT	4.5 Mn GT

Employment	20+ Lakh jobs	1.5 Crore jobs
Investment	INR 3 -3.5 Lakh Cr	INR 75 - 80 Lakh Cr

Four-Pillar Policy Framework INR69,725 Crore Total)

To address structural gaps, the Government has introduced a four-pillar framework:

Table 6. Four-Pillar Policy Framework

Pillar	Scheme	Allocation INR Cr)	Key Features
1	SBFAS	24,736	15–25% assistance; Ship Scrap Credit Note; up to 30% for green vessels
2	Maritime Development Fund	25,000	Govt 49% equity; up to 3% interest subsidy
3	Shipbuilding Development Scheme	~20,000	Greenfield ₹9,930 Cr; Brownfield ₹8,261 Cr; Design ₹305 Cr; Risk ₹1,443 Cr
4	Legal & Policy Reforms	—	Infrastructure status; Right of First Refusal; GIFT City tax holiday

Demand Aggregation

Demand aggregation has identified approximately 437 vessels (19 million GT) valued at nearly INR 2.2 lakh crore, primarily from PSUs in oil & gas, shipping, dredging, and port sectors. Mandates for green tugs (approx. 100 units over 10 years, valued at ₹12,000 crore) and dredger acquisitions by DCI are part of the near-term pipeline. During Indian Maritime Week, 20 MoUs worth approximately INR 8,200 crore were signed for shipyard infrastructure development.

Goa Shipbuilding Profile

Goa accounts for approximately 25% of India's shipbuilding capacity, with nearly 15–16 operational yards (and additional unregistered facilities). The Konkan Maritime Cluster has already been conceptualized with support from the Government of Goa and the central ministry, and efforts are underway to accelerate its development.

The Coastal Shipping Workshop in Goa—being the first physical workshop of its kind—was positioned as a model for replication across other coastal states. The objective is structured Centre–State consultation, identification of bottlenecks, and preparation of actionable follow-up plans.



Figure 9. Pillar 2 – Shipbuilding & Ship Recycling session by Shri Ravi Kumar Moka

7.2 Ship Recycling - Shri Gopi Krishna

Shri Gopi Krishna, Engineer cum Ship Surveyor Director General (Technical), DGS Ministry of Ports, Shipping & Waterways presented an overview of India's ship recycling sector, highlighting the sector's contribution to resource efficiency, employment generation, and maritime circular economy objectives.

India's Ship Recycling Leadership

Unlike shipbuilding, India is a global leader in ship recycling, accounting for 30 - 35% of global recycling volume. The sector contributes 20 - 25% of India's ferrous scrap requirements, reducing import dependency.

Table 7. India's Ship Recycling Leadership

Parameter	Value
Global share	30–35% (~800 vessels/year)
Ferrous scrap	20–25% of India's needs (4–5 Mn tonnes/yr)
National capacity	6.2 Mn GT annually
HKC compliant yards (Alang)	115 of 150
Direct employment	15,000+
Total employment	1.7 lakh

Parameter	Value
GDP contribution	INR 30,000 crore/year
CO ₂ avoided	20 Mn tonnes/year
Materials recoverable	97–98%

Regulatory Framework

India aligned its domestic framework with the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships. Hong Kong Convention entered into force 26 June 2025. India was FIRST major recycling nation to accede (2019). DG Shipping as National Authority (15 Dec 2020). Ship Recycling Rules 2021 (26 Feb 2021). Ship Recycling Regulations 2026 (12 Jan 2026). Mandatory: Inventory of Hazardous Materials, Ship Recycling Facility Plan, Ship-Specific Recycling Plan.

Challenges and Opportunities

Nearly 98% of ship recycling is concentrated in Alang, indicating geographic imbalance. There is opportunity for diversification, particularly in states with shipbuilding activity such as Goa.

Unregulated vessel layups can pose navigational and environmental risks, underscoring the need for structured governance mechanisms. A lifecycle integration approach from shipbuilding to operation, repair, and recycling was highlighted.

Goa : Strategic Potential in Ship Recycling

Goa has a 193 km coastline, strong inland waterway presence, and concentration of small and medium vessels. It also maintains high environmental standards due to CRZ regulations and its status as a tourism hub.

Given the availability of skilled and semi-skilled manpower engaged in shipbuilding, Goa has potential to develop controlled, compliant ship recycling facilities, provided:

- Non-beaching dismantling in dry docks or berths
- Impermeable flooring and zero-discharge drainage systems
- Hazardous waste handling facilities
- Real-time environmental monitoring
- Digital hazardous material tracking
- Strict worker safety and emergency response systems

Such development would require calibrated planning, balancing economic opportunity with environmental safeguards.



Figure 10. Pillar 2 – Shipbuilding & Ship Recycling session by Shri Gopi Krishna

Goa Ship Recycling Opportunity & Roadmap

- Phase 1: Baseline assessment
- Phase 2: Regulatory framework development
- Phase 3: Pilot operations
- Phase 4: Compliance stabilization with HKC
- Phase 5: Performance review and upscaling

Proposed Ferrous Scrap Development Fund for yard infrastructure, worker welfare, green recycling, and R&D.

8. Special Presentation: Shipyard Association of Goa

Shri Priyesh Kamat, President, Shipyard Association of Goa, presented a comprehensive overview of the sectoral landscape and the structural challenges faced by MSME shipyards in the State. He expressed appreciation to the Government of Goa and the Captain of Ports Department for providing the Association an opportunity to formally articulate industry concerns and recommendations.

Global & National Context

Shri Kamat briefly contextualised Goa's shipbuilding ecosystem within the global and national framework. The global shipbuilding market is currently estimated at approximately USD 150 billion and is projected to grow to nearly USD 230 billion by 2030, at an annual growth rate of 3.5 - 4%. At present, India's share stands at approximately USD 1 billion, indicating significant untapped potential.

He noted that global shipbuilding continues to be dominated by China, South Korea, and Japan, which together account for nearly 90% of manufacturing capacity.

At the national level, he observed that growth in the Indian shipbuilding sector is presently policy-driven, with strong Government support. Projections indicate that India could potentially witness growth of up to 60% CAGR over the next 5 - 6 years, presenting a strategic opportunity for existing and emerging shipyards.

Goa Sector Profile

Goa has a longstanding shipbuilding heritage dating back to the Portuguese era. The State continues to host prominent public and private players, including:

- Goa Shipyard Limited (established in 1957)
- Chowgule & Company
- Dempo Shipbuilding & Engineering
- Mandovi Vijay Marine
- Prakash Engineering Works

At present, Goa has approximately 56 workshops and shipyards, of which around 30 are operational, while others are seeking sustained order flow. The State supports an active fleet of approximately 450 - 500 large vessels and has developed a functional ecosystem of suppliers and vendors catering to shipbuilding and repair requirements.

Challenges Identified

1. High Capital Investment

Shipbuilding is capital-intensive, requiring substantial upfront investment in infrastructure, dry docks, machinery, and working capital. Additionally, execution of large vessel orders necessitates

bank guarantees (BGs) and letters of credit (LCs), which significantly lock up capital for MSME shipyards.

The Association requested consideration of credit support mechanisms similar to the CGTMSE framework, enabling collateral-free or partially guaranteed bank guarantees for eligible shipyards, subject to due diligence.

2. Licenses & NOCs (11–12 per yard)

Each shipyard is required to obtain and periodically renew approximately 11 - 12 licenses and statutory clearances, typically within one- to two-year cycles. Smaller shipyards lack dedicated compliance departments, resulting in promoters directly managing regulatory processes.

"Smaller shipyards don't have a dedicated department for issuing licenses. The promoter is always running out to government departments."

The Association strongly recommended the introduction of a Single Window Clearance mechanism or a nodal department to coordinate inter-departmental approvals, thereby reducing administrative burden and transaction delays.

3. Inverted Duty Structure (Most Critical)

A key concern highlighted was the inverted GST structure applicable to shipbuilding:

Approximately 30 - 40% of shipbuilding costs are labour-related, where GST on services is not fully refundable. This results in accumulation of unutilised input tax credit, with larger shipyards reportedly holding INR 5–10 crore in blocked GST input.

The effective cost escalation due to this structure is estimated at 6 - 7% per vessel.

In the case of export orders, 18% GST is held during the project lifecycle (typically 15 - 18 months) before refund, creating significant cash flow constraints. Resolution of the inverted duty structure could potentially reduce vessel costs by 5 - 7%, thereby enhancing competitiveness.

"30 to 40% of cost of production goes into labor where services GST is not refunded."

"Any two-three large shipyards will have 5 crore, 10 crore in GST input available which is very unfair."

4. Bridge & Air Draft Constraints

Goa's shipyards are largely located along riverbanks, where bridge infrastructure restricts vessel movement due to air draft limitations:

River/Waterway	Air Draft	Additional Constraints
Mandovi	13 metres	—
Cumbarjua Canal	15 metres	70m length restriction
Zuari	19 metres	—

It was highlighted that 80 - 90% of Goa's shipyards operate within these constrained corridors, limiting the construction and movement of larger coastal or higher-specification vessels.

"80-90% of Goa shipyards are operating where there are large network of bridges."

5. Dredging Needs

The Association highlighted the need for systematic dredging at river mouths and along access channels to facilitate safe navigation.

Additionally, shipyards with private jetties require permission to dredge from jetty points up to the navigational channel. Tidal dependence and sedimentation presently restrict operations. Environmental considerations, including CRZ regulations, were acknowledged, and the Association requested structured mechanisms to address navigational dredging requirements in compliance with statutory norms.

6. Electricity Quality

Many shipyards are located away from designated industrial zones and are situated along riverbanks or coastal areas. During peak summer months, voltage fluctuations of 5–10% below required levels were reported.

Such instability adversely affects instrumentation, compressors, inverters, and other sensitive equipment, impacting productivity and maintenance costs. The Association recommended improved grid connectivity or classification of shipyard zones as industrial clusters to ensure reliable power supply.

Recommendations

- **Outfitting Jetty Outside Bridge Network** : Establishment of two common outfitting jetties with 200-ton crane capacity—one along the Mandovi (Panjim side) and one at Mormugao—to enable final outfitting of larger vessels beyond bridge restrictions.
- **Trade Skill Development** : Introduction of short-duration (30–45 day) skill enhancement courses for welders, fitters, grinders, and related trades, including 3G, 4G, and 6G welding certifications. Emphasis was placed on practical workmanship quality rather than long-duration academic certification.
- **R&D / Innovation Fund** : Creation of a State or Centre-supported innovation fund to promote indigenous development of ship components and marine equipment, many of which are currently imported. Competitive project proposals from shipyards, academia, and vendors may be invited for targeted funding support.
- **Support Infrastructure**: Improvement of last-mile road connectivity to shipyards to enable movement of containers and ODC cargo. Standardisation of utility poles and overhead infrastructure near shipyard zones was also recommended.
- **Solar Power Subsidy**: Consideration of a capital subsidy model (similar to certain State solar policies) to enable shipyards to install captive solar power systems, particularly where grid connectivity is sub-optimal.
- **Micro-Cluster Development**: Development of common facility centres in river-based clusters (e.g., 7–8 yards along Zuari), with shared access to specialised equipment such as robotic painting systems or crawler-based surface treatment units.

- **Business Development & Trade Promotion:** Institutional support for participation in international maritime exhibitions (e.g., Singapore and other maritime hubs), enabling MSME shipyards to showcase capabilities through a common State or National pavilion.
- **PSU Project Allocation Cap:** It was suggested that Public Sector Undertakings may refrain from competing for projects valued below INR 15-20 crore, to safeguard MSME participation and promote balanced sectoral growth. crore



Figure 11. Priyesh Kamat – Shipyard Association of Goa presentation

9. Special Presentation: Captain of Ports – Goa Maritime Development

Shri Captain Octavio A. Rodrigues of the Captain of Ports Department, Government of Goa, provided a comprehensive overview of the State's maritime governance framework, institutional legacy, infrastructure capacity, and forward-looking initiatives aligned with the six pillars of maritime excellence articulated by the Directorate General of Shipping.

Department Overview

The Captain of Ports Department, established in 1912 during the Portuguese era, continues to function as the nodal authority for non-major ports in Goa. The State currently has 11 dry docks and 10 workshops, supported by associated maritime facilities. Of Goa's nine rivers, six have been declared National Waterways, with the Mandovi, Zuari, Cumbarjua and Mapusa rivers being operationally active.

Infrastructure Developments

A new terminal building for the Captain of Ports Department is nearing inauguration in Panaji. The facility will house administrative offices and an integrated control centre to strengthen operational oversight.

The State Maritime and Waterways Transport Committee has been constituted to prepare a comprehensive State Waterways Master Plan, to be submitted to the Ministry of Ports, Shipping and Waterways for funding under Sagarmala and PPP frameworks. It was highlighted that projects routed through this structured mechanism would be considered for central support.

Pillar-wise Initiatives

Maritime Safety and Casualty Response

The Department outlined several measures undertaken to enhance maritime safety:

- Signing of an MoU with HITES for AI-based early warning systems covering disaster management, search and rescue, oil spill preparedness, and dredging support.
- Real-time dissemination of weather advisories to vessel operators, including water sports operators and cruise boats.
- Focus on dredging river mouths to ensure navigational safety, subject to environmental and CRZ compliance.
- Proposal for bridge fendering systems to safeguard critical infrastructure.
- Installation and maintenance of navigational aids, including light beacons and lighthouses, with DPRs submitted for upgradation of dilapidated structures.

Key challenges flagged included heritage and archaeological clearances for Vessel Traffic and Port Management Systems (VTPMS), CRZ constraints, and balancing environmental considerations with navigational safety. VTPMS DPR (drone surveillance, CCTV, long-range cameras 10km, solid state radar) - IIT Madras vetting

Shipbuilding and Ship Recycling

Goa hosts a distributed ecosystem of privately owned shipyards, MSME workshops and marine service providers, with approximately 40 operational units. The State has successfully exported vessels to Europe and developed specialised vessels, including ice-class builds.

However, operational constraints were highlighted:

- Closure of certain shipyards due to regulatory actions.
- Draft limitations (maximum ~3.2 metres).
- Bridge height constraints and land availability challenges.
- Competition from PSUs for smaller-value contracts, potentially impacting MSME shipyards.

To address infrastructure bottlenecks, the Department proposed:

- Installation of a 200-ton crane at a western location to facilitate hull outfitting and superstructure integration.
- Development of a marine slipway under PPP mode.
- Formulation of a dedicated Shipbuilding Policy in consultation with stakeholders.

Maritime Training

The Betul Maritime School is being upgraded in collaboration with Goa University to expand training offerings, including trade certifications (welding, cutting) and diving courses. The State also hosts established maritime institutions such as:

- Institute of Maritime Studies
- NUSI Maritime Academy

Certification frameworks are being aligned with national standards and integrated with the Jal Navik portal to enable digital registration, crew tracking, and improved compliance under the Inland Vessels framework.

- Britona Maritime School → GIME (PPP with Ganpat University)
- Trade courses for welders, cutters
- First diving school planned
- Existing: Institute of Maritime Studies, NUSI Maritime Academy, Cecan Marine Institute, ISBT, ONGC ATI

Green and Sustainable Maritime Initiatives

The Department outlined measures to support energy transition in the inland water transport segment, including:

- Pilot trials for gas-based retrofitting of outboard motors (9.9–24 HP range), aimed at reducing fuel costs by approximately 50%.
- Promotion of solar-electric ferries, with proposals to explore subsidy support under central schemes.
- Integration of drone surveillance and solid-state radar systems under the proposed Vessel Traffic and Port Management System (VTPMS).

Coastal Shipping

Panaji operates as an anchorage port. The Department is exploring remotely operated mooring buoys to enhance EXIM cargo handling efficiency. Following the resumption of mining-linked trade, efforts are underway to revive barge operations, including conversion of barges for coastal movement to Maharashtra markets.

Cold storage infrastructure for fisheries and GI pharmaceutical logistics has been proposed, along with feasibility studies for water taxi services and mini-harbour development at Cortalim.

Following are the additional initiatives undertaken by CoP,

- Coastal Shipping Committee formed
- Mining: 400 barges (2012) → 29 operating
- Water taxi feasibility study completed
- Dredging at Cumbarjua planned (DPR via Heights)
- 7 coastal community jetties under Sagarmala (Goa got "zero rupees" from 1.0)
- 10 cruise jetties (4 by IWAI, 10 more sanctioned)
- Two cold storage units (north + south)
- Mini harbour at Cortalim
- Bat Island development (like Sentosa)
- Submarine tourism from Mazagon Docks
- Aguada sandbar study via IWAI

Sagarmala and Funding Concerns

It was noted that Goa did not receive allocations under Sagarmala 1.0. Accordingly, the State intends to integrate its projects into Sagarmala 2.0 through a structured master planning process and has

sought handholding support from the Directorate General of Shipping in facilitating central engagement.

Jalyan Navik Concerns

"Someone staying in Delhi can put 15 boats here and run the show. The others have been displaced."

Concern: outsiders flooding local market, displacing Goan operators.

The session concluded with acknowledgment that policy-level concerns may be examined through appropriate advisory mechanisms, while digital compliance under the portal will proceed.



Figure 12. Captain Octavio A. Rodrigues of the Captain of Ports Department, Government of Goa presentation



10. Special Address by Guest of Honor - MoS

The Special Address was delivered by Shri Digambar Kamat, Hon'ble Minister for Ports, Public Works and Legal Metrology, Government of Goa. The Hon'ble Minister welcomed the initiative of the Directorate General of Shipping in convening the Goa Coastal State Workshop in collaboration with the Captain of Ports Department and industry stakeholders. He highlighted the growing national emphasis on the maritime sector, aligned with India's long-term vision of strengthening shipping and shipbuilding as strategic pillars of economic development.

Highlighting Goa's 100+-kilometre coastline and maritime legacy, the Hon'ble Minister noted that while the State possesses significant potential in coastal shipping and shipbuilding, development must be pursued within the constraints of limited land availability and environmental considerations. He emphasised that, as a small State, Goa must adopt a calibrated and context-specific approach, ensuring that maritime expansion remains sustainable and responsive to public sentiment.

The Hon'ble Minister outlined ongoing efforts of the State Government, including initiatives to promote cleaner marine transport through electrification measures at jetties and the gradual transition towards electric vessels. He also referred to the strengthening of maritime skill development through collaboration with academic institutions, aimed at enhancing employment opportunities in the sector. Further, he informed that the proposal for establishment of a Maritime Board for Goa is under active consideration.

In his concluding remarks, the Hon'ble Minister called upon stakeholders to deliberate on practical and scalable interventions suited to Goa's unique context. He assured that the recommendations emerging from the workshop would be duly examined by the Government of Goa, with a view to supporting balanced and sustainable maritime growth in the State.



Figure 13. Special Address by Shri Digambar Kamat, Hon'ble Minister for Ports, Public Works and Legal Metrology, Government of Goa



11. Pillar 3: Maritime Training, Skilling & Zero Corruption

Shri Praveen Nair, Deputy Chief Surveyor-cum-Senior Deputy Director General (Technical), Directorate General of Shipping, presented an overview of India's maritime training and seafarer development landscape.

India is presently among the leading global suppliers of maritime manpower, contributing approximately 12-14% of the world's seafarers. In alignment with Maritime India Vision 2030, the target is to enhance this share to 20% by 2030. Achieving this objective requires strengthening training standards, expanding skill pathways, enhancing employability, and ensuring robust regulatory oversight. Goa, with its maritime legacy and skilled seafaring community, is positioned to contribute meaningfully to this national target.

MTIs in Goa

Table 8. List of MTIs in Goa

S.No.	Institute	Type	Location
1	Sea Scan Maritime Foundation	Pre-sea	South Goa
2	NUSI Maritime Academy	Post-sea	South Goa
3	Institute of Maritime Studies	Pre-sea	South Goa
4	Seascan Marine Foundation	Post-sea	South Goa
5	Kamaxi Maritime Academy	Post-sea	Salcette
6	Institute of Marine Engineers (India), Goa	Post-sea	Goa

Goa hosts a cluster of DG Shipping-approved Maritime Training Institutes (MTIs) offering both pre-sea and post-sea courses. The Directorate General of Shipping (DGS) performs regulatory oversight through approval of institutes and courses, continuous monitoring, grading under the Comprehensive Inspection Programme (CIP), and conduct of exit examinations for trainees.

The Mercantile Marine Department (MMD) office in Goa supports certification and regulatory functions. The conduct of Certificate of Competency (CoC) examinations is being progressively digitised to enhance transparency, efficiency and timely declaration of results.

ITI Integration

41 MTIs covering 136 ITIs across India under 6 MMDs. Over 16,000 students reached with maritime career awareness.

As part of a structured outreach initiative, DG Shipping has directed approved MTIs to engage with Industrial Training Institutes (ITIs) within their jurisdiction to promote maritime careers. Over the past few months, 41 MTIs have covered 136 ITIs across six Mercantile Marine Department jurisdictions, reaching more than 16,000 students.

The objective is to create structured entry pathways for ITI graduates—such as fitters, machinists and turners into the merchant navy as ratings, with opportunities for progressive certification and advancement to officer levels. This initiative seeks to widen the talent pool, align vocational training with maritime requirements, and improve employability.

Proposed Deep Sea Diving Course

By Ganpat University in Goa. Courses: Surface Supplied Air (50m), Underwater Welding, Saturation Diving. ADAS partnership. Addresses severe shortage of commercial divers.

The Government of Goa, in collaboration with Ganpat University, has proposed the introduction of specialised maritime courses including Surface Supplied Air Diving (up to 50 metres), Underwater Welding, and Saturation Diving, with technical alignment to international standards such as ADAS.

These courses respond to the emerging demand for specialised skills in offshore, ship repair, port infrastructure and subsea operations. The initiative addresses the current shortage of certified commercial divers and aims to create employment opportunities in both domestic and international markets

Key Policies & Systems

- **STCW Compliance Board: Bi-weekly evaluations** : The STCW Compliance Board, constituted by DG Shipping, functions as an advisory and evaluative body for matters relating to training standards under the STCW Convention. The Board undertakes regular deliberations, with representation from MMDs and opportunities for institutes to present their cases prior to approval or policy decisions.
- **Comprehensive Inspection Programme (CIP): Three-year cycle**: All approved MTIs are subject to mandatory inspections under the CIP on a defined cycle. Institutes are graded based on infrastructure, faculty, compliance and training standards. These gradings are made available to ensure transparency and informed decision-making by prospective trainees.
- **Learning Management System (LMS), Web-based simulator, Centralized Attendance**: DG Shipping has introduced digital systems including an LMS platform, web-based simulation modules and centralised biometric attendance to standardise training delivery and strengthen monitoring. Exit examinations for trainees are conducted online to benchmark learning outcomes and ensure uniform standards across institutes.
- **Faculty Development Programme (FDP)**: Recognising the need for continuous upskilling of trainers, DG Shipping is in the process of formalising a structured Faculty Development Programme. The objective is to ensure periodic knowledge upgradation for Master Mariners, Chief Engineers and other qualified faculty engaged in MTIs, thereby enhancing instructional quality and maintaining global standards.

In addition to strengthening training and skilling, DG Shipping has adopted a zero-tolerance approach towards corruption and malpractice. Awareness campaigns are being conducted to caution aspiring seafarers against fraudulent recruitment agents and unauthorised “open CDC” practices. A grievance redressal mechanism and public advisories have been instituted to safeguard trainees and uphold the integrity of India’s maritime training ecosystem.

Collectively, these measures aim to enhance compliance, improve employability, and develop a State-level maritime skilling strategy aligned with national maritime priorities



Figure 14. Pillar 3 – Maritime Training session by Shri Praveen Nair



12. Special Presentation: GIS Solutions / ESRI India

Shri Ashish Dhavan the industry head for infrastructure from ESRI India presented GIS technology for maritime operations and port management.

Key Technology Applications

- Multimodal connectivity: ships, roads, railways – dedicated freight corridor to JNPD
- ULIP platform from NICDC: open APIs with government cargo/vessel data
- Document management integration (lease documents, parcel data)
- Weather data: 1,000+ India-specific layers; cyclone tracking, tide information
- Real-time weather impact analysis on port operations
- Digital twin creation for ports
- Utility mapping (many ports have unmapped pipelines)
- Navigation charts: IHO standards S-57/S-100
- Near real-time data for movable and non-movable assets
- Shortest route optimization and multimodal path analysis



Figure 15. Industry representation by ESRI India

13. Special Presentation: Ganpat University / GIME-GIAMC

Dr. Saurabh Dave outlined the education and skilling vision of Ganpat University for Goa, centred on the establishment of the Goa Institute of Maritime Excellence (GIME). He highlighted the intent to develop a comprehensive maritime education ecosystem in Goa, aligned with national maritime priorities and global training standards. Drawing on over 15 years of experience in maritime training in Gujarat, including a consistently highly rated Maritime Training Institute (MTI), the University aims to replicate and scale this model in Goa with a focus on quality, compliance and industry alignment.

GIME - Public-Private Partnership

Established under PPP with Captain of Ports/Sports Department. Concession agreement signed (first with Minister Alex Sequeira, then supported by Minister Kamat). Britona Maritime School under redevelopment (18–20 months). Operating from transit infrastructure. Two batches enrolled. PPP tender: qualified with 24,000+ points (vs 750 required).

GIME is being established under a Public-Private Partnership (PPP) framework with the Captain of Ports Department under the authority of the concerned State Department. The concession agreement was formally signed in the presence of the then Minister Shri Alex Sequeira and has subsequently received continued support from the present Minister.

The Britona Maritime School campus is presently under redevelopment, with completion envisaged within 18–20 months. In the interim, academic operations have commenced from approved transit infrastructure to avoid disruption of training activities. Two batches have already been enrolled under the new entrant programme.

Under the PPP tender process, the qualifying benchmark was 750 technical evaluation points; the University secured over 24,000 points, reflecting substantial prior experience and institutional capability. The project is being implemented under a Design–Build–Finance–Operate–Transfer (DBFOT) model, with eventual transfer to the Government of Goa as per concession terms.).

Key Highlights

- **More than 40% cadets are girl cadets:** The institution has recorded significant participation of women cadets, with more than 40% of enrolments comprising girl cadets, indicating progress towards gender inclusion in maritime training.
- **Gujarat's first maritime girl cadet from their campus:** Ganpat University's Gujarat campus has produced the first maritime girl cadet from the State, demonstrating its commitment to inclusive maritime education and expanding participation in traditionally male-dominated domains.
- **~115 cadets enrolled for new entrant training:** The initial new entrant batch in Goa has enrolled approximately 115 cadets, with a majority belonging to Goa and the remaining comprising candidates working or residing in the State. This reflects positive local response and demand for structured maritime training.
- **Presented vision welcomed by Tamil Nadu Maritime Board:** The University has presented its maritime education vision to representatives of the Tamil Nadu Maritime Board. The initiative

was positively received, and potential collaboration was indicated, demonstrating inter-State interest in the model being developed in Goa.

Programmes Planned

- **Pre-sea and post-sea courses:** GIME proposes to offer a full spectrum of DG Shipping-compliant pre-sea and post-sea courses, including value-added certification programmes aligned with industry demand. The objective is to create structured career pathways from entry-level training to advanced certifications.
- **Deep sea diving school (ADAS) - 10m/30m diving:** A specialised Deep Sea Diving School is proposed, aligned with international standards such as ADAS. Initial courses will include surface-supplied air diving at varying depths (e.g., 10m and 30m), underwater welding and advanced diving modules. The facility is intended to address skill gaps in offshore, port and subsea sectors.
- **BSc Nautical Science, DNS programmes:** The institution proposes to introduce degree-linked programmes such as BSc Nautical Science and Diploma in Nautical Science (DNS), subject to statutory approvals. These programmes aim to integrate academic qualifications with professional maritime certification.
- **First MTI in Goa offering degrees:** GIME is positioned to become the first MTI in Goa to offer degree programmes integrated with maritime training, thereby expanding the State's higher education portfolio in the maritime domain.
- **Research activities:** The proposed campus includes provision for research and innovation activities in maritime operations, offshore technologies, and allied sectors. Engagement with experienced seafarers and industry mentors is envisaged to support applied research and knowledge development.
- **Entrance, skilling, upskilling programmes:** In addition to long-term courses, GIME plans to conduct short-term entrance-level, skilling, reskilling and upskilling programmes tailored to emerging industry requirements, including water sports operations, hazardous goods handling and commercial maritime activities. Customised industry-led training modules and Centres of Excellence are proposed in partnership with sector stakeholders.



Figure 16. Ganpat University / GIME presentation

14. Inland Vessel Act & Jalyan Navik Portal

Shri Vineet Pandey, Deputy Director (Maritime), Inland Waterways Authority of India (IWAI), responded to the concerns raised during the session regarding the implementation of the Jalyan Navik portal. He clarified that the portal is strictly a digital enablement platform developed under the provisions of the Inland Vessels Act and does not alter or override any existing policy framework.

"This portal has nothing to do with policies."

The Jalyan Navik portal is a digital replication of statutory processes prescribed under the Act and associated rules. It replaces manual forms and physical submissions with an online workflow to improve efficiency, transparency, and standardization. The legislative framework and rules were framed following structured consultations with State Governments and industry stakeholders. An Advisory Committee has also been constituted by the Ministry to deliberate on implementation issues, with the State of Goa represented as a member.

Accordingly, the portal operationalizes statutory provisions without modifying the jurisdictional powers of State Governments.

Safeguards for State Authority

Shri Pandey further clarified that adequate safeguards are embedded within both the Act and the portal architecture to preserve State authority and regulatory oversight. Key safeguards include:

- **State-Level Processing of Applications:** Applications pertaining to vessels operating in Goa are routed only to the designated authority of the State. No automatic approvals are granted through the system.
- **Right to Scrutiny and Clarification:** The designated authority retains full powers to seek clarifications, raise queries, inspect documents, or reject applications in accordance with statutory provisions.
- **Trade Permissions Remain with the State:** Grant of trade permissions, operational clearances, and route approvals continues to rest exclusively with the State Government.
- **Mandatory Compliance Before Operations:** No vessel is permitted to undertake trade operations unless all required statutory approvals and permissions are duly obtained.
- **Safe Navigation and Regulatory Controls:** The Act and rules provide enabling provisions to regulate navigation in consideration of traffic density, safety requirements, and environmental safeguards. These provisions allow States to exercise necessary control in sensitive or congested waterways.

He reiterated that the principle of “One Nation, One Registration” under the Act ensures validity of registration across States for ease of movement; however, operational and regulatory controls remain within the jurisdiction of the respective State authorities.

Concluding his remarks, Shri Pandey stated:

"If you have any policy related concerns that can be raised and we will examine it."

This reaffirmed IWAI's openness to constructive inputs from States, subject to alignment with the statutory framework of the Act.



Figure 17. Vineet Pandey – IWAI Jalyan Navik presentation

15. Pillar 4: Maritime Crewing & Employment

Capt. Nitin Mukesh, Deputy Nautical Advisor-cum-Senior Deputy Director General (Technical), Directorate General of Shipping, presented the fourth thematic pillar.

The fourth pillar focused on strengthening seafarer welfare architecture, enhancing ethical employment practices, and recognising Goa's expanding contribution to the national maritime workforce. The presentation underscored Goa's steady alignment with national targets under Maritime India Vision (MIV) 2030, particularly in workforce expansion, regulatory compliance, and inclusive growth. Emphasis was placed on structured governance, verified recruitment channels, digital grievance systems, and targeted welfare interventions across pre-service, in-service, and post-retirement stages of a seafarer's career.

Goa Seafarer Statistics

Goa continues to play a significant role in India's maritime manpower pool. The State has recorded consistent growth in registered seafarers, contributing meaningfully to national workforce targets.

Table 9. Goa Seafarer Statistics

Parameter	Value
Total cumulative seafarers	42,974
National share	5.8%
National ranking	7th
Growth from 2020	37%
Women participation	1.3% (~3x national <0.5%)
Women growth	12.8% CAGR over 15 years
MIV 2030 women target	2–3%

The data indicates that Goa, despite its geographical size, ranks 7th nationally in seafarer contribution. Growth trends reflect alignment with the 20% workforce expansion target envisaged under MIV 2030. Women participation, though modest in absolute terms, is significantly higher than the national average and demonstrates sustained long-term growth.

Yearly New Seafarer Intake

The annual intake reflects a strong post-2021 recovery and stabilisation trend.

Table 10. Yearly New Seafarer Intake

Year	2020	2021	2022	2023	2024	2025
New Seafarers	380	764	2,148	2,098	2,113	1,858

The intake figures demonstrate a substantial increase following 2020, with consistent enrolment above 2,000 annually between 2022 and 2024, reinforcing Goa's expanding maritime training and placement ecosystem.

Women Seafarer Growth (National)

Table 11. Women Seafarer Growth (National)

Year	2021	2022	2023	2024	2025
Women Seafarers	1,600	3,300	4,800	5,900	7,000

The national data reflects progressive growth in women participation. However, overall representation remains below 1.5%, necessitating targeted interventions under gender-inclusive maritime policies.

Welfare Schemes (April 2024 – February 2026)

The Seafarers' Welfare Fund Society (SWFS) continues to implement multiple schemes covering survival benefits, old-age support, death compensation, education assistance, and other financial interventions.

Table 12. Welfare Schemes

Scheme	Beneficiaries	Amount INR Cr)
Survivor's Benefit	76	2.92
Old Age Benefit	236	1.18
Death on Board	49	0.98
Azadi ka Amrut Kal	259	0.6475
Family Benefit	20	0.09
TOTAL	720	6.015

Between April 2024 and February 2026, INR 6.015 crore was disbursed to 720 beneficiaries. It was noted that while approx. INR 50-60 crore accrues annually as interest within the Fund, actual disbursement remains relatively low due to limited applications, underscoring the need for enhanced awareness among seafarers.

Goa Welfare/Pension Scheme 2023

The Government of Goa has introduced a dedicated welfare and pension scheme for seafarers, considered one of the first structured State-level initiatives of its kind. The scheme provides INR 2,500 per month through Direct Benefit Transfer (DBT).

Eligibility criteria include:

- Indian citizenship
- Permanent residency in Goa
- Age 60 years and above
- Minimum 10 years of sea service

Eligible widows of Goan seafarers (minimum 15 years residency and annual income below INR 1.2 lakh) may also avail benefits. The scheme reinforces the State's commitment to post-retirement financial security and dignified livelihood support.

Key Initiatives

Seafarers' Club at Mormugao Port

A proposal has been submitted under the SWFS–SWBAT framework for reconstruction of a Seafarers' Club at Mormugao Port, with an estimated cost of INR 12.5 crore. The proposed facility is strategically located approximately 1 km from berths, 50 metres from the Port Office, and 4 km from the airport.

The proposed infrastructure includes:

- Recreation facilities
- Counselling services
- Temporary accommodation
- Medical assistance facilities

The initiative is aligned with Maritime Labour Convention (MLC) 2006 standards and aims to enhance shore-based welfare infrastructure. The proposal is under review, subject to presentation and technical approval.

Sagar Shakthi (DGS Order 18/2024)

This initiative promotes a gender-inclusive maritime workforce. With approximately 6,000 women seafarers in India (around 0.5% of total workforce), the programme seeks to enhance participation through structured support mechanisms.

It aligns with Sustainable Development Goals (SDG) 5 (Gender Equality) and SDG 8 (Decent Work and Economic Growth), as well as MIV 2030 targets. Sagar Yog (DGS Order 19/2024)

Holistic wellness: 10 pillars including spiritual, emotional, economic, physical, occupational wellness.

Sagar Yog (DGS Order 19/2024)

Sagar Yog introduces a holistic wellness framework based on ten pillars, including spiritual, emotional, economic, physical, and occupational wellness.

A Learning Management System (LMS) is proposed to be launched on the Directorate platform, with structured certification modules. The initiative is intended to institutionalise preventive wellness practices and professional resilience across the maritime workforce.

Other Initiatives

- PRANAAM Counter at Mumbai Airport T1 (inaugurated 21 Jan 2026)

- SPF: ₹20+ crore with CDC; ERP system coming for online access
- Ex-Gratia: enhanced ₹10,000 → ₹20,000/month from Jan 2026
- 9 valid RPSL companies in Goa (8 invalid)
- 988 seafarers repatriated from 108 vessels (Jan–Dec 2025)

Grievance Statistics

Table 13. Grievance Statistics

Year	Received	Resolved	Resolution Rate
2023	856	854	99.8%
2024	1,116	1,094	98.0%
2025	3,170	3,126	98.6%

A 184% increase in grievances was recorded between 2024 and 2025, reflecting improved reporting mechanisms and outreach. Between July and December 2025 alone, 2,661 grievances were registered through the 24/7 DG COMM Centre. The Directorate is concurrently implementing digitised crisis response modules, integrated grievance redressal systems, strengthened RPSL compliance requirements (including proposed enhancement of bank guarantees), and coordinated action with Indian Missions abroad to address abandonment and compensation cases.



Figure 18. Pillar 4 – Maritime Crewing & Employment session by Shri Nitin Mukesh

16. Pillar 5: Decarbonisation, Sustainability & Environment

Shri Satish Kamath, Deputy Chief Surveyor-cum-Senior Deputy Director General (Technical), Directorate General of Shipping, presented the fifth pillar on sustainability and decarbonisation in the maritime sector.

The fifth pillar focused on integrating sustainability considerations across all maritime development initiatives in Goa. It was emphasised that environmental stewardship is the common thread connecting all thematic pillars deliberated during the workshop. Maritime transport accounts for approximately 80% of global merchandise trade by volume and nearly 70% by value, thereby placing significant responsibility on the sector to align with global climate commitments.

Reference was made to the 2023 strategy of the International Maritime Organization (IMO) targeting Net Zero emissions by 2050. At the national level, the Harit Sagar framework envisages a 30% reduction in carbon intensity by 2030 and 70% by 2047. It was underscored that maritime expansion in Goa must proceed in a calibrated and environmentally responsible manner, given the State's tourism-dependent economy and ecologically sensitive coastline. Environmental compliance, pollution prevention, and sustainable port operations were highlighted as critical enablers of long-term maritime competitiveness.

Key National Frameworks

The session outlined the principal national policy frameworks guiding maritime decarbonisation and sustainability:

- **MIV 2030 & MAKV 2047:** Provide strategic direction for green ports, green vessels, and emission intensity reduction aligned with national development priorities.
- **National Green Shipping Policy (NGSP) :** forthcoming – A consultative policy framework under development, covering green ships, green ports, green fuels, green technology, green recycling, green financing, and green skill development. Multi-stakeholder consultations are underway prior to finalisation.
- **National Green Hydrogen Mission (NGHM) :** Supports exploration of alternative marine fuels, including hydrogen and fuel-cell-based propulsion, subject to technological and infrastructural feasibility.
- **Green Tug Transition Programme :** Mandates phased replacement or retrofitting of conventional diesel-powered harbor tugs. Target: 50% green or hybrid tugs at major ports by 2030 and 100% by 2047.

It was noted that India has over 400 tugs, of which approximately 45% are over 20 years old and nearly 20% are more than 30 years old, thereby presenting both a challenge and an opportunity for green retrofitting and domestic shipbuilding growth.

Shore Power Implementation

Shore Power Supply (SPS), also referred to as “cold ironing” or Onshore Power Supply (OPS), was discussed as a critical intervention to reduce emissions at berth. The system enables vessels to switch off auxiliary engines and draw electricity from the shore grid, thereby reducing local air pollution and associated public health impacts.

Table 14. Shore Power Implementation

Port	Capacity	Specs	Status
Kamarajar (Ennore)	500 kW	400V, 50–60 Hz	Coal Berths 1 & 2
VO Chidambaranar	305 kW	400V, 60 Hz	Berths 2 & 3
JNPA Mumbai	45 MVA planned	~₹600 Cr	SPS for tugs; expansion

A phased national roadmap was highlighted:

- Phase I (2025): Tugs and small harbor vessels
- Phase II (2030): Coastal and feeder vessels
- Phase III (Post-2030): International and cruise vessels

It was noted that while full-scale OPS implementation in inland waterways may pose viability challenges due to infrastructure requirements, targeted application near urban centers and heritage/tourism zones can yield substantial environmental and health benefits.

Mormugao Port Environmental Achievements

The session acknowledged the progress made by Mormugao Port in adopting green port practices:

- Commissioning of a 3 MW solar power plant (May 2025), achieving 100% solar-powered status for port electricity requirements
- Recognition as the First Accredited Green Port of India
- Implementation of the Green Ship Incentive Scheme (Harit Shrey), linked to Environmental Ship Index (ESI) performance
- Sewage recycling initiatives targeting 20% freshwater reduction by 2030
- Operational Oil Spill Contingency Plan
- Additional 2 MWp solar installation underway (Oriana Power)

These initiatives were presented as enabling factors for transition towards a low-carbon and environmentally resilient port ecosystem.

Port Reception Facility Data (Mormugao, Jan–Dec 2025)

Port Reception Facilities (PRFs) were identified as essential infrastructure for ensuring compliance with MARPOL conventions and preventing marine pollution. The Swachh Sagar digital portal developed by the Directorate General of Shipping enables reporting, monitoring, and traceability of waste discharge and related compliance parameters.

Waste handled at Mormugao Port (January - December 2025)

Table 15. Port Reception Facility Data

Category	Total (kg/litres)	Key Components
Annex V (Garbage)	3,131,389.6	Food waste: 2,597,120
Annex I (Oil)	85,878	Oily bilge: 80,524; Sludge: 5,339
Annex VI (EGCS)	24,780	—
Annex IV (Sewage)	1,766	—

PRF Vendor Status:

- Total listed vendors: 18
- Active vendors: 10
- Mormugao: 10 providers
- Panaji: 4 providers

It was reported that no inadequacies were flagged by international vessels during the review period, indicating satisfactory compliance performance. However, minor infrastructure and coverage gaps remain, particularly in handling specialised waste streams such as refrigerants and ballast water treatment residues. Cluster-based PRF models and shared vendor frameworks were suggested as cost-efficient solutions for smaller and riverine ports.

India generates approximately 3.5 million tonnes of plastic waste annually. The Directorate General of Shipping serves as the National Focal Point for IMO's RegLitter initiative, and India was among the first to prohibit single-use plastics on ships. Digital reporting and Standard Operating Procedures have been integrated into the Swachh Sagar portal to enhance monitoring and enforcement.

Goa Environmental Profile

Goa's maritime development strategy must be aligned with its ecological sensitivities. The State has a coastline of 193.95 km and an extensive inland waterway network comprising the Mandovi, Zuari, Chapora, and Sal river systems. These waterways support tourism, fisheries, inland navigation, and coastal trade.

The region encompasses ecologically sensitive zones including mangroves, fish breeding grounds, turtle nesting beaches, and wetland bird habitats. Any port expansion, shipbuilding activity, or increase in maritime traffic must therefore be preceded by environmental impact assessments, marine spatial planning, and biodiversity safeguards.

The session underscored that sustainable maritime planning must incorporate:

- Air and water quality monitoring
- Marine noise impact assessment (including reference to the GloNoise initiative)
- Ecosystem-based management systems (EBMS)
- Circular economy approaches for waste recovery and recycling
- Digital data-driven environmental governance

It was concluded that environmental sustainability is not a standalone objective but an integrating principle across shipbuilding, port operations, seafarer welfare, tourism, and coastal infrastructure development. Strengthened compliance, digital monitoring, adoption of green fuels and technologies, and coordinated Centre–State oversight mechanisms were identified as the way forward for achieving sustainable maritime growth in Goa.



Figure 19. Pillar 5 – Decarbonization session by shri Satish Kamat

17. Pillar 6: Coastal Shipping & Inland Navigation

Shri Ravi Kumar M, Ship Surveyor-cum-Deputy Director General (Technical), Directorate General of Shipping, Ministry of Ports, Shipping & Waterways, presented the sixth pillar. Pillar 6 focused on strengthening coastal shipping, inland navigation, and multimodal integration as key enablers of Goa's maritime growth. The presentation highlighted Goa's alignment with national maritime priorities, infrastructure readiness, investment pipeline, and the evolving regulatory and digital ecosystem aimed at enhancing cargo movement efficiency and blue economy outcomes.

Budget & National Context

At the national level, the Union Budget 2026–27 provides an allocation of INR 5,164 crore for coastal shipping and inland waterways, reflecting a 48% increase over the previous year. The allocation supports capacity building, training infrastructure along key waterways, ship repair hubs, and modernization initiatives.

Additionally, a INR 10,000 crore Container Cargo Promotion Scheme has been announced to strengthen domestic container manufacturing capacity and enhance multimodal logistics competitiveness. The New Coastal Cargo Promotion Scheme is being formulated to incentivise modal shift of cargo from road and rail to coastal shipping.

Table 16. National budget 25-27

Goa State Budget	Allocation INR Cr)
Ports Administration	49.41
River Navigation	85.80

These allocations demonstrate the State's continued commitment to improving port administration, inland vessel operations, and last-mile maritime connectivity.

Goa Cargo Performance

Goa's major port demonstrates strong performance with 20.63 million tonnes of cargo handled, contributing 2.52% to India's total major port traffic - a testament to the State's strategic relevance in the national coastal shipping network. This solid throughput highlights the operational strength, deep-draft capability, and regional importance of the Mormugao Port Authority (MPA), which continues to anchor Goa's maritime growth. While non-major ports currently contribute 0.12 million tonnes, their presence offers significant future potential for diversification into tourism, light cargo, cruise operations, and community-based maritime services. Together, this ecosystem positions Goa for accelerated maritime development, with MPA serving as a strong foundation and smaller ports offering opportunities for targeted expansion and innovation across the coastal economy.

Goa continues to play a strategic role in India's coastal cargo ecosystem.

Table 17. Goa Cargo Performance

Parameter	Value
Major port (MPA)	20.63 MT (2.52% national)
Non-major ports	0.12 MT (0.017%)
Iron ore coastal	50.02 lakh tonnes (+119%)
Steel products	+18% YoY

Pig iron	+51%
Fertilizers	+64%
Liquid cargo	+7%
Waterways cargo share	3% of national (FY 2023–24)

In FY 2023–24, Goa’s inland waterways accounted for approximately 3% of total national inland waterways cargo movement, reflecting latent capacity for further expansion through cargo diversification and aggregation.

Infrastructure Profile

Goa’s maritime and transport infrastructure provides a strong foundation for its coastal shipping and inland navigation ecosystem. The State’s well-distributed, multimodal framework supports efficient passenger and cargo movement, enabling Goa to integrate seamlessly into national maritime and logistics networks.

Goa possesses a well-distributed maritime and multimodal infrastructure base.

Table 18. Infrastructure Profile

Infrastructure	Details
Navigable waterways	255+ km
National Waterways	6 (NW-25 Chapora, NW-27 Cumberjua, NW-68 Mandovi, NW-71 Mapusa, NW-88 Sal, NW-111 Zuari)
Major Port	1 (Mormugao)
Non-Major Ports	5 (Tiracol, Chapora, Panaji, Betul, Talpona)
Government jetties	35 (COP:10, River Nav:16, Fisheries:7, Tourism:2)
Private jetties	89 (48 concrete, 6 wooden cruise, 35 floating)
Ship repair	22 facilities, 11 dry docks, 10 workshops
Airports	2 international (Dabolim, Mopa)
Road network	1.4 lakh km

The State’s integrated connectivity across ports, waterways, roads, railways, and airports provides a strong foundation for multimodal logistics expansion.

Inland Vessels

The inland fleet composition indicates a balanced mix of cargo, tourism, and utility operations.

Table 19. Inland Vessels

Category	Count
Passenger vessels	189
Cruise vessels	107
Ore-carrying barges	81
Casino/gaming	6
Utility vessels	43

Water Sports Assets

Table 20. Water Sports Assets

Asset	Count
Kayaks	514
Passenger boats	1,426
Parasailing	304
Jet skis	405

These assets reinforce the tourism-led dimension of inland waterways while requiring continued safety and regulatory oversight.

Investment Commitments

Goa has secured substantial investment commitments across port, logistics, and maritime infrastructure.

Table 21. Investment Commitments

Project	Stakeholder	Investment INR Cr)
LNG Facilities	Atlantic & Pacific LNG	3,500
Berth No.9 Redevelopment	Gammon Engineers	1,000
Vasco Bay Infrastructure	Indian Port Rail & Ropeway	1,000
Capital Dredging	ISDPL	500
Finger Jetties 1,2,3	Indian Coast Guard	250
LPG Facilities	Cisterina	100
Berth-3 Development	Indian Port Rail & Ropeway	25
2MWp Solar	Oriana Power	20
TOTAL		~₹6,395

Over the past five years, projects worth ₹1,016 crore have been completed, reflecting steady capital deployment.

IWAI Projects INR200 Crore)

The Inland Waterways Authority of India (IWAI) has sanctioned ₹200 crore for waterways development in Goa.

Table 22. IWAI Projects

Project	Cost INR Cr)	Timeline
10 Community Jetties	14.28	—
Floating Jetty, River Sal	15.00	Mar 2026
2 Floating Jetties, Chapora	—	—
Fairway Maintenance	52.10	Jun 2026
VTMS National Waterways	45.13	Jun 2026
Other (Captain of Ports)	73.49	—
TOTAL	200.00	

These projects focus on navigation safety, fairway maintenance, and community-level connectivity.

Coastal Shipping Act 2025

The Coastal Shipping Act, 2025 represents a landmark reform aimed at modernizing India's coastal shipping framework and fostering self-reliance in the maritime sector. This legislation introduces several progressive measures designed to simplify compliance, enhance operational efficiency, and promote sustainable growth

The recently enacted Coastal Shipping Act 2025 introduces structural reforms:

- Simplified licensing for Indian-flagged vessels
- Integration of coastal and inland waterways
- National Database for Coastal Shipping
- Biennial Strategic Plan
- Target: 230 MT coastal cargo by 2030
- Promotes Indian-built vessels

Strategic Initiatives

Key initiatives supporting sectoral growth include:

- Mumbai–Goa fast ferry (~6.5 hrs)
- 32-passenger submarine tourism (Mazagon Docks)
- Water Metro system
- Ro-Ro ferry terminals
- 26 floating jetties developing
- 9 coastal jetties planned
- NH-17B flyover: ₹644.1 Cr (India's 1st curved cable-stayed, Jan 2025)
- Berths 10 & 11: 30-yr PPP with Delta Ports, ₹140 Cr

These initiatives aim to improve passenger mobility, tourism connectivity, and cargo throughput capacity.

Digital Initiatives

Digital transformation remains central to maritime governance:

- SAGAR SETU platform (80+ ports, 40+ stakeholders integrated)

- Digital Centre of Excellence (DCoE) – AI, IoT, Blockchain applications
- DRISHTI – KPI monitoring dashboard for port performance
- S2I2 – Startup incubation initiative
- National Database for Coastal Shipping (under development)
- Swachh Sagar Portal – waste tracking and compliance monitoring

The integration of digital platforms will support regulatory simplification, data transparency, and operational efficiency.

Export Profile (FY25)

Goa's export composition reflects industrial diversification:

- Drugs & Pharmaceuticals – 51%
- Iron and Steel – 16%
- Organic Chemicals – 9%

This profile indicates opportunities for containerised coastal cargo expansion, particularly for high-value pharmaceutical exports.

Key Policies

The State of Goa has introduced a comprehensive set of policies and incentives to strengthen its maritime sector, enhance coastal connectivity, and promote sustainable development across waterways and port ecosystems. These interventions support infrastructure expansion, encourage private participation, and align state efforts with national maritime priorities.

- **State Logistics & Warehousing Incentives Scheme 2025:** To attract investment and expand logistics capacity, Goa has introduced a forward-looking incentive policy. Key incentives include - 10–15% capital investment reimbursement and 50% interest subsidy
- Green Vessel Incentive Scheme (ESI-linked) at Mormugao Port has a **Green Vessel Incentive Scheme**, offering concessions to vessels that achieve higher Environment Ship Index (ESI) ratings.
- Sagarmala Programme: Under Sagarmala, Goa is implementing the development of seven coastal community jetties at strategic locations, supported through a 50:50 cost sharing model between the State Government and the Ministry of Ports, Shipping & Waterways. These jetties will serve as critical enablers for:
- Cruise Bharat Mission 2024

- INR 10,000 crore Container Manufacturing Scheme (1 million TEU target)

Pillar 6 highlighted that Goa is structurally aligned with national maritime priorities and possesses the infrastructure base, policy framework, and investment pipeline required to scale coastal shipping and inland navigation.

Future growth will depend on infrastructure augmentation, multimodal integration, digital data consolidation under the National Database for Coastal Shipping, targeted cargo aggregation, and sustained Centre - State coordination.



Figure 20. Pillar 6 - Coastal Shipping & Inland Navigation session by shri Ravi Kumar Moka



18. Vote of Thanks

The formal Vote of Thanks was delivered by Shri Constantino, Radio Officer, Department of Captain of Ports, Government of Goa, on behalf of the Captain of Ports and the Government of Goa.

In his remarks, he conveyed sincere appreciation to the Directorate General of Shipping, Ministry of Ports, Shipping and Waterways, Government of India, for convening the Goa Coastal State Workshop and for its continued regulatory leadership in strengthening India's maritime framework. He acknowledged the significance of the initiative in facilitating direct engagement between the Central authorities and State-level stakeholders, thereby creating an effective platform for dialogue, knowledge exchange, and collaborative problem-solving.

He further expressed gratitude to the representatives of the Inland Waterways Authority of India (IWAI) for their continued support to inland waterways development in Goa, including technical guidance and financial assistance extended to the State.



Figure 21. Vote of Thanks by Shri Constantino

Referring to the six thematic pillars deliberated during the workshop—maritime safety, shipbuilding, ship recycling, maritime training and employment, sustainability and decarbonisation, and coastal shipping—he noted that the structured presentations and expert insights had enhanced institutional understanding and would assist the State in aligning its maritime initiatives with national priorities.

Special appreciation was extended to the Hon'ble Union Minister and the Hon'ble State Minister for Ports for their presence and encouragement, reflecting strong policy-level support for maritime

development in Goa. He also acknowledged the professional conduct of the event by the organising partners and thanked all industry representatives, shipyards, training institutes, academia, and delegates for their active participation and constructive contributions.

Concluding his address, he emphasised that the workshop marks the beginning of sustained Centre–State collaboration in the maritime domain and expressed confidence that such engagements would further strengthen coordination among government, industry, and academia in advancing India’s maritime objectives.

Goa Maritime Profile - At a Glance

Parameter	Details
Coastline	193.95 km
Navigable waterways	255+ km
National Waterways	6 (highest density)
Major Port	Mormugao (20.63 MT, 2.52%)
Seafarers	42,974 (5.8%, 7th nationally)
Women seafarers	1.3% (~3x national)
Private shipyards	15+ plus GSL (defence)
Total workshops/yards	~56
Active vessels	450–500
Shipbuilding capacity	~25% of India
Maritime Cluster	Konkan (India's 1st, Verna)
Green Port	Mormugao – India's 1st
Solar Power	3 MW (100% solar port)
Investment pipeline	~₹6,395 Cr
Projects completed (5 yr)	₹1,016 Cr
IWAI allocation	₹200 Cr
Airports	2 (Dabolim, Mopa)
Govt jetties	35
Private jetties	89
MTIs	6 (4 post-sea, 2 pre-sea)
Exports	Pharma 51%, Steel 16%, Chemicals 9%
Waterways cargo	3% of national
RPSL companies	9 valid

19. Key Outcomes & Action Items

Key Outcomes

- First physical Coastal State Workshop nationally – template for all states
- Comprehensive review across all six pillars
- 14 challenges identified, 20 recommendations formulated
- Showcased Goa: 25% shipbuilding, first green port, 5.8% seafarers
- Six-pillar brochure launched
- Highlighted ₹69,725 Cr national shipbuilding policy framework
- ₹6,395 Cr investment pipeline + ₹200 Cr IWAI allocation identified
- GST inverted duty, bridge constraints, licensing burden addressed
- Jalyan Navik concerns clarified – state authority safeguards confirmed
- Mormugao environmental leadership showcased
- GIME PPP model for maritime education introduced
- Nautical tourism vision for five river systems
- Ship recycling diversification opportunity identified
- Biannual online follow-up framework established

Action Items by Pillar

Pillar 1: Maritime Safety

- Designate ports of refuge (west coast priority)
- Implement Coastal State Advisory Framework
- Deploy VTPMS (DPR ready, IIT Madras vetting)
- Conduct multi-agency drills
- Streamline customs/immigration for salvage

Pillar 2: Shipbuilding & Recycling

- Outfitting jetties with 200-ton cranes
- Resolve GST inverted duty

- Single window clearance
- Micro-clusters along Zuari
- Ship recycling pilot
- Strengthen Konkan Cluster

Pillar 3: Training

- Operationalize GIME
- Deep sea diving school (ADAS)
- ITI-MTI integration
- Trade school for welders/fitters

Pillar 4: Crewing

- Seafarers' Club at Mormugao
- Sagar Shakthi for women
- SPF ERP system
- RPSL compliance

Pillar 5: Decarbonisation

- Gas conversion kits (50% fuel savings)
- Solar electric boat subsidies
- Shore Power at ferry terminals
- Cluster-based PRFs along rivers

Pillar 6: Coastal Shipping

- State Waterways Master Plan
- Sagarmala 2.0 funding
- Mumbai–Goa fast ferry
- Bat Island tourism
- Water Metro
- IWAI fairway maintenance + VTMS by Jun 2026

20. Challenges & Recommendations

No.	Challenge	Recommended Action
1	No port of refuge	Establish ports (east + west coast)
2	Foreign salvage dependence	Unified response framework; more ETVs
3	Inverted GST (5% out, 18% in)	Central engagement; 5–7% savings possible
4	Bridge height/air draft	Outfitting jetties with 200-ton cranes
5	Dredging (CRZ issues)	Environmental clearances; dedicated programme
6	PSU vs MSME competition	PSU cap on small projects (\leq ₹15–20 Cr)
7	Electricity quality	Solar subsidy; grid improvement
8	11–12 licenses needed	Single window clearance
9	Jalyan Navik displacement	State safeguards confirmed; policy review
10	Zero Sagarmala 1.0 funding	Pursue Sagarmala 2.0
11	CRZ shipyard shutdowns	Fine and reopen approach
12	Limited shipbuilding R&D	R&D/Innovation Fund
13	Equipment imports	Micro-clusters; local manufacturing
14	Low women seafarers (<0.5%)	Sagar Shakthi; target 2–3% by 2030

21. Way Forward

The workshop established a robust foundation for sustained engagement across Goa's maritime ecosystem.

Continuous Engagement Model

Online follow-up workshops every six months, state by state across all coastal states. Ensures momentum, progress monitoring, and course corrections.

Action Plan Development

Action plan based on workshop inputs: 14 challenges, 20 recommendations, pillar-wise items, ₹6,395 Cr investment facilitation, regulatory reform priorities (GST, licensing, CRZ).

Institutional Mechanisms

- Goa Maritime Board for integrated port-led development
- State Maritime Waterways Transport Committee → Master Plan
- Coastal Shipping Committee for promotion
- Konkan Maritime Cluster strengthening
- GIME operationalization as training hub

National Rollout

Following Goa's success as first physical workshop, similar exercises across all coastal states, adapting the six-pillar framework to each state's unique context.

Key Monitoring Indicators

- Shipbuilding capacity utilization and orders
- Seafarer employment and women participation
- Port cargo throughput and coastal volumes
- Investment pipeline conversion (MoU → completion)
- Environmental compliance and green metrics
- Maritime training enrolment and placement
- Infrastructure project completion timelines

22. Acknowledgements

Sincere gratitude to all individuals and institutions whose contributions made this a landmark event.

Directorate General of Shipping (DGS)

Ministry of Ports, Shipping & Waterways, Government of India – for conceiving and institutionalizing the Coastal State Workshop series.

Captain of Ports Department, Government of Goa

For comprehensive collaboration as co-organizers, providing local expertise and facilitating state-level coordination.

Speakers & Presenters

Captain Harinder Singh, Captain Anish Joseph, Shri Ravi Kumar Moka, Shri Gopi Krishna, Shri Gautam Datta, Shri Priyesh Kamat, Captain Octavio Rodrigues, Dr. Saurabh Dave, Shri Vineet Pandey, ESRI India representative, and all industry partners.

Young Cadets

Special acknowledgement to cadets from Ganpat University representing the future of India's maritime workforce.

<https://events.eletsonline.com/coastal-workshop/>