CMEC (RIS) Foundation Day Event

Panel Discussion: Connectivity for Productivity: "Ports as Production Engines"

Summary of Discussions

Introductory Remarks: Dr. Shishir Shrotriya
CMEC, RIS

- India has currently got close to 146,000 kms of National Highways, the second largest in the world.
- India has also got one of the largest networks of railways in the world with connectivity spanning over 69,000 km and a total track length exceeding 135,000 km.
- India has also got 111 National Waterways with a notified length of 20,163.5 km, and 14,500 km of navigable length.
- Intermodal connectivity of all these for productivity is the key driver of India's social and economic growth.

- Since the sheer scale of these projects is humungous, Systems Approach is therefore needed from conceptualization to prioritization to optimization and synchronization to execute of these projects in a systematic manner.
- Rightfully, the PM GatiShakti National Master Plan was launched in 2021 to integrate, accelerate and bring whole of government approach to the journey of social and physical infrastructure development. The touchstone of the Master Plan is to realize world-class modern infrastructure and logistics synergy among different modes of movement – both of people and goods – and location of projects.
- Seven engines have been identified which propel the economic and social growth and progress of our country. These include railways, roads, ports, waterways, airports, mass transport, and logistics infrastructure.
- The projects pertaining to these seven engines in the "National Infrastructure Pipeline" have to be aligned with PM GatiShakti framework and National Master Plan
- As per the DPIIT Report, released last year on Logistics Costs in India, rail logistics emerges as the cost-efficient mode, with an average cost of ₹1.96 for rail, Rs. 3.78 PTPK for road and only Rs. 1.8 PTPK for coastal shipping.
- Since Ports, Waterways and Water Transportation are important for steering India towards the Viskit Bharat Goals, our focus today is to bring the contributors to the these Gati Shakti engines together on this very significant CMEC Foundation Day.

Welcome Address: Prof. Sachin Kumar Sharma
DG, RIS

- The Centre for Maritime Economy and Connectivity (CMEC) is part of a RIS. RIS hosts multiple specialised centres working on diverse policy areas including trade, connectivity, shipping, finance, agriculture, and traditional medicine.

- RIS undertakes policy-relevant research and provides evidence-based inputs to support decision-making by line ministries at both domestic and international levels. Capacity building is a key function of the Centre, carried out through lecture series, training programmes, and stakeholder interactions.
- Strong institutional linkages and continuous collaboration with line ministries such as Commerce, AYUSH, and Shipping, Ports and Waterways are essential for maintaining the Centre's relevance and impact.
- The maritime sector including trade, logistics, connectivity, shipping, and multimodal integration is critical for India's ambition to become a developed country by 2047. High logistics costs remain a challenge despite recent improvements, directly affecting India's competitiveness in global trade.
- In the context of global uncertainty, greater stakeholder engagement and guidance are needed to strengthen the Centre's role and expand its contribution to maritime policy and productivity.

Special Address: Dr Seshadri Chari

Member Governing Board, RIS

- Need for Deep Maritime Policy Reform: India's shipping and logistics sector continues to suffer from long-standing policy bottlenecks. Despite awareness of the issues, structural reforms especially in regulation, registration, and ownership have been slow and inadequate.
- Decline of Indian Ship Registration & Ownership: Many Indian ship-owners register vessels abroad due to unfavourable domestic regulations, leading to loss of national capacity, control, and strategic advantage in maritime trade.
- Shipping as a Pillar of Economic Growth: A strong shipping and logistics ecosystem is essential for India's ambition of becoming a developed economy. Manufacturing and exports cannot scale up without efficient, automated, and competitive maritime logistics.
- Infrastructure, Automation, and Connectivity Gap: India lags in automation, port efficiency, multimodal connectivity, and congestion management. These gaps directly impact trade competitiveness and need urgent, time-bound resolution.

- Industry Government Think-Tank Collaboration: Institutions like Research and Information System for Developing Countries and Centre for Maritime Economy and Connectivity act as crucial conduits between industry stakeholders and the government to translate field-level problems into implementable policy actions.
- Action-Oriented Approach Going Forward: The focus is not merely on recommendations but on practical implementation defining clear steps (A, B, C, D) for revitalising the shipping industry, supported by continuous brainstorming, expert engagement, and possibly a dedicated Special Purpose Vehicle (SPV).

Opening Address Chair: Shri TK Ramachndran

Former Secretary MoPSW

- India's maritime turnaround is recent and decisive: After decades of underperformance, the shipping sector has seen strong momentum over the last decade especially the last five years driven by strategic vision and sustained policy focus.
- Maritime India Vision provides a 25-year blueprint: The Maritime India Vision (released in 2023) lays out a comprehensive roadmap across 11 themes shipbuilding, ship repair, ports, digitalisation, automation, green shipping, and maritime education. The challenge now is effective implementation.
- Historic legislative reform in shipping: Five outdated maritime laws were repealed and replaced with five new Acts in one parliamentary session an unprecedented reform that simplified ship registration, ownership norms, safety processes, and global participation.
- Shipping declared infrastructure ₹70,000 crore support: Declaring shipping as infrastructure has transformed access to finance longer tenures and lower interest rates backed by a ₹70,000 crore package and institutional mechanisms like shipping finance institutions.
- Process reform through 'One Nation, One Process' for ports: Standardisation of documentation and procedures across ports has reduced friction, improved ease of doing business, and enhanced operational efficiency nationwide.

- Productivity depends on the entire logistics ecosystem: Ports or shipping alone cannot deliver productivity. True efficiency comes from integrated logistics roads, railways, waterways, coastal shipping, multimodal parks, warehousing, and last-mile connectivity working together.
- Reducing logistics cost needs port-led industrialization: High logistics costs should be reduced by developing industrial clusters near ports, expanding coastal shipping and inland waterways, and shifting cargo from roads to cheaper, greener maritime modes.

PANEL DISCUSSION: KEY TAKEAWAYS

Speaker: Mr. Davinder Sandhu
Co-Founder & Chairman, Primus Partners

Mr. Davinder Sandhu introduced a broadened conceptual framework for understanding connectivity, which he referred to as a **systems-based and integrated paradigm of connectivity**, emphasising that infrastructure must be viewed not as isolated assets but as **interlinked networks enabling productivity, efficiency, and economic transformation**.

The speaker underscored that national discourse on connectivity has traditionally focused on a limited set of modes, **roads, railways, aviation, and shipping** while overlooking equally critical networks such as **pipelines, power transmission lines, telecom infrastructure, and even pedestrian infrastructure**. Drawing from his experience during the formulation of the National Transport Development Policy Committee, he highlighted how energy pipelines and electricity transmission corridors move far larger volumes of economic value than conventional freight systems yet remain institutionally siloed.

He argued that **telecom networks now function as substitutes for physical mobility**, citing the pandemic-induced shift to digital communication as a structural change rather than a temporary adjustment. Virtual connectivity, he noted, has permanently altered transport demand patterns, replaced certain categories of travel while enhancing overall efficiency.

Mr. Sandhu highlighted the strategic shift in India towards **pit-head power plants**, driven by the economic logic of transmitting energy through wires rather than transporting coal over long distances. This shift, he noted, has significantly reduced logistics costs and environmental externalities, particularly given India's high-ash coal, which imposes additional handling and disposal challenges.

He observed that India has developed **one of the world's most efficient electricity transmission networks**, with relatively low transmission losses, demonstrating how integrated planning across sectors can deliver productivity gains.

A key structural concern identified was the **mismatch between annual budgetary cycles and long-gestation infrastructure projects**, which typically have financial lifecycles of 15–30 years. Mr. Sandhu cautioned that this disconnect creates uncertainty for private investors, especially when long-term infrastructure promises are vulnerable to short-term political and fiscal constraints.

He advocated for **phase-wise project structuring**, recommending that infrastructure programmes clearly articulate **two-to-three-year deliverables** rather than aspirational ten-year plans. Using the example of the Dedicated Freight Corridors (DFCs), he noted that prolonged timelines dilute investor confidence and delay industrial responses, particularly in initiatives such as Coastal Economic Zones (CEZs).

The speaker stressed that India's infrastructure ecosystem remains heavily dependent on **imported technologies**, ranging from metro rail systems to airport automation and logistics digitisation. While acknowledging select successes—such as indigenous locomotive manufacturing and innovations like dwarf containers to address electrification constraints—he cautioned that high-cost imported technologies risk **locking India into elevated cost structures for decades**.

He highlighted the absence of **India-specific standards** for infrastructure equipment, noting that technologies designed for temperate climates are often inefficient and costly to operate under India's extreme heat and humidity conditions. This has direct implications for operating costs, maintenance, and energy consumption across ports, railways, telecom installations, and logistics hubs.

Mr. Sandhu emphasised the need to shift from an **asset-centric** to a **people-centric** approach to infrastructure development. He noted that infrastructure cannot succeed in isolation and must be embedded within functional ecosystems that include **urban services, housing, healthcare, education, and social infrastructure**.

In this context, he viewed the concept of **Coastal Economic Zones** as a positive step, but cautioned that such zones must be designed as **livable industrial ecosystems**, rather than standalone logistics or port-led developments. Infrastructure, he argued, should respond to where people and industries locate, rather than assuming that demand will automatically follow asset creation.

In concluding, Mr. Sandhu stressed the importance of **institutional learning**, advocating for systematic documentation of policy and project failures alongside successes. Drawing an analogy from the Canadian Society of Civil Engineers' **"Book of Fail**ures," he argued that transparent reflection on what did not work is essential for improving future infrastructure planning and avoiding repetition of costly mistakes.

Proposed Recommendations	Key Stakeholders	Nodal Agencies
Adopt a systems-based approach to connectivity integrating transport, energy, pipelines, power transmission, and telecom	MoRTH (Ministry of Road Transport and Highways), MoR (Ministry of Railways), MoPSW, MoP (Ministry of Power), DoT (Department of Telecommunications), State Governments, Industry	PM Gati Shakti NMP, NITI Aayog, ULIP
Align infrastructure financing with long project lifecycles through phase-wise (2–3 year) implementation	Department of Economic Affairs (DEA), Infrastructure Developers, Financial Institutions	Ministry of Finance, NITI Aayog, PM Gati Shakti NMP
Promote localisation of infrastructure technologies and climate-appropriate standards	Infrastructure OEMs, Research Institutions, Ports & Rail Operators	DPIIT (Department for Promotion of Industry and Internal Trade), MoRTH, MoPSW, DMRC, Port Authorities, Indian Ports Association (IPA) etc.
Shift towards people-centric infrastructure development, especially in Coastal Economic Zones	State Governments, Urban Local Bodies, Industry, Local Communities	MoPSW (Sagarmala), State Maritime Boards, MoES, Deep Ocean Mission

Speaker: Capt. Rakesh Singh

President, Indian Coastal Ship Owners' Association (ICCSA), Member National Shipping Board

Capt. Rakesh Singh provided an industry-grounded perspective on India's maritime and logistics ecosystem, highlighting structural inefficiencies, policy fragmentation, and the persistence of "half-measures" that continue to constrain the growth of Indian shipping, coastal trade, inland waterways, and shipbuilding.

The speaker emphasised that private investors in shipping primarily seek **dignity of engagement and certainty of delivery**, rather than regulatory dilution. He noted that maritime businesses are often viewed with suspicion rather than as partners in national development, leading to procedural delays and inconsistent policy implementation.

He observed that while maritime issues have recently gained visibility in national discourse, **policy outcomes have not kept pace with intent**, resulting in growing frustration within the industry.

Taking a clue from the previous speaker on highlighting the failures and work towards their solutions, Capt. Singh highlighted the **lack of coherence in maritime policymaking**, with multiple institutions simultaneously discussing similar themes without convergence or coordination. This duplication, he argued, dilutes outcomes and prevents holistic engagement across shipping, ports, coastal shipping, and inland waterways.

He called for a **single, integrated platform** for structured dialogue across maritime sub-sectors, noting that siloed deliberations undermine strategic continuity.

A central issue raised was the **definition of Indian shipping itself**. Capt. Singh questioned whether Indian shipping should be restricted only to Indian-flag vessels, noting that global shipping nations such as Greece operate predominantly with foreign-flag fleets while retaining ownership, control, and economic benefits.

Despite 100 percent FDI, liberalised policies, and past cargo reservation regimes, India continues to control only **about 1 percent of global tonnage**, with nearly **93 percent of India's EXIM cargo carried on foreign vessels**. He argued for reconsidering flagging policies, including the possibility of **offshore or international registries linked to Indian ownership**, to retain strategic control without revenue leakage.

The speaker also critiqued the **partial application of infrastructure status** to shipping, noting that while large vessels may qualify, a significant portion of India's fleet particularly **tugs and small vessels critical to port operations** remains excluded. This is especially problematic as the

sector transitions toward **green and capital-intensive vessels**, such as environmentally compliant tugs.

He also highlighted the absence of supportive fiscal measures such as rationalised fuel taxation, despite shipping's marginal share in national fuel consumption, which places Indian operators at a competitive disadvantage.

Capt. Singh noted that despite repeated policy emphasis, **coastal shipping has stagnated at around 6 percent modal share**, largely due to lack of cargo assurance, inadequate first- and last-mile connectivity, and skewed regional demand–supply patterns.

He stressed that coastal shipping cannot be treated uniformly along the entire 11,000 km coastline, and instead requires **region-specific, cargo-driven planning**, including hub-and-spoke and short-sea shipping models. He highlighted that the absence of reliable cargo pipelines creates a "chicken-and-egg" dilemma, discouraging private investment.

Drawing on operational experience, the speaker argued that inland waterways policy has been **over-extended without adequate proof of commercial viability**. He emphasised that waterways cannot function without assured depth, night navigation, predictable dredging, and realistic distance economics.

Using National Waterway-1 as an example, he pointed out that longer riverine routes compared to rail and road corridors impose inherent disadvantages. He advocated for **selective, corridor-based development**, focusing on a few commercially viable stretches rather than blanket declarations.

While acknowledging government efforts to bridge cost differentials through viability funding, Capt. Singh noted that **delivery delays and multi-ministerial bottlenecks** continue to undermine Indian shipyards. He highlighted rigid domestic content requirements as a major barrier to export competitiveness, contrasting India's approach with China's pragmatic shipbuilding strategy that prioritised scale, delivery, and gradual indigenisation.

Proposed Recommendations	Key Stakeholders	Nodal Agencies
Establish an integrated and coherent maritime governance framework covering shipping, ports, coastal trade, inland waterways, and shipbuilding	Central Ministries, State Governments, Port Authorities, Shipping Industry	Ministry of Ports, Shipping & Waterways (MoPSW), Cabinet Secretariat (National Maritime Advisory Board), National Shipping Board (NSB) MSDC (Maritime State Development Council) and IWDC (Inland waterway Dev Council)

Reform shipping and flagging policies to enhance Indian ownership and control of tonnage while safeguarding fiscal and strategic interests	Indian Shipowners, Investors, Shipping Lines, Financial Institutions	MoPSW, Directorate General of Shipping (DGS)
Ensure full-cycle implementation of maritime policies, including infrastructure status, fiscal incentives, and green transition measures	Shipping Companies, Shipyards, Fuel Suppliers, Lenders, DGS	MoPSW, Ministry of Finance, SMFCL
Adopt selective, cargo-driven approaches for coastal shipping and inland waterways using corridor-based and hub-and-spoke models	Cargo Owners, Ports, Logistics Providers, State Governments	MoPSW, Inland Waterways Authority of India (IWAI), ICCSA, National Shipping Board

Speaker: Shri L. V. S. Sudhakar Babu

Managing Director, Sagarmala Finance Corporation Limited (SMFCL)

Shri L. V. S. Sudhakar Babu presented a comprehensive overview of the mandate, early operational progress, and strategic challenges of Sagarmala Finance Corporation Limited (SMFCL), positioning it as India's **only sector-specific NBFC dedicated exclusively to the maritime ecosystem**.

The speaker highlighted that SMFCL performs a **dual institutional role**: (i) as a standalone NBFC financing maritime sector projects, and (ii) as a **nodal implementation agency** for several Government of India maritime schemes.

Unlike legacy financial institutions such as REC and PFC, established several decades ago to focus primarily on the power sector are reshaping as infra-sector focussed NBFCs.

SMFCL's distinct advantage lies in its **exclusive maritime focus**, enabling it to address financing gaps that are otherwise underserved by the broader financial system.

Additionally, SMFCL operates with **very lean institutional overheads**, functioning from a single office with fewer than 20 employees, resulting in negligible operating expenditure. This structural efficiency allows SMFCL to offer financing at **more competitive rates**, potentially 20–30 basis points lower than comparable NBFCs, while maintaining financial discipline.

Since commencing lending operations, SMFCL has sanctioned approximately **₹4,300 crore** across key maritime projects, including:

- A **green-field port project** promoted by the Andhra Pradesh Maritime Board,
- Financial support to the **Dredging Corporation of India**, and
- Funding to **Goa Shipyard Limited** for development of a training centre and land acquisition.

These projects are scheduled for disbursement within the current financial year. The Board has further approved a **disbursement target of ₹8,000 crore** for the year, alongside an **overall borrowing ceiling of ₹25,000 crore**, subject to regulatory compliance and market conditions.

A key challenge highlighted was compliance with **RBI exposure norms applicable to NBFCs**, which cap exposure at 25 percent for individual entities and 40 percent at the group level. With a current net worth of approximately **₹1,100 crore**, and legacy investments of around **₹500 crore** made prior to SMFCL's conversion into an NBFC, the corporation's effective lending headroom therefore is constrained.

To partially address this limitation, SMFCL is prioritising **projects backed by state government guarantees**, which are exempt from exposure limits. However, the speaker underscored the need for **additional equity infusion from the Government of India**, requesting at least **₹2,000 crore**, which would allow SMFCL to significantly scale operations by leveraging its balance sheet multiple times over.

SMFCL has been designated as the **nodal agency** for implementing Government of India maritime initiatives amounting to approximately **₹69,754 crore**, structured around four pillars:

- Shipbuilding Financial Assistance,
- Shipbuilding Development,
- Maritime Development Fund (MDF), and
- Regulatory and legal reforms.

SMFCL plays an active role in three of these four pillars.

The **₹25,000 crore Maritime Development Fund** represents a cornerstone reform aimed at mobilising private capital and reducing financing costs. The MDF comprises:

- **₹20,000 crore equity support**, with SMFCL investing up to **49 percent** on behalf of the Government of India, and
- **₹5,000 crore interest subvention**, providing a **3 percent interest subsidy** on loans availed from banks or NBFCs, routed through SMFCL.

This blended finance structure enables SPV-based investments in ports, shipbuilding, dredging, and allied infrastructure, while crowding in private and institutional investors.

SMFCL has also been entrusted with administering the **Shipbuilding Financial Assistance Scheme**, supported by a dedicated Project Management Unit within the corporation. Under the **Shipbuilding Development Scheme**, SMFCL will manage an insurance subsidy programme of approximately **₹1,500 crore**, aimed at lowering high insurance costs that erode the competitiveness of Indian shipyards.

Importantly, SMFCL's lending policy has been deliberately kept **broad and ecosystem-oriented**, enabling financing not only for vessels and ports, but also for jetties, terminals, training infrastructure, and efficiency-enhancing projects across the maritime value chain.

The speaker emphasised that while SMFCL must compete with established NBFCs and financial institutions, its sectoral specialisation, low operating costs, and policy alignment provide a strong comparative advantage. However, realising its full potential will depend on timely equity support, regulatory flexibility, and sustained industry participation.

Proposed Recommendations	Key Stakeholders	Nodal Agencies
Strengthen SMFCL's capital base through equity infusion to enable large-scale maritime financing (Immediate for Budget 26-27)	Government of India, Financial Markets, Industry	Ministry of Finance, MoPS&W
Institutionalise SMFCL as the central blended-finance platform for maritime infrastructure	Banks, NBFCs, Private Investors, Multilateral Agencies	SMFCL
Accelerate operationalisation of the Maritime Development Fund (MDF)	Port Developers, Shipyards, Infrastructure SPVs	SMFCL, MoPSW
Support ecosystem-based maritime financing (ports, jetties, shipbuilding, training infrastructure)	MSMEs, Shipyards, Port Operators, States	SMFCL, State Maritime Boards, IPA, MSDC and IWDC

Speaker: Shri Shiv Om Dwivedi

GM, DMRC

He discussed the critical importance of early-stage strategic decision-making in large infrastructure projects to manage key parameters such as cost, quality, timelines, and operational viability. Successful delivery of connectivity and infrastructure projects depends on integrated institutional coordination and well-planned strategic decisions.

Timely and litigation-free land acquisition was highlighted as a foundational requirement for port, maritime, and infrastructure projects, as these developments require complete ecosystems including housing, transport networks, and social infrastructure. Experiences from national highways and railways, particularly the Haryana Orbital Rail Corridor, demonstrated that dedicated statutory frameworks for land acquisition significantly reduce delays and legal disputes.

The National Highways Act, 1956 and Railways Act's provisions for Special Railway Projects were cited as models that could be adapted for maritime projects.

The Special Purpose Vehicle (SPV) model was discussed as an effective institutional mechanism to coordinate multiple stakeholders, improve accountability, and ensure efficient project execution. Integrated project delivery covering consultancy, construction, operations, and maintenance was emphasised as essential for long-term productivity and asset optimisation.

Capacity building and skill development were highlighted as core enablers, with practitioner-led training institutions playing a key role in supporting large-scale infrastructure expansion. DMRC's role as a partner for consultancy, construction, operations, and collaboration under SPV frameworks was noted, with its integrated delivery model, advanced technology adoption, and capacity-building initiatives cited as a key strength.

India's metro systems were discussed as globally competitive in terms of cost efficiency, construction quality, technology adoption, and high levels of indigenisation. Advanced technologies such as automated signalling, digital systems, and driverless operations were highlighted for improving efficiency, safety, and scalability.

Replication of metro technologies and operational practices for non-passenger applications, including cargo and urban logistics, was discussed as a viable option to enhance productivity. The use of metro infrastructure during non-peak hours for parcel and cargo movement was highlighted as an efficient way to maximise asset utilisation. Automated systems and cyber-secure station infrastructure were discussed as enablers for time-bound and reliable cargo movement within urban regions.

Institutional risk-taking, supported by strong governance and learning mechanisms, was highlighted as necessary for innovation and long-term infrastructure development. Knowledge transfer through systematic documentation of successes and failures was emphasised as essential for building institutional memory and enabling future project scale-up. Finally, application of metro-style planning, technology, and execution frameworks to maritime and port connectivity projects was discussed as a pathway to improving port productivity, hinterland connectivity, and overall logistics efficiency.

Proposed Recommendations	Key Stakeholders	Nodal Agencies
Establish a dedicated statutory framework for land acquisition for port-led and maritime infrastructure, modelled on the National Highways Act, 1956 and Railways Act provisions for Special Railway Projects	Central & State Governments, Port Authorities, Project Developers	Ministry of Ports, Shipping & Waterways (MoPSW), Ministry of Law & Justice
Adopt SPV-based institutional models for port connectivity and logistics projects to ensure multi-stakeholder coordination, accountability, and efficient execution (Immediate for Budget 26-27)	Central & State Governments, PSUs, Private Developers, Operators	MoPSW, State Maritime Boards, PM Gati Shakti, IPA, DMRC
Leverage metro-sector expertise and integrated delivery models (consultancy, construction, O&M, technology, capacity building) to enhance productivity and reliability in port and maritime connectivity	DMRC, Port Authorities, Logistics Operators	MoPSW, DMRC, MoRTH, Ministry of Railways

Speaker: Capt. R Poswal
MMI Noida, DG Shipping

Capt. R. Poswal from the Directorate General of Shipping discussed a major digital initiative titled **E-Samudra**, which aims to transition maritime assessments, examinations, and licensing processes to a fully digital, online, and faceless system. It was noted that the objective is to minimise physical interface and eliminate the need for candidates to visit offices, with most processes being conducted through online platforms. A national digital platform is being rolled out across India to enable candidates from all states and UTs to complete assessment and licensing requirements remotely, with physical presence required only in limited and unavoidable cases.

He also discussed the progress made in operationalising the system, including finalisation of tenders and platform development, and noted that the system is moving towards full implementation. It was highlighted that examinations are being conducted frequently, with multiple examinations held on a regular basis to reduce backlog and processing delays. Faster examination cycles were discussed as essential to meet industry demand and ensure timely certification.

The discussion also focused on the limited penetration of maritime careers in smaller towns and non-coastal regions, which has contributed to a shortage of trained maritime officers. It was noted that digitalisation and decentralised assessment systems would help expand access, encourage wider participation, and reduce turnaround time for licensing and deployment of seafarers. Coordination among DG Shipping, assessment bodies, and training institutions was underscored as part of the implementation process, with further reviews planned to monitor progress and address operational challenges.

Speaker: Mr Sachin Bhanushali
Former CEO Distriparks

The speaker discussed the importance of connectivity and logistics costs in the Indian context, highlighting the critical role of maritime transport for exports and the need for strong integration between maritime and land-based transport systems. It was noted that efficient domestic trade requires seamless integration of road, rail, coastal shipping, and inland waterways, supported by ports and rail terminals functioning as logistics hubs to reduce overall logistics costs. Emphasis was placed on the need for an integrated transport network combining roads, railways, rivers, waterways, and coastal infrastructure as a comprehensive connectivity solution.

The discussion clarified that logistics cost is not limited to transportation cost alone, but includes the cost to businesses arising from the choice of transport mode, particularly inventory carrying costs, working capital requirements, and infrastructure needed to manage higher inventories due to unreliable transport systems. It was noted that lower reliability of transport modes leads to higher logistics costs, and that improving reliability is critical for reducing overall logistics costs in India. From a business perspective, reliability was discussed as the most important determinant of transport choice, followed by modal efficiency to reduce inventory costs, comparative transportation costs, and enforceability of contracts.

It was further discussed that challenges in contract enforcement, particularly in large transport systems, affect businesses' ability to rely on formal logistics arrangements. The discussion also noted that India's logistics infrastructure and supply chains were shaped by pre-GST conditions, leading to fragmented, road-heavy distribution networks and limited use of multimodal solutions.

It was highlighted that post-GST, there is a need to restructure logistics systems towards integrated, hub-and-spoke, and multimodal models.

The agenda for policymakers and stakeholders was discussed around improving transport speed and reliability, noting that current average speeds across road and rail are inadequate. The need to develop an ecosystem of recognised multimodal common carriers with assured transit times and regular service frequency across rail and maritime modes was emphasised. The discussion also highlighted the importance of expanding rail terminals and logistics hubs to support multi-operator, sustainable hub-and-spoke transport models.

The discussion concluded with emphasis on logistics cost reduction as a central objective, with modal efficiency and integrated multimodal performance playing a key role. A suggestion was also discussed on developing a unified multimodal transportation document for domestic trade, particularly incorporating waterways, to enable a single documentation framework across rail, road, and waterways, aligned with GST principles.

Proposed Recommendations	Key Stakeholders	Nodal Agencies
Strengthen integration of maritime, road, rail, coastal shipping, and inland waterways to enable seamless multimodal connectivity for export and domestic trade	MoRTH (Ministry of Road Transport and Highways), Ministry of Railways, MoPSW, Rail & Road Operators, Logistics Providers, IWAI, DGS	PM Gati Shakti NMP, NITI Aayog
Improve reliability and speed across all transport modes to enhance logistics efficiency and reduce overall logistics costs	Transport Operators, Infrastructure Developers, Cargo Owners, MoRTH (Ministry of Road Transport and Highways), Ministry of Railways, MoPSW	MoRTH (Ministry of Road Transport and Highways), Ministry of Railways, MoPSW for creation of repair and support infra for cargo transports
Develop a framework of recognised multimodal common carriers with assured transit times and regular service frequency	Logistics Service Providers, Shipping Lines, Rail Operators, Cargo Owners	PM Gati Shakti
Expand and strengthen ports, rail terminals, and logistics hubs to support hub-and-spoke transportation models	Port Authorities, State Governments, Private Terminal Operators,	MoPSW, IPA, State Maritime Boards, MSDC and IWDC

	Ministry of Railways, MoPSW	
Shift policy focus from transport cost alone to total logistics cost, including inventory, working capital, and contract enforceability	Industry, Trade Bodies, Financial Institutions	Department of Commerce, Ministry of Finance
Introduce a unified multimodal transport document for domestic trade aligned with GST	Traders, Logistics Providers, GST Authorities	PM Gati Shakti, Department of Revenue, Ministry of Finance and line Miniseries

Speaker: Professor Prabir De

Faculty, CMEC (RIS)

Professor Prabir De reflected on the evolution and mandate of CMEC since its inception, situating connectivity within a broader framework of **knowledge creation, maritime diplomacy, and strategic policy-making**. He noted that CMEC at RIS has undertaken several impactful research projects, including flagship studies launched internationally, reinforcing its role as a knowledge hub for maritime and connectivity issues.

A key concern raised by Professor De was the **systematic underestimation of international components of trade and logistics costs**, particularly due to the lack of reliable data on trade volumes (weight-based data). While trade values are readily available through HS-code-based datasets, volume data, which is critical for understanding freight costs, logistics efficiency, and comparative competitiveness, remains largely inaccessible. He highlighted CMEC's efforts to convert trade values into volumes at disaggregated HS levels, while also acknowledging data gaps due to limited disclosure by customs authorities. Addressing this data deficiency, he argued, is essential for realistically assessing India's export ambitions and freight competitiveness vis-à-vis other countries.

Professor De also emphasized the importance of **digital and institutional connectivity**, particularly through initiatives such as the **National Maritime Single Window (e-Samudra)**. He underlined that such platforms are not only critical for domestic efficiency but are closely watched by South and Southeast Asian partners, presenting India with an opportunity for regional leadership in maritime facilitation.

From a **geostrategic perspective**, he cautioned that connectivity projects cannot be viewed in isolation from geopolitics. Referring to recent developments in neighbouring countries, he highlighted how infrastructure investments, initially aligned with Indian strategic interests, can be

redirected under changing political circumstances, including growing Chinese involvement. This underlines the need for sustained engagement, risk assessment, and long-term strategic planning in neighbourhood connectivity initiatives.

Professor De identified **training and capacity building** in maritime governance as a "low-hanging fruit" for regional cooperation, particularly with South and Southeast Asian countries, where India can leverage institutional expertise through CMEC.

Finally, he pointed to **institutional and governance asymmetries** between coastal and non-coastal states. While maritime states benefit from dedicated maritime boards and funding, inland states with significant waterways often remain institutionally sidelined.

The Chair cited the evolving role of the **Inland Waterways Development Council** as a necessary step toward greater coherence between central and state governments, and between Coastal and inland connectivity frameworks.

Proposed Recommendations	**Key Stakeholders**	**Nodal Agencies**
Develop and institutionalise weight/volume-based trade and freight datasets to improve logistics cost assessment and export competitiveness	Exporters, Importers, Logistics Providers, Data Agencies	ULIP, DPIIT, Ministry of Commerce & Industry
Fast-track the National Maritime Single Window (e-Samudra) to enhance trade facilitation and regional leadership	Port Authorities, Shipping Lines, Customs, Trade Facilitation Bodies	MoPSW, DG Shipping, Central Board of Indirect Taxes and Customs (CBIC)
Integrate geostrategic risk assessment into neighbourhood connectivity and infrastructure planning	Strategic Think Tanks, Infrastructure Planners, Security Agencies	MEA, Line Ministries
Expand maritime governance training and capacity-building programmes for South and Southeast Asian partners	Regional Governments, Training Institutions, Multilateral Bodies	MoPSW, MEA, IORA, BIMSTEC and ASEAN Secretariats
Strengthen coordination between coastal and inland states, including formal empowerment of inland waterways governance	State Governments, Inland Waterway Authorities, Port Authorities	MoPSW, IWAI, IWDC, MSDC

Speaker: Mr. Murlidhar Venkata Satya
MVS Consultancy

Mr. Murlidhar Venkata Satya approached connectivity from a **cargo-centric and operational perspective**, arguing that infrastructure planning must begin with understanding how cargo itself seeks to move, along the **shortest route, in the least time, and at the lowest cost**. He observed that India's geographic advantage is not being optimally leveraged, particularly in containerized trade.

He highlighted the **severe imbalance in container traffic**, with nearly 60–65 percent of India's container volumes concentrated at the West Coast ports, primarily JNPA and Mundra, despite significant cargo originating from or destined for the eastern and southern regions. These results in inefficiencies such as longer vessel routes, pendulum shipping movements, increased transit times, and higher inland transportation costs.

Mr. Satya stressed that cargo owners prioritize **predictability, transparency, and visibility**. Delays and uncertainty in port operations, inland evacuation, and scheduling directly increase inventory and logistics costs, ultimately making Indian exports less competitive. While some predictability exists in major ports, it falls short of global benchmarks where vessel calls, turnaround times, and container movements are highly precise.

Drawing from his extensive experience in shipping and inland logistics, he highlighted **road congestion and underutilized rail capacity** as major bottlenecks, especially around large ports. He cautioned that simply adding more roads or rail lines will not resolve congestion unless cargo flows are systematically planned and incentivized, particularly to shift a larger share of cargo (60–70 percent) to rail for long-haul inland movement.

A critical constraint identified was the **limited backup storage space at ports**, which restricts throughput once yards are congested. As a solution, he advocated for **off-port storage and evacuation systems**, such as developing **Multi-Modal Logistics Parks (MMLPs)** 15–25 km away from ports. This would allow ports to function purely as modal transfer points rather than storage locations, significantly enhancing effective capacity without physical expansion.

Mr. Satya also proposed exploring **innovative container evacuation systems**, including automated, guided, or metro-inspired cargo movement solutions, supported by centralized digital control systems. While acknowledging that such systems would require pilot projects and safeguards, he argued that innovation is necessary given land scarcity, congestion, and environmental concerns.

He concluded by noting that two Indian ports (Machilipatnam and Kandla Ports) have already signed MoUs to pilot such new-age evacuation and logistics solutions. If successful, these

initiatives could improve productivity, reduce congestion and pollution, and enhance India's overall logistics competitiveness.

Proposed Recommendations	Key Stakeholders	Nodal Agencies
Shift connectivity planning to a cargo-centric approach; rebalance container traffic toward East Coast ports with strong hinterland connectivity	Port Authorities, Shipping Lines, Exporters, Importers	MoPSW, IPA and NSB, SMBs
Improve predictability, transparency, and visibility across ports and logistics chains to meet global service benchmarks	Terminal Operators, Logistics Service Providers, Customs	MoPSW, CBIC
Incentivise rail-based evacuation (60 - 70%) for long-haul inland cargo to reduce road congestion (Immediate for Budget 26-27)	Indian Railways, Port Operators, Logistics Providers	Ministry of Railways, MoPSW
Develop off-port Multi-Modal Logistics Parks (MMLPs) to decongest ports and enhance throughput (Immediate for Budget 26-27)	State Governments, Private Logistics Developers	MoRTH, MoPSW
Pilot innovative and automated container evacuation systems to boost productivity and reduce emissions	Technology Providers, Port Authorities, Terminal Operators	MoPSW, DPIIT, DMRC, PM Gati Shakti

Concluding Remarks and Vote of Thanks

The brainstorming was concluded with Concluding remarks by the Chair and DG RIS. Dr Shishir Shrotriya, gave the Vote of Thanks to the experts who joined and the thanked DG RIS and Team CMEC for all their support and the effort.

AGENDA

Background

India stands at a critical juncture in its economic trajectory, aiming for a $5 Trillion economy by 2027-28. While infrastructure creation (Highways, DFCs, Ports) has accelerated under the PM Gati Shakti National Master Plan, the next leap in growth will not come from building more assets alone, but from integrating them to unlock industrial efficiency.

Efficient Logistics Infrastructure and seamless supply chains are critical drivers of trade, economic growth and global competitiveness. Integration of connectivity modes (land, air, rivers and seas) is as significant as the connectivity itself. Without the involvement of inland waterways, coastal shipping and multi-modal integration, the efficiencies in connectivity are hard to achieve.

"Connectivity for Productivity", discussion is designed as a strategic dialogue on requirements of few important aspects multi-modal integration of Rail/Road/ Shipping Infra, development of efficient Multimodal Logistics Parks, Coastal Economic Zones and Synchronization, Digitization, and Last-Mile Efficiency.

Objectives of the Discussions

Focus 1 : Moving from 'Transit Ports' to 'Industrial Ports' (Port-Led Industrialization).

Focus 2 :Coastal Shipping imperatives, need for Coastal Economic Zones (CEZs) and MMLP infra tointegrate industries to reduce logistics costs.

Focus 3 : Role of Dedicated Freight Corridors (DFC) and connecting "Road to Rail to Waterways". Imperatives for accelerating Multi-Modal Logistics Parks (MMLPs)

Focus 4 :Gather momentum for thrust areas for the forthcoming Union Budget 2026-2027

Agenda : Connectivity for Productivity : "Ports as Production Engines"

1100 – 1105	**-**	**Introductory Remarks - Dr. Shishir Shrotriya, CMEC(RIS)**
1105 – 1115	**-**	**Welcome Address by DG (RIS) – Prof. Sachin Kumar Sharma**
1115 -1125	**-**	**Special Address - Dr Seshadri Chari, Member Governing Board, RIS**
		Guest of Honour
1125 – 1130	**-**	**Opening Address by Chair - Shri TK Ramachandran, Former Secy. MoPSW**
1130 – 1250	**-**	**Panel Discussion**
1250 – 1300	**-**	**Vote of Thanks & Felicitations of the Guest Speakers and Group Photograph**

Panelists

DMRC : Shiv Om Dwivedi, GM DMRC

National Shipping Board : Capt. Rakesh Singh, President ICCSA

Sagarmala Finance Corporation Ltd : Shri LVS Sudhakar Babu, MD, SMFCL

Next Gen Logistics: Mr Sachin Bhanushali, Former CEO Distriparks (online from Peru)

DG Shipping : Capt R Poswal, MMI NOida

RIS : Prof Prabir De, Faculty CMEC(RIS)

Primus Partners :Mr Davinder Sandhu, Co-Founder & Chairman

Infra Consultancy :Mr Murlidhar Venkata Satya, MVS Consultancy - Logistics & Infra

CMEC (RIS) : Moderator – Dr Shishir Shrotriya

(Note – Other noted experts from the Industry, Govt., Academia were also present in audience)

Photo Gallery

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