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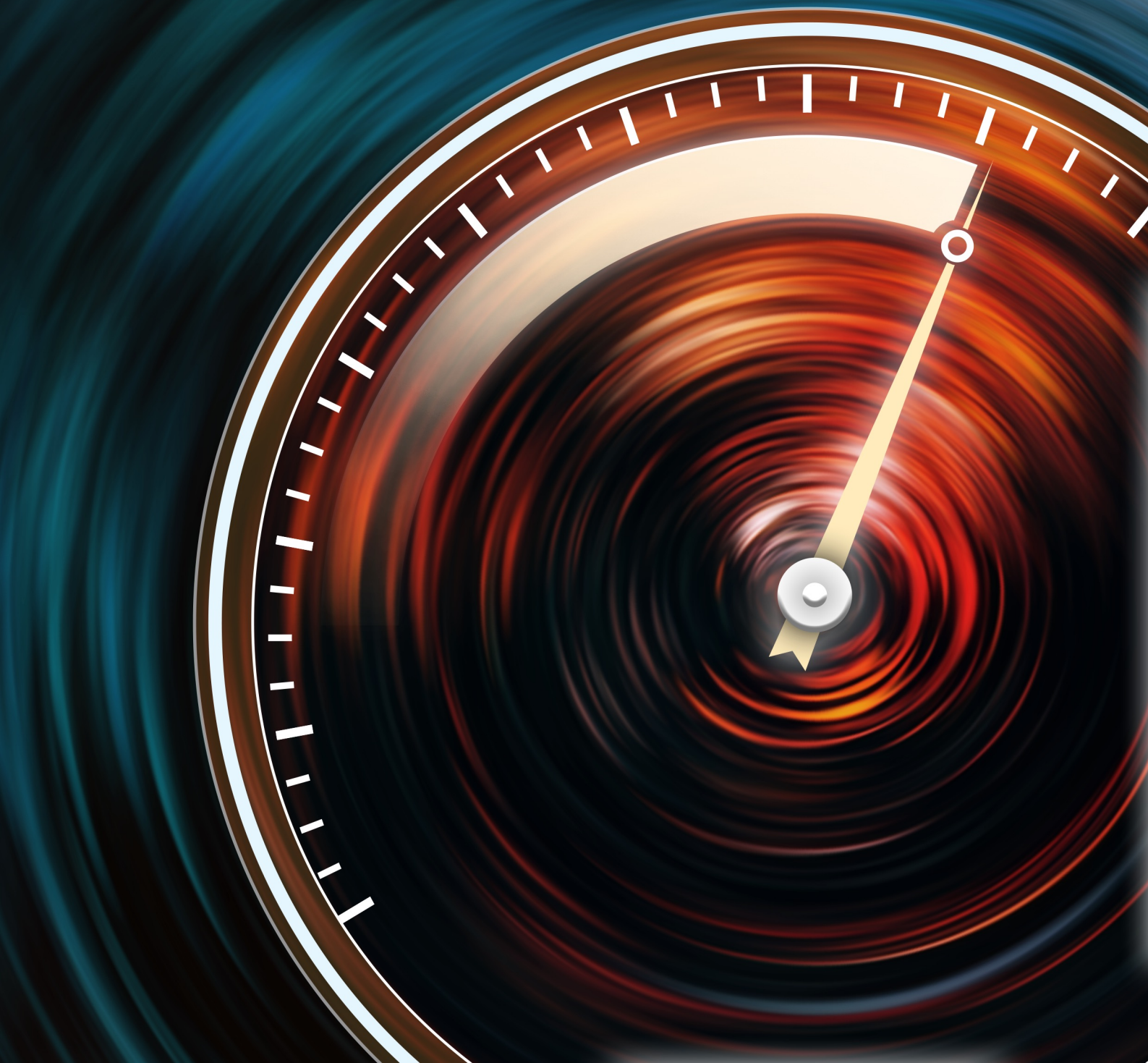
Moving the Needle

May 2026 Edition



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As we bring together this edition of MTN, one theme cuts across every sector, every policy discussion, and every reform conversation featured in these pages: India entering a phase where scale alone will no longer be enough. The next phase of growth will depend on resilience, credibility, systems thinking, and the ability to integrate policy intent with on-the-ground execution.

Whether it is maritime decarbonisation, food traceability, healthcare transformation, urban sustainability, or public infrastructure financing, the underlying challenge remains around making systems that are future-ready, globally competitive, and inclusive at the same time.

discussion on urban greens argues for treating ecology as core infrastructure rather than an afterthought. The piece on digital public infrastructure for food traceability highlights how trust and verifiable data are becoming essential requirements in global trade. The analysis of Maharashtra's PPP Policy 2026 points to a new generation of infrastructure partnerships in which governments are increasingly expected to act as enablers, coordinators, and long-term ecosystem builders.

Similarly, the healthcare and wellness discussions underline how technology, AI, preventive care, and interoperable health systems are beginning to reshape service delivery models in India. Across sectors, there is also a growing recognition that sustainability can no longer be approached in silos. Climate resilience, digital systems, supply chains, workforce readiness, financing, and governance are now deeply interconnected.

The coverage of Singapore Maritime Week 2026 showcases how India is increasingly being viewed not only as a large market but as an emerging contributor to the future of global maritime transition through green fuels, digital systems, port modernisation, and maritime skilling.

This edition, therefore, is not merely a collection of sectoral articles but a reflection of how India's development conversation itself is evolving.

We hope the insights and perspectives presented in this edition contribute meaningfully to that larger national conversation.

Happy Reading

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01

Rethinking Urban Greens

Almost 11% of the global urban population lives in Indian cities. Urban expansion, however well-intended, has come at a severe cost: the degradation of cities' ecological systems. Our cities continue to face urban island effects, flooding, and water shortages.

While commendable efforts have been made by the government to strengthen urban infrastructure, the approach towards creating ecological resilience and preserving biodiversity in cities remains fragmented and untargeted.

To achieve long-term, sustainable urban transformation, we need to treat our ecology – and more particularly, our urban greens – as essential urban infrastructure. Urban planning requires a 'New Urbanism Approach' that compels us to look at community and ecology in tandem, rather than focus on expansion alone.

This article, therefore, identifies three structural problems that stand between Indian cities and the full potential of urban greens, in their path towards ecological resilience. For each, it proposes a clear direction for reimagining urban greens as a call to action for government, academia, and industry to move from intent to implementation.

Problem 1: Urban Greens are not Treated as Essential Infrastructure

Cities invest in roads, drains, and power grids with defined delivery targets, maintenance budgets, and performance metrics. Urban green spaces seldom receive this discipline. They are managed residually — measured by area of coverage rather than ecological performance and are among the first assets to be deprioritized in policymaking.

The consequences of sidelining urban greens in such a manner are not merely aesthetic. Degraded green cover increases temperatures, worsens air quality, and erodes the biodiversity that city ecosystems depend on.

What must change

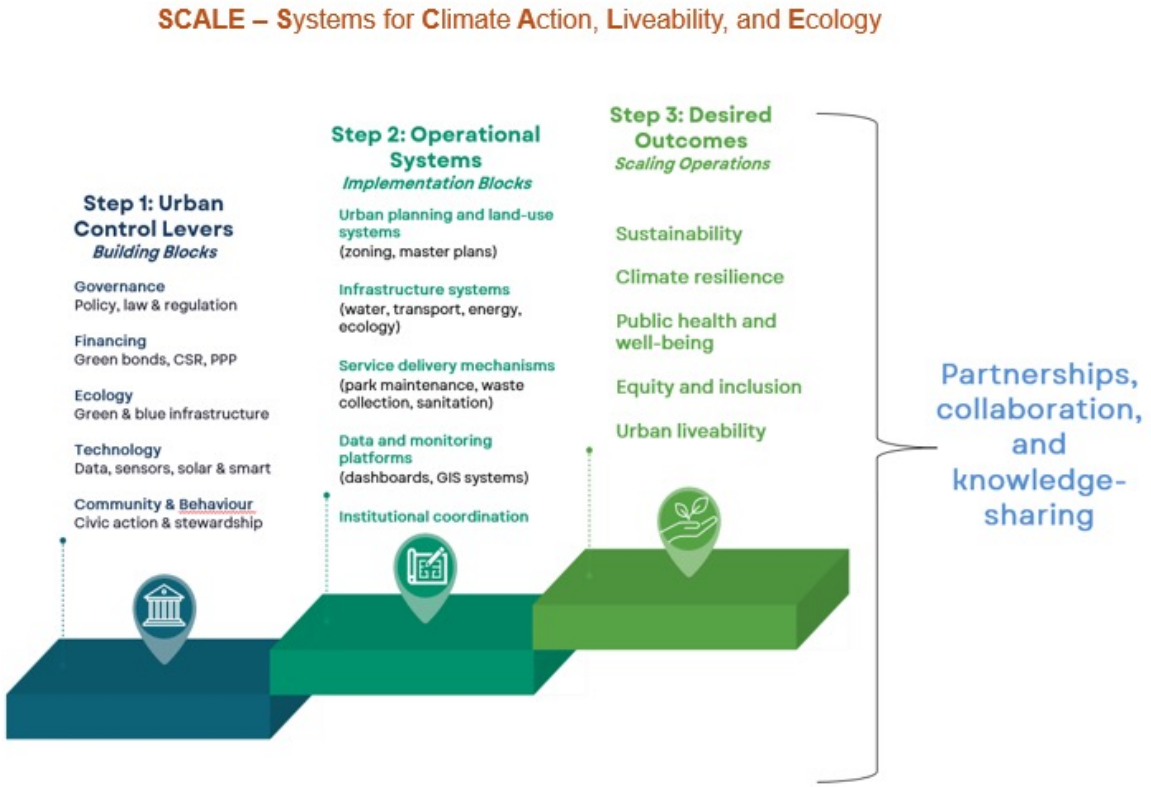
Urban authorities must reclassify green spaces as essential infrastructure and govern them with the same rigor as grey infrastructure. Urban development plans must include ecological performance indicators — carbon sequestration, biodiversity indices, heat island mitigation — alongside traditional metrics such as areas under green cover. Further, planning authorities must commission baseline ecological studies through partnerships with academic institutions and private actors, enabling a shift from intuition-led to evidence-based decision-making.

What this achieves

Treating urban greens as urban infrastructure establishes accountability for ecological outcomes. It also lays the data foundation that a systems-level approach to sustainability demands — which brings us directly to the second structural challenge.

Problem 2: Institutional Fragmentation Prevents Systems-Level Action

Sustainability is, by its very nature, a systems problem – it cuts across sectors and mandates and requires coordination. Yet Indian urban governance addresses it as a sectoral one. The technical, financial, and environmental dimensions of urban projects are often assessed by different departments, rather than through a unified, systems-based approach. As a result, urban planning and ecological restoration continue to operate in silos — across institutions, and often within them. Such fragmentation limits the effectiveness of otherwise well-intentioned efforts. The issue is not merely one of intent, but of institutional alignment and systems integration.



What must change

There is a growing recognition that sustainability cannot be achieved through isolated or piecemeal interventions. Instead, it requires a systems-based approach that aligns policy, planning, and implementation.

Planning authorities may implement the 'SCALE — Systems for Climate Action, Livability, and Ecology' framework, which is premised on the idea that sustainable outcomes do not result from a single intervention, but from the coordinated interaction of urban systems across three distinct levels:

- **Urban control levers,**
- **Operational systems,** and
- **Long-term outcomes**

Importantly, this framework is not prescriptive — it is applicable across city sizes, institutional structures, and different geographies. What it demands, above all, is that partnerships and collaborations enable coordination between government agencies, private sector actors, academic institutions, and civil society across all three levels.

What this achieves

A systems-based framework converts isolated interventions into coordinated action. It enables urban authorities to identify leverage points across the entire sustainability ecosystem, rather than optimizing individual components in isolation. It also establishes institutional architecture through which knowledge — from pilot projects, peer cities, and research — can be absorbed and scaled.

This architecture, however, is only as effective as the communities it serves - which surfaces the third structural problem.

Problem 3: Urban Greens are not Activated as Shared Civic Assets

Urban green spaces serve a vital purpose - in a rapidly urbanizing world, where private space is increasingly scarce and stratified, they are among the few remaining spaces in a city that belong, unconditionally, to everyone.

Well-designed green spaces offer people the opportunity to rest, and to simply be — in a way that few other urban environments permit. Research consistently links access to green, open spaces with reduced stress, stronger community bonds, and a more grounded sense of shared urban identity. These are not soft benefits. In cities where millions live high-pressure lives with shrinking access to affordable private space, they are among the most consequential public assets a city can offer its residents.

What must change

Urban authorities must move beyond a maintenance model for urban greens and adopt an activation model — one that creates the conditions for civic co-ownership. Development authorities may partner with establishments beyond the traditional urban governance ecosystem – such as cultural institutions and conservation organizations - to foster citizen-centric engagement within urban greens and promote conservation awareness. Parks should be reimagined as public assets capable of delivering social, health, and educational outcomes, in addition to ecological benefits.

What this achieves

Activated parks deliver measurable outcomes on public health and social cohesion and strengthen the case for sustained political and financial investment. In doing so, they will become a tangible expression of the systems-level sustainability that the SCALE framework envisions – something that urban residents can experience every day.

Contributors

Vanshika Sagar

Manager, Primus Partners

Meha Chandra

Senior Consultant, Primus Partners

02

Why India Must Act Now on DPI for Food Traceability

India exports ~INR 5 Lakh Cr worth of Agriculture and Processed Foods[1]. Our share of the global trade is barely 2–3 %, despite being one of the largest producers. The issue is about credibility. We are operating in a global market that is increasingly demanding about verifiable data on origin, inputs and so on. Our systems and supply chains struggle to meet these standards.

Recent disruptions bring this to life. Shrimp shipments have been rejected in the EU and the US over banned antibiotic residues[2]. Indian Mango exporters faced problems in the US due to documentation issues[3]. Saudi Arabia's restriction on poultry imports amid bird flu concerns[4] shows how quickly market access can collapse when health and other treatment traceability systems are weak. The issue is not just quality. It is the inability to prove consistency.

The number one compelling reason for DPI-based food traceability is global regulatory pressure.

Regulatory requirements in major markets are shifting compliance from paperwork to real-time, verifiable data. In this environment, products that cannot be traced will not be traded. Please read that again, carefully: Products that cannot be traced will not be traded!!!

A DPI-based Traceability approach can address this challenge. By leveraging standardized digital registries, India can create interoperable systems where farmers, aggregators, exporters, and regulators plug into a common architecture. Farmer identities linked to land records, crop data captured through remote sensing, and farm activities recorded through digital platforms can together create a robust traceability backbone.

DPI works because it standardizes data and reduces the marginal cost of verification to near zero, allowing millions of small transactions to scale seamlessly. In modern food markets, this translates directly into trust, and trust carries a premium.

The good news for India is that we already have robust DPI-based food and Agriculture systems. Adding a traceability layer on top can be relatively easy and a fast affair for us.

The building blocks for such a system are already in place. The government's Digital Agriculture Mission, explicitly envisages a DPI for agriculture through building blocks such as AgriStack and the Krishi Decision Support System. Three Foundational registries have been already initiated – Farmer Registry, Farmland Registry, and Crop Sown Registry. APEDA has a basic Tracenet system in place, providing certificate details for exporters. Bharat VISTAAR initiative aims to provide customized agronomy advice to farmers (basis agroclimatic zone, the crop, its sowing date and current issues). Adding food traceability elements such as crop seed variety, inputs used, etc. should be relatively simple from here.

Over the past decade, the country has demonstrated how DPI—through platforms such as Aadhaar, UPI, and DigiLocker—can transform access, inclusion, and efficiency at scale. Extending this architecture to agriculture would not only reduce compliance risks but also enhance India's credibility in global markets.

Traceability can be great for the domestic market too.

Indian consumers are evolving in their tastes and preferences. Especially in large cities, food is no longer judged only by price and appearance but increasingly by provenance, production practices and authenticity. Premiumization is visible in the spread of farm-linked brands, regional specialties, low-chemical-residues, etc. However, without a trustworthy information layer, the premium travels badly: a celebrated variety can become just another label once it leaves the district where it was grown.

This also has important implications for India's indigenous crops and GI-tagged products. From Darjeeling tea to Alphonso mangoes, we possess a rich repository of geographically distinct produce. Yet, the economic value of these products is often diluted due to weak authentication mechanisms. A DPI-based traceability system can anchor provenance in verifiable data, allowing farmers to capture higher value. For the policymaker, it offers a bridge between cultural preservation and commercial value addition.

The timing could not be more opportune. As global supply chains reconfigure in the aftermath of disruptions, buyers are seeking reliability and transparency. At the same time, India is pushing to significantly expand its agricultural exports. A DPI-led traceability system sits at the intersection of these ambitions.

What is required now is decisive execution. States and the Union government must now move decisively to establish a clear policy and regulatory framework for traceability, making it a standard requirement across agriculture and allied sectors. Private sector companies, industry bodies, Government departments (e.g. APEDA) and research institutions (e.g. ICAR) will need to work together, in defining protocols, ensuring data integrity, and enabling adoption at scale. The next agricultural breakthrough will not come from higher yields alone. It will come from the invisible chain that connects farms, livestock systems and markets. In the next phase of global trade, countries will not compete on produce alone. They will compete on proof.

Contributors

M Ramakrishnan

Managing Director, Primus Partners

Rajesh Serupally

Manager, Primus Partners

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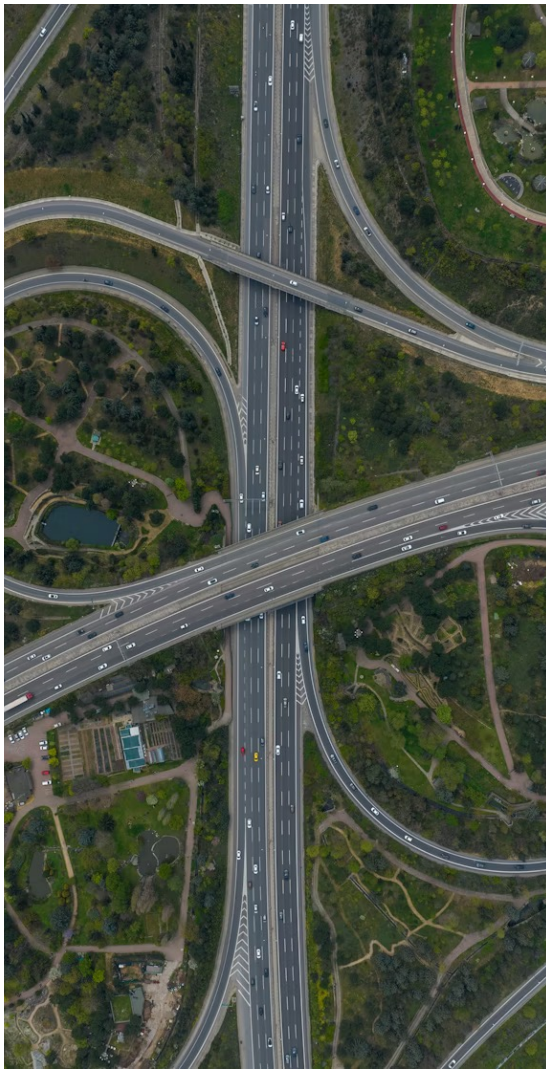
03

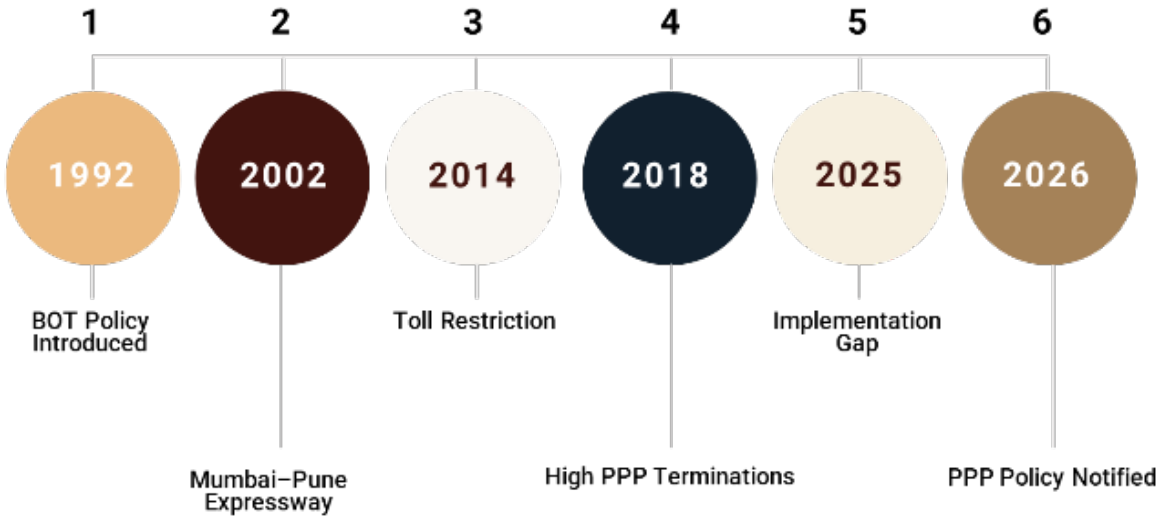
Maharashtra's PPP Policy 2026: A Critical Reset for PPP Infrastructure Projects

The Government of Maharashtra has launched its ambitious Public Private Partnership (PPP) policy 2026, which signals a decisive shift in how the state approaches infrastructure development. Approved in February 2026 and notified in March 2026, the policy responds to years of inconsistent PPP outcomes. Despite pioneering India's first Build-Operate-Transfer (BOT) toll road policy in 19921, Maharashtra has not achieved its full potential as the PPP projects were limited to Highways and road construction only. However, this policy is focused on multi sector approach and aligns with the broader vision of "Viksit Maharashtra 2047" and shall assist the state in achieving the ambitious goal of 1 trillion economy by 2030.



Currently, when states across India are competing to attract capital, technology, and innovation, Maharashtra's PPP policy provides a structures and investor friendly approach for delivering large infrastructure projects on PPP mode. The policy reflects the government's recognition that public resources alone may not be sufficient to meet the state's infrastructure aspirations and private sector collaboration will be essential in bridging this investment gap.

By 2018, the state accounted for a significant share of PPP failures in India8,9 as majority of the projects were related to highway construction. This reflected deeper issues such as overestimated projections, land acquisition delays, and weak institutional capacity. By 2025, only ₹27,357 crore of a planned ₹1.16 lakh crore PPP pipeline had translated into execution10.

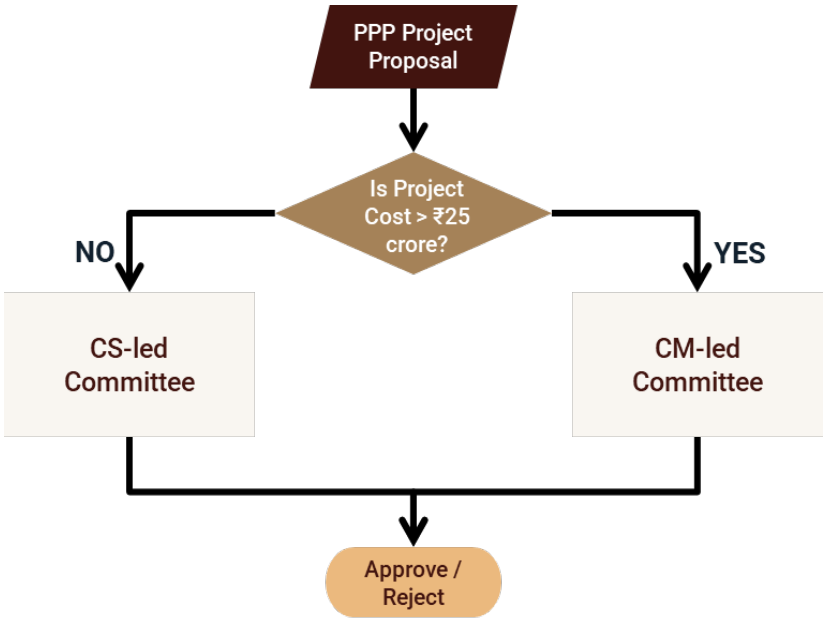


Timeline – Maharashtra PPP Journey

The 2026 policy introduces a more structured framework. A tiered approval system now routes projects above ₹25 crore to a Chief Minister-led Infrastructure Committee, while projects with value less than ₹25 crore are handled by a Chief Secretary-led committee. This replaces fragmented decision-making with a clear process. The policy also proposes to resolve the institutional gaps by creating a dedicated PPP unit under the planning department, along with specialized PPP cells across the various line departments for seamless coordination and monitoring. Moreover, a PPP cell is proposed to be established in MIRTA to provide technical expertise, project structuring and coordination with licensing authorities. In such a way the internal capacity of the institutions will be enhanced to handle complex PPP transactions and improve project delivery.

The PPP cells shall also develop a centralized database Management Information Systems (MIS) for continuous monitoring of the PPP projects over the project life cycle which shall also include monitoring of the executed concessions.

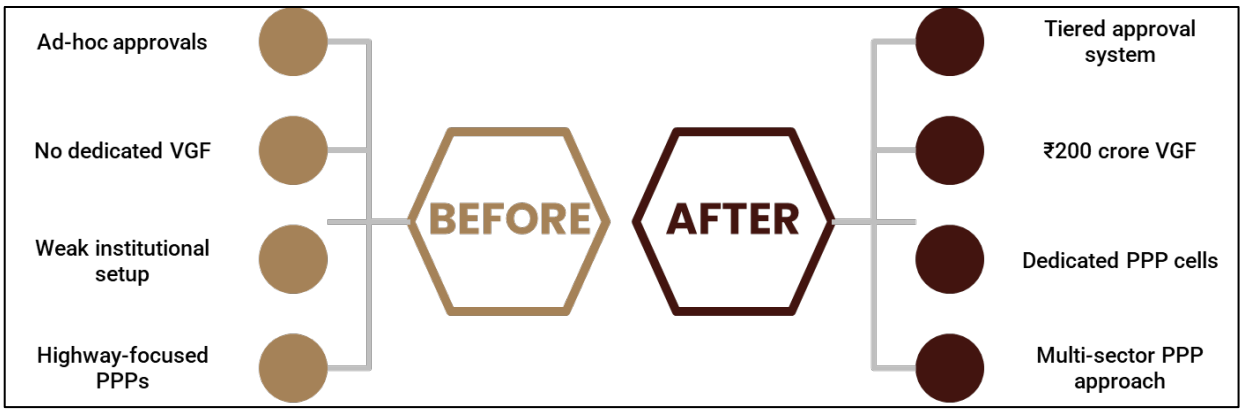
The policy also addresses the need for state support and balanced risk allocation for successful implementation of PPP projects. Among the various state support mentioned under this policy, creation of a ₹200 crore Viability Gap Fund shall assist in implementing various public infrastructure projects that are not viable for the private developers. Also, complementing this is a Project Development Fund of ₹5 crore that would be provided in the budget of the respective departments to provide financial assistance for undertaking project development activities such as preparing project estimates, feasibility studies, technical reports, hiring of transaction advisors or legal consultants, etc.



PPP Approval Mechanism

Creation of these funds shall improve project viability and encourage private participation in socially important but financially challenging sectors. Such mechanisms are important for attracting private capital for sectors like rural infrastructure, waste management, healthcare etc.

With the recent infrastructure developments that include India's longest sea bridge i.e. Atal Setu, Mumbai coastal road, Mumbai metro, missing link, Navi Mumbai international airport, express highways etc., Maharashtra has already demonstrated strong momentum in infrastructure development, and this PPP policy is expected to scale up these efforts further. Recent announcements regarding development of logistics corridors, renewable energy projects, housing redevelopment, electric vehicle infrastructure and urban mobility indicate the state's push towards modern infrastructure. Another important aspect of the policy is its focus towards future ready and sustainable infrastructure. This PPP policy mentions about the applicable sectors that include data centers, renewable energy infrastructure, telecommunication, irrigation etc., which is in line with the state's ambition to promote electric mobility, clean energy, data centers, tech infrastructure and circular economy solutions. From an investor perspective, the policy offers better institutional support, project visibility and greater clarity by creating a formal framework for project approvals and implementation along with the Viability Gap Fund.



The policy is expected to improve investor confidence, reduce procedural delays and accelerate financial closures for PPP projects. Overall, the Maharashtra PPP policy 2026 represents a progressive and strategic shift towards collaborative infrastructure development across sectors and shall therefore strengthen the state's position as a leading economic powerhouse of India.

Contributors

Ankit Modgil

Assistant Vice President, Primus Partners

Tushar G. Dessai

Manager, Primus Partners

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04

Reframing Climate Change as a Public Health Emergency:

Differential Impacts, Systemic Blind Spots, and Policy Priorities

Climate change is often framed as an environmental crisis, occasionally as an economic risk, but rarely as a lived public health emergency. The biased framing is not just incomplete but dangerously misleading.

Climate change does not arrive as an abstract, global phenomenon but arrives through the body. Climate change affects our bodies by entering our lungs as polluted air, being digested by our stomachs as contaminated water and crops, dehydrating our blood, and eventually affecting our minds with distress and anxiety.

The World Health Organization (2023) has already established that climate change remains the greatest health threat of this century. Ecological disruptions are accelerating in the name of development, as evidenced by the fact that almost 60% of emerging infectious diseases are linked to zoonotic transmission due to environmental changes (UNEP–ILRI, 2020).

Specific to India, we can observe the visible signal of this transition in the shifting geography of vector-borne diseases such as dengue, malaria, and chikungunya (Watts et al., 2023).

It is crucial to understand why the dichotomy of these inconsistent patterns of climate change affects our health. Most forested regions are still inhabited by tribal communities, highlighting that the synergy of human, animal, and ecological systems remains deeply intertwined. Despite the effects of climate change on ecosystems being sharper, they are woefully under documented. What appears as a gradual trend in national datasets is already a lived disruption in these geographies.

It is unfortunate that our institutional response mechanisms remain fragmented. Climate change is still treated as someone else's problem, maybe the Environment Department's mandate or the Finance Department's concern, or simply an International Negotiation agenda. Meanwhile, the health system silently absorbs its consequences.

Expert:

Dr. Anand Bang, Director of SEARCH,
Honorable Advisor for
Health to the Chief Minister of Maharashtra

Heatwaves: The Silent Killer

Among the many manifestations of climate change in India, heatwaves are perhaps the most immediate, least visible, and most underestimated public health threat.

Unlike floods or cyclones, heat does not leave behind broken infrastructure or dramatic imagery. It leaves behind exhausted bodies. The Indian Meteorological Department (IMD) defines a heatwave as a period in which the temperatures go beyond the critical threshold, indicating a significant deviation from regional norms. However, the experience of heat cannot be captured by this definition alone. It operates invisibly, raising core body temperatures, thickening blood, and pushing already vulnerable individuals toward collapse. Heat is felt through slowed body function, dizziness from dehydration, and eventual strain on the heart and lungs (Glaser et al., 2016). No doubt heatwaves are biologically aggressive, but the real burden lies beneath the surface. Heat exacerbates underlying conditions of hypertension, diabetes, kidney disease, and respiratory disorders, turning manageable illnesses into life-threatening crises.

India should no longer plan for an anticipated climate change, as it is living through it. Summers are arriving earlier, lasting longer, and offering little solace from the continuous, cumulative heat stress. Once considered a relief window for physiological recovery, there is no reduction in the nighttime temperatures, which are remaining 1–5°C above normal (India Water Portal, 2025).

For many, this is physiologically dangerous due to the lack of recovery, while for others, it is simply devastating. A person in an air-conditioned office may experience heat as a source of discomfort. However, if one were to step outside the temperature-controlled environment, the story would change. For a construction worker, a farmer, a street vendor, or a tribal household dependent on forest-based livelihoods, the heat becomes a direct physiological assault.

In the tribal belts of central India, the relentlessly burning heat is not limited to occasional temperature shocks but pervades daily life as a constant, structuring force. It intersects with systemic disadvantages of the marginalized, which are long hours of outdoor labor with limited access to cool areas, an already fragile situation of nutrition, and significantly constrained access to healthcare. The traditional houses, constructed from local materials, offer limited protection against sustained heat. In an effort to address the trapped heat inside the homes, basic cooling solutions remain ineffective due to unreliable electricity supply (Census Housing Data; Ministry of Tribal Affairs). In this context, heat exposure moves beyond simply stressing the body to compounding social vulnerability. In populations where undernutrition, anemia, and untreated chronic conditions are already prevalent, as seen in many tribal communities (NFHS-5; Tribal Health Report, MoHFW), this risk is significantly amplified.

Inequality in Exposure, Inequality in Survival

It is important to confront the most persistent myth about climate change, which is that it affects everyone equally. In reality, it magnifies existing inequalities. The ability to cope with heat is not just biological but structural. It depends on housing, occupation, access to water, healthcare, and social protection.

To expand our exploration of climate-induced health conditions beyond the tribal regions, to include the broader pattern of structural inequity across settings. In the tribal communities, existing vulnerabilities are intensified by geographic isolation, weak infrastructure, and dependence on climate-sensitive livelihoods. However, other low-resource communities, such as the urban poor, also face parallel compounding risks. They live in densely packed settlements with poorly ventilated, inadequate housing infrastructure, limited access to cooling, and poor access to quality health services. Similarly, rural residents routinely face water scarcity and agricultural uncertainty.

The effects of heat are not limited to homes but also quietly erode livelihoods. The International Labor Organization (2019) estimated that heat stress could result in a 2.2% loss of total working hours globally by 2030. Underlying this reported statistic lies a more immediate reality of the fewer hours worked, directly reducing income, which then compromises nutritional intake, leading to a gradual deterioration of health. For communities dependent on agriculture and forest produce, this is not just economic loss but a reinforcement of the cycle of vulnerability.

Furthermore, gender is instrumental in increasing the individual's vulnerability to face more severe health consequences from climate change. In resource-constrained environments, it is often the women who spend long hours collecting water, gathering fuelwood, and managing household responsibilities amid this extreme heat. Nutritional deficiencies and caregiving burdens further diminish their body's resilience to manage thermoregulation for core endocrine systems in this sustained exposure (UN Women; Ministry of Tribal Affairs). Therefore, climate change is not just an environmental crisis but a layered social and physiological inequality.

Invisible Costs: Mental Health and Displacement

No doubt climate change contributes to physical ailments, but it also places a significant burden quietly on the individual's mind. The climate changes of heatwaves and scanty rainfall lead to droughts and crop failures, which are not just economic shocks but remain deeply personal disruptions, altering lifestyles, straining interpersonal relationships, and creating uncertainty about the future.

In a typically drought-prone tribal region, climatic disruptions are observed in a particularly acute manner due to the close association of livelihoods with land and ecology. Seasonal migration is now a regular feature of annual displacement from traditional lands, leading to a loss of ecological stability induced by economic stress and contributing to cultural and psychological dislocation (UNDP Indigenous Communities & Climate Change).

Heat itself affects cognition and thereby behavior, which leads to irritability, reduced concentration, and mental fatigue (Charlson et al., 2021). Nevertheless, mental health remains one of the least acknowledged dimensions of climate policy, as highlighted by the WHO Climate and Mental Health Brief.

Systemic Blind Spots: Why Health Systems Are Failing

Despite these realities, our health systems remain fundamentally reactive. They respond to illness after it occurs but fail to incorporate designs for the anticipation of climate-driven health risks. Monitoring mechanisms such as surveillance systems track disease but rarely dive deep to understand its environmental triggers. Heatwave patterns, vector proliferation, and water scarcity portals are not systematically interoperable into public health planning (WHO Health System Resilience Framework). A consequence that becomes most visible for the frontline workers. At the first point of care, our Primary Health Centers struggle with mitigating heat due to the poorly designed infrastructure, compounded by unreliable electricity, limited water supply, and inadequate cooling (Rural Health Statistics; NITI Aayog). In remote and tribal areas, these challenges are compounded by workforce shortages and improper roads to navigate the difficult terrain. During extreme heat events, the irony is that the very health facilities meant to provide relief become sites of discomfort and risk.

Frontline workers, too, are expected to respond to climate-sensitive health conditions without adequate training (WHO Workforce Guidance). The NDMA reports disruptions in supply chains during extreme events affecting the delivery of medicines and diagnostic tests when they are most needed. In effect, the health system attempts pitifully to absorb the shock of climate change without being designed for it, making the entire exercise of healthcare response costly, fragmented, and unsustainable (OECD Health System Resilience).

From Recognition to Response

Recognizing climate change as a public health crisis demands more than just an incremental change. It requires a dedicated rethinking of how health systems must be designed and delivered. Prospective climate-resilient infrastructure must become the norm throughout. Maharashtra's State Action Plan on Climate Change (SAPCC 2.0) already enlists some well-intended recommendations such as passive cooling designs in heat-prone regions, flood-resilient infrastructure in coastal areas, and water-secure systems in drought-affected districts. These approaches can be scaled to the national level by drawing on local and tribal knowledge systems that have historically adapted to routine climatic variability (MoEFCC Indigenous Knowledge Reports).

In remote and tribal regions, decentralized mobile health service units would not be limited to innovations but have the potential to address necessities. Decentralized care models such as telemedicine, mobile health units, and strengthened primary care offer a way to maintain continuity of care despite disruption in physical access, as proposed by the NITI Aayog Telemedicine Framework.

Equally critical, if not more, is sensitive, equitable, and inclusive of governance. Climate and health should not operate in silos; by integrating meteorological data with health surveillance systems, the health system can be empowered with early warnings to inform preventive action. Making these interoperable policies of data sharing and collective decision making across water, agriculture, urban development, and energy is essential to address the upstream drivers of health risk.

Conclusion: A Matter of Negligence

It is evident that climate change is not an abstract environmental concern but a direct assault on human physiology, dignity, and basic survival. Particularly, heatwaves reveal the fault lines of inequality in infrastructure and systemic gaps in governance. These lacunae show us a mirror - who is protected, who is exposed, and who is left behind. For millions across India, especially in its most vulnerable tribal regions, climate change-induced health risks are a present reality. To continue treating climate change as anything less than a public health emergency is no longer ignorance. It is deliberate negligence because climate change is coming for our lungs, our kidneys, our minds, our livelihoods, and ultimately, our collective future.

Contributors

Dr Siddhi Bhosale

Senior Consultant, Primus Partners

Dr Maitreyi Redkar

Senior Consultant, Primus Partners

04

Primus Outreach

MTN – Singapore Maritime Week 2026

1. Singapore Maritime Week 2026: Navigating the Next Wave

Singapore Maritime Week marked its 20th edition as one of the world's most influential maritime gatherings, bringing together policymakers, regulators, industry leaders, technology innovators, and investors from across the maritime ecosystem. Organised by Maritime and Port Authority of Singapore, the event hosted over 20,000 maritime professionals, 200+ exhibitors, and delegates from more than 80 countries, reaffirming Singapore's position as a leading global maritime hub.

Over the years, SMW has evolved from a conventional maritime conference into a multi-dimensional strategic platform where policy dialogue, technology showcases, investment partnerships, and implementation-focused collaborations converge. The event increasingly serves as a space where maritime policy intersects with trade security, energy transition, logistics resilience, and digital innovation.

The 2026 edition gained further geopolitical significance amid growing concerns around global supply chain disruptions, Red Sea shipping security, fuel transition mandates, and the need for resilient Indo-Pacific trade routes. As maritime trade continues to carry nearly 90% of global merchandise trade by volume, the discussions at SMW highlighted the critical role the maritime sector plays in ensuring economic continuity and energy security.

At the same time, the event strongly aligned itself with the global maritime transition agenda focused on decarbonisation, digitalisation, and operational resilience, positioning SMW as not only a shipping industry platform but also a strategic forum shaping the future direction of global maritime systems.

2) Key Themes Emerging from SMW 2026

Maritime Decarbonisation and Green Fuel Transition

Maritime decarbonisation emerged as the most dominant theme at Singapore Maritime Week, driven by the International Maritime Organization's target of achieving net-zero emissions from shipping by around 2050. Since shipping contributes nearly 3% of global greenhouse gas emissions, discussions focused strongly on practical implementation pathways including methanol, ammonia, LNG, hydrogen, and biofuels. Key discussions centred around green shipping corridors, bunkering ecosystems, vessel retrofitting, and shore power infrastructure. Singapore positioned itself as a future low-carbon marine fuel hub, while India aligned strongly through initiatives related to methanol bunkering, green fuel infrastructure, and port electrification.

Digitalisation, AI, and Smart Maritime Systems

Digitalisation and AI emerged as another major transformation theme, reflecting the maritime sector's shift toward automated and data-driven operations. The global smart ports market is projected to reach nearly USD 8 billion by 2030, while the maritime AI market is expected to grow rapidly due to increasing adoption of predictive analytics, autonomous navigation, and digital safety systems. SMW 2026 showcased technologies such as maritime digital twins, autonomous vessels, AI-enabled fleet management, robotics-based port operations, and smart cargo systems. India's initiatives including DigiCom Centre, LRIT-enabled vessel tracking, and digital maritime governance systems aligned closely with these global trends.

Port Electrification and Green Port Ecosystems

Port decarbonisation and electrification also emerged as a major implementation-focused theme. Discussions focused on shore-to-ship power systems, electrification of port equipment, renewable-powered terminals, and green hydrogen hubs. Under the Harit Sagar Green Port Guidelines, Indian ports are targeting more than 60% renewable energy usage by 2030 and 90% by 2047. Ports such as Deendayal Port, V.O. Chidambaranar Port, JNPA, and Paradip Port highlighted initiatives related to renewable energy, shore power readiness, and green fuel infrastructure, while Kandla, Tuticorin, and Paradip are being positioned as future green hydrogen hubs.

Human Capital, Future Skills and Seafarer Transition

SMW 2026 strongly recognised that maritime transition will require significant workforce transformation. With shipping shifting toward alternative fuels and AI-enabled systems, nearly 450,000 seafarers globally may require additional training by 2030. Discussions therefore focused on future fuel handling, AI-enabled maritime operations, simulation-based learning, and seafarer welfare. India positioned itself strongly in this area as one of the world's leading maritime workforce providers, contributing nearly 10–12% of the global seafaring workforce, while also showcasing initiatives such as Sagar Mein Yog, Sagar Mein Samman, digital grievance systems, and future fuel training collaborations.

3) The Unified India Pavilion – SMW 2026

India's participation at SMW 2026 through the Unified India Pavilion reflected a coordinated national approach to global maritime engagement. The pavilion brought together 14 Indian maritime institutions and organisations, representing shipping, ports, shipbuilding, maritime regulation, maritime finance, and technology ecosystems.

During the course of the event, the India Pavilion facilitated:

- 6 major MoUs and strategic agreements
- 10+ structured stakeholder meetings and bilateral engagements

The pavilion functioned not merely as an exhibition space but as an active engagement and partnership platform, enabling India to present itself as a future maritime investment and collaboration destination.

One of the strongest outcomes from India's participation was the concentration of partnerships around green maritime transition and future fuels. The key agreements demonstrated India's strongest traction internationally currently lies at the intersection of Green fuel ecosystems, Port decarbonisation, Shipbuilding growth, Maritime skilling and Digital maritime systems

Primus Partners played an important enabling role in shaping the unified pavilion strategy by supporting Pavilion narrative development, Institutional positioning, Stakeholder mapping, Bilateral preparation, Engagement planning and Investor and partner identification. This helped ensure that India's participation was presented as a single coherent maritime narrative, rather than fragmented institutional representation.

4) The Road Ahead – India's Maritime Decarbonisation Pathway

India's maritime decarbonisation journey is now moving from policy intent toward implementation. Several major ports and maritime institutions are already undertaking projects aimed at reducing emissions and building green maritime infrastructure. Under the Harit Sagar Green Port Guidelines, Indian ports have adopted targets to achieve over 60% renewable energy usage by 2030 and 90% by 2047. Ports such as:

- Deendayal Port Authority are advancing solar and green hydrogen initiatives
- V.O. Chidambaranar Port Authority is developing shore power systems and green fuel readiness
- Jawaharlal Nehru Port Authority is expanding renewable energy integration
- Paradip Port Authority is progressing solar infrastructure and green hydrogen initiatives

India has also identified Kandla, Tuticorin, and Paradip as potential green hydrogen and alternative fuel hubs, indicating a strategic shift toward future marine fuel ecosystems.

A particularly important development is the growing India–Singapore Green and Digital Shipping Corridor partnership. The corridor initiative aims to strengthen collaboration in Green fuel adoption, Digital maritime systems, Smart ports, Low-carbon shipping routes, Port decarbonisation & Maritime skilling

Singapore brings strengths in maritime digitalisation, port automation, and global bunkering ecosystems, while India offers scale, infrastructure growth, shipbuilding capability, and future fuel production potential. Together, this partnership has the potential to emerge as one of the most important Indo-Pacific maritime transition collaborations.

Looking ahead, India's maritime competitiveness will increasingly depend on its ability to combine Infrastructure scale, Green energy transition, Digital systems, Regulatory modernisation and Maritime workforce capability. The discussions and outcomes at SMW 2026 clearly indicate that India is no longer being viewed only as a large maritime market, but as an emerging participant in shaping the future global maritime transition.

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