



# CSB IAS ACADEMY

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MAINS Impact- 2025 – 07/02/2025

## PM GATI SHAKTHI NATIONAL MASTER PLAN

### SYLLABUS:

GS 3 > Economic Development >> Infrastructure of India

### REFERENCE NEWS:

Road Transport and Highways Minister Nitin Gadkari said eight National High-Speed Corridors of over two thousand four hundred kilometres in length have been operationalised in the country under the **PM Gati Shakti National Master Plan**. In a written reply in the Lok Sabha, the minister said the government has taken several steps to expedite the completion of projects in the country. He further said the highest 887 kilometres of High-Speed Corridors were operationalised in Rajasthan followed by Haryana with 583 kilometres.

### PM GATI SHAKTHI YOJANA:

- Launched on October 13, 2021, the **PM Gati Shakti National Master Plan (NMP)** is a transformative initiative aimed at **developing integrated and multi-modal infrastructure** to boost India's logistics efficiency and economic growth.
- It is a transformative infrastructure initiative with a proposed investment of INR 100 trillion.
- It seeks to **reduce logistics costs**, ensure **seamless connectivity**, and promote **sustainable infrastructure development**.
- The scheme aligns with **India's goal of becoming a \$5 trillion economy** by enhancing **inter-ministerial coordination**, leveraging **technology**, and expediting **infrastructure projects**.
- In a recent report, Morgan Stanley commended India's Gati Shakti NMP for its transformative impact on the nation's infrastructure development.

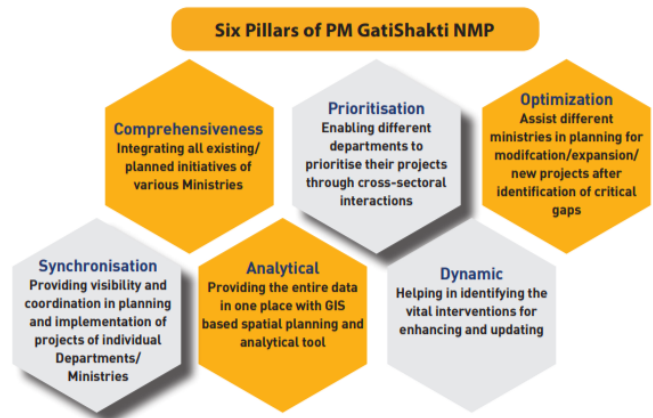
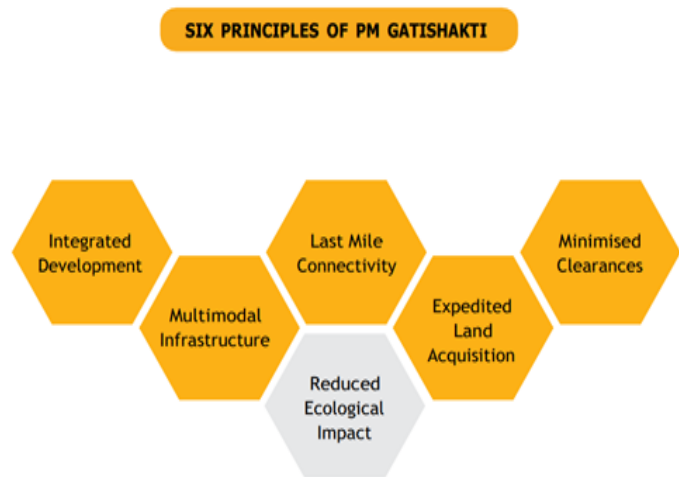
### Key Objectives of PM Gati Shakti Yojana

**PM GATISHAKTI** Driven by 7 engines :

- Roads
- Airports
- Mass Transport
- Logistics Infrastructure
- Railways
- Ports
- Waterways

To Pull Forward the economy & provide more **jobs and opportunities for youth**

- **Holistic Infrastructure Planning** – Integrating **16 ministries**, including railways, roads, ports, and aviation, for coordinated infrastructure development. Also integrates national schemes like Bharatmala, Sagarmala, UDAN and various industrial corridors creating a unifies framework for infrastructure of the nation.
- **Reduction of Logistics Costs** – Aims to bring logistics costs down from **14-15% of GDP to around 8%**, making Indian exports more competitive.
- **Seamless Multimodal Connectivity** – Developing **roads, railways, ports, airports, waterways, and digital infrastructure** for better connectivity.
- **Data-Driven Decision Making** – Uses **GIS-based spatial planning tools** for real-time project monitoring and minimizing delays.
- **Sustainability & Efficiency** – Ensuring **energy-efficient, environmentally friendly, and cost-effective** infrastructure development.



**IMPACT OF PM GATI SHAKTHI ON INDIAN ECONOMY:**

**Boost to Infrastructure Development:**

- Planned over 8,891 km of roads under the Ministry of Road Transport and Highways (MoRTH).
- **Ministry of Railways (MoR) planned over 27,000 km of new railway lines** under the NMP.
- A 300km coastal corridor in Gujarat streamlined, cutting the number of NoC (No Objection Certificate) permissions from 28 to 13, boosting tourism and connectivity.
- Among its achievements is the evaluation of 208 major infrastructure projects valued at INR 15.39 trillion, adhering to PM Gati Shakti principles.
- The **Delhi-Mumbai Expressway (1,350 km)**, under Bharatmala Phase 1, is a key project fast-tracked by Gati Shakti, expected to reduce travel time between the cities by **50%**.

**Reduction in Logistics Costs & Improved Trade Competitiveness**

- 434 projects across three railway economic corridors—**Energy, Mineral and Cement Corridors, High Traffic Density Corridors, and Rail Sagar Corridors**—have been reviewed and submitted to the Prime Minister's Office (PMO) for consideration.
- Addressed 156 critical gaps in coal, steel, and food distribution sectors.
- India's logistics costs are **14% of GDP**, significantly higher than the global average (**8-9%**). PM Gati Shakti aims to **reduce logistics costs to 8% by 2030**, improving India's **global trade competitiveness**.
- **Sagarmala Programme** has optimized coastal shipping, reducing **bulk cargo transport costs by 30%**.
- The **National Logistics Policy (NLP) 2022** aligns with Gati Shakti to improve **India's Logistics Performance Index (LPI) ranking**.

### Acceleration of Industrial Growth & Exports

- **100 critical infrastructure projects identified** to support manufacturing and exports.
- **Multi-Modal Logistics Parks (MMLPs)** are being developed across states to improve **supply chain efficiency**.
- Leh to Kaithal Green Energy Corridor optimized for renewable energy transmission.
- Gujarat's **300 km coastal corridor** planned using NMP, reduced **approval delays by 50%**, boosting connectivity between four industrial districts.
- **MMLPs in Punjab, Maharashtra, and Tamil Nadu** are improving warehouse efficiency and reducing turnaround time for exports.

### Job Creation & Economic Growth

- Expected to create **2 crore+ jobs** in logistics, construction, and manufacturing.
- **Jewar Airport (Noida International Airport)**, fast-tracked under Gati Shakti, is projected to generate **1 lakh jobs**.
- The **Leh-Kaithal Green Energy Corridor (13 GW renewable project)** has boosted employment in **solar and wind energy sectors**.

### Digital Transformation in Infrastructure Planning

- 1,614 data layers integrated into the NMP, allowing real-time project monitoring.
- Enabled faster project approvals and reduced delays, ensuring on-time and within-budget completion.
- Use of **satellite imagery, AI-based monitoring, and big data analytics** to minimize **project delays and cost overruns**.
- **Electronic Detail Route Survey (eDRS)** under the Ministry of Petroleum and Natural Gas reduced survey time from **6-9 months to just one day**.

### Strengthening Rural Connectivity & Urban Infrastructure

- The **District Master Plan (DMP) portal** is being developed to extend Gati Shakti to district-level infrastructure planning.

- The Uttar Pradesh government used NMP to identify locations for 200+ new schools in underserved areas through the Pahunch Portal.
- Gujarat reduced clearances for its coastal corridor and Goa developed disaster management plans using NMP.
- Gujarat's flood-prone Amona River area used NMP data for disaster management and infrastructure planning.

### **Faster & More Efficient Telecom and Digital Connectivity**

- Gati Shakti Sanchar Portal (launched in May 2022) has approved 2.11 lakh telecom infrastructure applications, accelerating 4G and 5G rollout.
- 5G services launched on October 1, 2022, with 13 crore+ subscribers, making it the fastest 5G rollout globally.
- BharatNet expansion is connecting 55,000 villages with fibre-optic internet under a ₹1.88 lakh crore budget.

### **International Approval**

- The success of PM Gati Shakti has caught the attention of several countries, including Nepal, Bangladesh, and Senegal, which are keen to replicate aspects of the platform.
- This global interest highlights India's emergence as a model for infrastructure development among emerging economies.

### **CHALLENGES FACED BY THE NATIONAL MASTER PLAN:**

- **Land Acquisition Delays: Land disputes and compensation issues** slow down infrastructure projects.
  - The **Mumbai-Ahmedabad Bullet Train Project** faced **land acquisition delays in Maharashtra and Gujarat**, leading to **years of delay**.
  - **Bharatmala highway expansion** was delayed due to **landowner protests** over compensation rates.
- **Coordination Issues Between Ministries & States:** PM Gati Shakti integrates 44 ministries and 36 states/UTs, but bureaucratic red tape slows decision-making.
  - The **Sagarmala Project** (focused on port-led development) faced **delays in inter-ministerial approvals**, affecting port connectivity projects.
  - **Railways' plan to build dedicated freight corridors** was delayed due to lack of alignment with **state governments on land approvals**.
- **Funding Constraints & Delays in Private Investment:** Infrastructure projects require significant capital, but budget constraints and low private investment participation create funding gaps.
  - The **National Infrastructure Pipeline (NIP)** aims for **₹111 lakh crore investment**, but **private sector participation remains below 25%**.
  - **Multi-Modal Logistics Parks (MMLPs)** have faced funding delays, slowing implementation.
- **Environmental & Social Concerns:** Large infrastructure projects lead to **deforestation, displacement of communities, and ecological damage**.

- The **Mumbai Coastal Road Project** faced **environmental opposition** due to potential damage to **marine ecosystems and mangroves**.
- The **Char Dham Highway Project** was challenged in **Supreme Court** due to concerns about **Himalayan landslides and deforestation**.
- **Logistics & Infrastructure Bottlenecks:** India's logistics cost (14% of GDP) is higher than global averages (8-9%), but poor last-mile connectivity and outdated infrastructure hinder efficiency.
  - **Kolkata and Chennai ports** suffer from **logistics congestion**, increasing freight costs.
  - **Lack of multimodal transport integration** (rail, road, and waterways) increases transit time and inefficiency.
- **Slow Implementation of Digital Infrastructure & GIS Mapping:** The **PM Gati Shakti platform integrates 1,614 data layers**, but **some states lack digital infrastructure** to fully utilize GIS-based project planning.
  - Some district-level planning authorities have limited access to real-time project tracking tools, delaying infrastructure execution.
  - Trial runs of the District Master Plan (DMP) Portal in 28 districts are still ongoing, delaying the full rollout across 750+ districts.
- **Delays in Rail & Port Connectivity Projects: Railways planned 27,000 km of new lines**, but land and budget constraints slow expansion.
  - The Western Dedicated Freight Corridor (WDFC) is behind schedule due to land acquisition delays and contractor issues.
  - Port connectivity under Sagarmala is progressing slowly due to delays in rail linkage approvals.
- **Lack of Awareness & Adoption at Local Levels: District administrations and smaller towns** lack expertise in utilizing the **Gati Shakti Master Plan** for local infrastructure.
  - **Only 28 aspirational districts** have been integrated into the **District Master Plan (DMP) portal**, leaving a gap in local-level planning.
- **Dependence on Bureaucratic Approvals:** Despite PM Gati Shakti's aim to **reduce red tape**, **project approvals still take months** due to complex clearance processes.
  - The **Gujarat Coastal Economic Zone** took **three years** to get all necessary approvals, delaying industrial growth.
- **Security & Geopolitical Challenges in Border Infrastructure:** Road & rail connectivity projects in border regions face security risks and strategic delays.
  - The Arunachal Pradesh Frontier Highway is crucial for border security but faces delays due to difficult terrain and land acquisition.
  - Rail connectivity in Northeast India is slow due to geopolitical concerns and difficult topography.

#### **WAY FORWARD:**

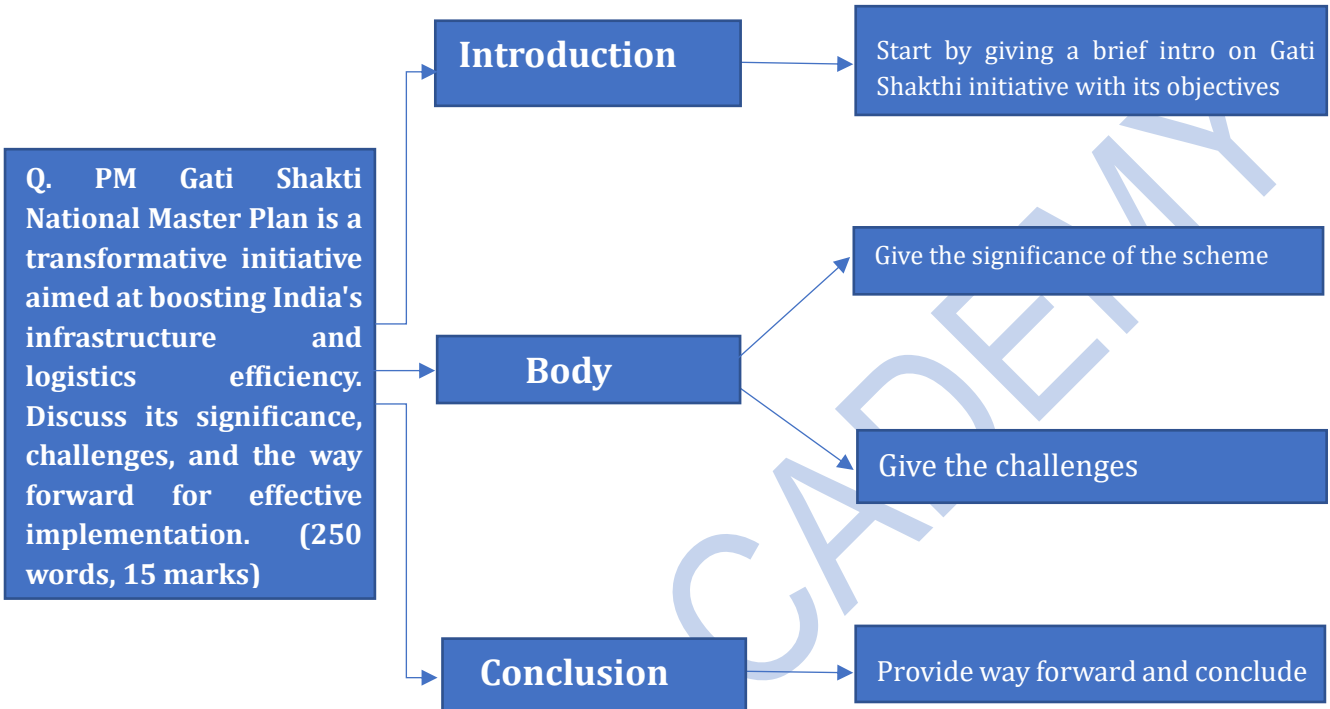
- **Strengthening Digital Infrastructure & GIS-Based Planning:** Enhance real-time tracking of projects using AI, GIS, and satellite imagery to reduce delays. Expand the District Master Plan (DMP) portal across 750+ districts for localized planning and implementation. Train **state & district officials** on **GIS-based infrastructure planning**.

- **Accelerating Land Acquisition & Regulatory Approvals:** Digitize land records and adopt fast-track approval mechanisms for infrastructure projects integrating with SVAMITVA Scheme. Implement a single-window clearance system for faster approvals. A **centralized land bank system** can prevent such bottlenecks. Develop an **online National Land Bank Portal** for **transparent and fast-tracked land acquisition**.
- **Enhancing Coordination Among Ministries & States:** Establish an inter-ministerial task force for real-time collaboration and decision-making. Expand the **Unified Logistics Interface Platform (ULIP)** to all 44 ministries and 36 states for better integration. Develop a **National Infrastructure Dashboard** to **monitor, track, and resolve bottlenecks** across ministries.
- **Increasing Public-Private Partnerships (PPP) & Foreign Investment:** Encourage greater private sector participation in logistics and multimodal transport through Viability Gap Funding (VGF). Offer tax incentives and risk-mitigation policies to attract foreign direct investment (FDI) in infrastructure. Establish a **PPP Acceleration Cell** to streamline investment approvals and risk-sharing mechanisms.
- **Developing Multi-Modal Logistics Hubs & Reducing Logistics Costs:** Integrate rail, road, air, and waterways through Multi-Modal Logistics Parks (MMLPs) to lower transportation costs. Expand Dedicated Freight Corridors (DFCs) to improve freight movement efficiency. Prioritize 100 new logistics parks across major industrial corridors.
- **Expanding Green & Sustainable Infrastructure:** Promote electric highways, solar-powered logistics hubs, and energy-efficient transport systems. Develop eco-friendly urban planning to minimize environmental impact. Implement mandatory Environmental Impact Assessments (EIA) for all Gati Shakti projects.
- **Promoting Skill Development for Workforce Readiness:** Introduce specialized training programs in logistics, digital infrastructure, and multimodal transport planning. Establish National Centres of Excellence for infrastructure skill training. Launch a **"Gati Shakti Workforce Development Program"** for **capacity-building in logistics and infrastructure**.
- **Fast-Tracking Key Infrastructure Projects:** Prioritize 100 high-impact projects under Gati Shakti for expedited execution. Set strict timelines and performance benchmarks for project completion. Establish a Project Fast-Track Committee to resolve delays in critical infrastructure projects.
- **Improving Rural & District-Level Connectivity:** Integrate PM Gati Shakti with PMGSY (Pradhan Mantri Gram Sadak Yojana) to improve rural road connectivity. Implement last-mile connectivity solutions for better rural-urban integration. Expand the District Master Plan Portal to all 750+ districts by 2025.
- **Strengthening Monitoring & Accountability:** Set up an independent infrastructure audit agency to track project performance. Conduct quarterly progress reviews with ministries and state governments. The Logistics Data Bank (LDB) tracks 100% of India's containerized EXIM cargo, improving trade efficiency. Develop a "Gati Shakti Performance Index" to measure state-wise progress in infrastructure development.

**PRACTICE QUESTION:**

**Q. PM Gati Shakti National Master Plan is a transformative initiative aimed at boosting India's infrastructure and logistics efficiency. Discuss its significance, challenges, and the way forward for effective implementation. (250 words, 15 marks)**

**APPROACH:**



**MODEL ANSWER:**

The **PM Gati Shakti National Master Plan (NMP)**, launched in **2021**, is a **₹100 trillion infrastructure initiative** aimed at **integrating multi-modal connectivity, reducing logistics costs, and accelerating economic growth**. It aligns with India's goal of becoming a **\$5 trillion economy** by improving **inter-ministerial coordination and technology-driven planning**.

**SIGNIFICANCE OF PM GATI SHAKTI:**

1. **Boost to Infrastructure Development:** 8,891 km of roads and 27,000 km of new railway lines planned. Delhi-Mumbai Expressway (1,350 km) to reduce travel time by 50%.
2. **Reduction in Logistics Costs & Trade Competitiveness:** Aims to reduce logistics costs from 14-15% to 8% of GDP. Sagarmala Programme cut coastal shipping costs by 30%.
3. **Industrial Growth & Export Enhancement:** 100 critical projects identified for manufacturing and export support. **Gujarat's 300 km coastal corridor** cut approval delays by **50%**, improving trade.
4. **Job Creation & Economic Expansion:** Expected to generate **2 crore+ jobs** in logistics, construction, and manufacturing. **Jewar Airport (Noida)** projected to create **1 lakh jobs**.

5. **Digital Transformation & Real-Time Monitoring:** 1,614 data layers integrated for project tracking. **Electronic Detail Route Survey (eDRS)** reduced survey time from 6-9 months to one day.

#### **CHALLENGES HINDERING IMPLEMENTATION:**

1. **Land Acquisition Delays** – Bullet Train Project & Bharatmala highway expansion faced land disputes.
2. **Inter-Ministerial Coordination Issues** – Sagarmala project delayed due to approval bottlenecks.
3. **Funding Constraints** – NIP's ₹111 lakh crore investment goal sees low private participation (below 25%).
4. **Environmental & Social Concerns** – Mumbai Coastal Road Project faced marine ecosystem damage concerns.
5. **Infrastructure Bottlenecks** – Kolkata & Chennai ports suffer from congestion, raising freight costs.
6. **Slow Digital Adoption** – District Master Plan (DMP) rollout delayed, limiting local planning benefits.

#### **WAY FORWARD FOR EFFECTIVE IMPLEMENTATION:**

1. **Enhancing Digital Infrastructure** – Expand **GIS-based tracking, AI-driven project monitoring** to all states.
2. **Speeding Up Land Acquisition** – **Digitization of land records**, integration with **SVAMITVA Scheme**.
3. **Strengthening Inter-Ministerial Coordination** – Establish a **National Infrastructure Dashboard** for real-time tracking.
4. **Boosting Private Investment (PPP Model)** – **Viability Gap Funding (VGF)**, tax incentives for infrastructure projects.
5. **Promoting Green & Sustainable Development** – Implement **mandatory Environmental Impact Assessments (EIA)**.
6. **Accelerating Rural & District-Level Connectivity** – Extend **District Master Plan (DMP)** to all **750+ districts**.

PM Gati Shakti is a **game-changer** for India's **logistics, trade, and infrastructure sectors**, promoting **seamless connectivity and economic competitiveness**. Addressing **land, funding, and digital adoption challenges** through **policy reforms and technology integration** will be key to **achieving India's \$5 trillion economy goal** while ensuring **sustainable and inclusive growth**.