National Mission for Urban Roads – A Vital Need

Mains: GS III – *Infrastructure: Roads*

Why in News?

Recently, India's urban roads have deteriorated rapidly over the last two decades, despite being critical infrastructure.

What is the status of road networks in India?

- **Total road network** – Over 6.6 million km as of December 2024, making it the second largest in the world.
- **National Highways –** Increased by 60% in the last decade, from 91,287 km in 2014 to over *146,000 km in 2024*.
- **Government initiatives** – The Pradhan Mantri Gram Sadak Yojana (PMGSY), launched in 2000 has connected 1.78 lakh settlements through more than 7 lakh km of new rural roads.
- Bharatmala Pariyojana have been central to the expansion of the highway network.
- **Urban roads –** They represent far more than mobility infrastructure.
- They could be a potentially systemic solution for public safety, women's participation in the workforce, public transport, clean air, walkability, public health, and flooding.
- **Elements for this achievement** – This success stems from the coming together of vision and leadership, dedicated funds from the union government, and specialist institutions which are the elements typical of national missions.
- **Need for National mission** – National missions could be a pathway for similar transformation in urban roads as well, as they deliver unified standards, coordinated funding, and institutional frameworks.
- States can adapt these to local contexts, mandate reforms, allocate funding, and strengthen the capacity of city governments in the design, implementation, and maintenance of urban roads.

What are the systematic gaps in urban road management in India?

- **Absence of mandatory standards** – India lacks mandatory standards for road design, execution and maintenance.
    - **For example**, there are no legally mandated guidelines on the width of footpaths, placement of signage, construction materials used, etc.
- Without these standards , the quality of urban roads depends on individual municipal engineers and contractors.
- Citizens experience the consequences of undefined standards every day as they

navigate life on city roads
    - Disorganized underground utilities beneath roads rather than under footpaths
    - Substandard materials, non-uniform travel lanes
    - Unsafe pedestrian crossings
    - Unscientific storm water drains
    - Haphazard parking and street vending.
- **No mandate for designs** – The current practice does not mandate design drawings for roads.
- Urban roads today can be constructed without detailed design drawings, including Good for Construction (GFC) drawings that specify every aspect of on-site execution.
- Such drawings are not required as part of tenders either.
- Municipalities are also under no obligation to employ urban designers.
- It is unimaginable to construct a building without detailed architectural drawings, yet this is exactly how most of our urban roads are built.
- **Inefficient policies** – Procurement laws and policies undermine quality.
- The *prevalent least-cost (L1) tendering system* prioritises price over performance.
- Contracts are typically issued for short stretches of road, attracting small-scale contractors with limited skills.
- **Weak coordination** – Poor coordination between civic agencies results in roads being dug up repeatedly.
- **Lack of information system** – There is no information system for urban roads.
- No mechanism tracks and manages the lifecycle from design and contracting to execution and maintenance, including mapping of underground utilities.
- The result is poor coordination and accountability.

What is The Tender S.U.R.E. model of Bengaluru?

- **Tender S.U.R.E** – Bengaluru's Tender SURE (Specifications for Urban Roads Execution) offers a compelling model for urban road design.
- The important components includes
    - Uniform travel lanes
    - Continuous and even footpaths
    - Tactile pavers and ramps for improved accessibility
    - Organized underground utilities
    - Pipe-and-chamber stormwater drains.
- **Interagency coordination** – In addition to detailed design drawings for roads, Tender SURE also recommends interagency coordination through its integrated tender model.
- **Implementation** – Tender SURE has already been implemented across more than 500 km in 34 cities and 7 states, including 174 km in Bengaluru.
- 285 km in 17 cities under *Uttar Pradesh's CM GRIDS programme*, with an allocation of Rs 3,000 crores.
- **Results of the model** – A study of Tender SURE roads in Bengaluru revealed promising results as
    - 228% more pedestrians and 117%more women using urban roads
    - 55% rise in land value
    - Improved safety, driveability, and maintenance.

What are the measures to systemically fix urban roads in India?

- **Recognising the design gap** – municipalities must recognise the urban design gap, introduce positions for urban designers, and empower them to enforce road design standards.
- **Mandating the road design standards** — Standards such as Tender SURE, IRC 86 and 103, or Complete Streets must be legally mandated as the default for road building.
- **Updating of tender documents** – Model tender documents must include design specifications, bills of quantities, material standards, and digital GFC drawings.
- These should be adapted to different categories of cities and typologies of roads, while remaining flexible and responsive to local contexts.
- **Adopting a quality tendering system** – States must adopt a quality and cost-based system of tendering.
- The L1 system is irreparably damaging the quality of urban roads.
- **Improving mapping abilities** – Cities should emulate the *Gati Shakti model* of mapping subterranean utilities and ensuring inter-agency coordination.
- They should also explore the relevance and feasibility of Digital Public Goods for urban roads.
- **Imparting skills** – India must undertake large-scale, certification-based skilling programmes for municipal engineers and contractors.
- Skills on road design, execution, and maintenance, should be inculcated.

What lies ahead?

- A Pradhan Mantri Shahari Sadak Yojana that enables states and cities to adopt the six measures outlined above could transform India's 6 lakh km of urban roads (as per MoRTH 2020 estimates) in the next 10 years.
- Models such as Tender SURE. and CM GRIDS demonstrate that when clear standards and model tenders are in place, high-quality urban roads are not only possible, but replicable at scale.

Reference

The Indian Express| National Mission on Urban Roads

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