



A clear road hierarchy is crucial for regulating vehicle types, speed limits, and defined spheres of movement on each road.

PHOTO: STAR

AFTER BILLIONS SPENT, STILL GRIDLOCKED

What the new government must do

In conversation with Md. Hadiuzzaman.



MD HADIUZZAMAN

Professor, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET)



The Daily Star: What should the upcoming government immediately do to make Bangladesh's communication infrastructure—particularly in Dhaka—functional beyond just building more roads and megaprojects?

Md. Hadiuzzaman: To make our existing road network functional, an immediate priority of the new government should be management and enforcement. It is tragic that, even after all these years, Dhaka still lacks a clearly defined road hierarchy. Within the city's roughly 3,000-kilometre road network, we must first determine the function of each road—which ones are meant for mobility and which for accessibility. Without this classification, it is impossible to decide what types of vehicles should operate on which roads, or to what extent.

Establishing a road hierarchy is something that can be done immediately. It is not an investment issue; it is a matter of commitment. Once the hierarchy is defined, vehicle types, speed limits, and spheres of

junctions as the "heart" of the road network. Just as the heart pumps blood through veins, junctions direct vehicles in different directions. If, after defining the road hierarchy, we manage junctions properly, many traffic problems will be resolved. Again, this is a question of commitment, not investment. Why should illegal parking exist at every junction? Why should ride-sharing hubs cluster at crossroads? Why should illegal or non-motorised vehicles such as rickshaws and auto-rickshaws occupy these critical points? If the "heart" does not function, widening roads will achieve little.

For roads to function, vehicles must be able to move freely. Yet pedestrians are often forced onto the roads because footpaths are occupied or unusable. Despite investing hundreds of thousands of crores, the output remains poor. Dhaka has only about 3,000 kilometres of roads, of which just 200 kilometres are primary roads. It is entirely feasible to create a high-quality footpath network across the city.

Around 25 million trips take place in Dhaka daily, and nearly 25 percent people walk to their workplaces. Yet nothing has been done for them. Of the roughly 400 kilometres of footpaths in Dhaka, 60 percent are occupied and 40 percent are not walkable. With only an investment of around Tk 3,000 crore, Dhaka could have an excellent footpath network—keeping pedestrians off the road and allowing traffic to flow smoothly.

Another urgent issue is the absence of a functional mobility network due to hybrid trip patterns, where office and school trips collide on the same roads. In developed cities, school trips are typically separated from office commuting. Dhaka urgently needs a school zoning system with defined catchments so that students do not have to travel across the city—for instance, ensuring that a child living in Motijheel does not have to attend school in Uttara. Our research shows that 20 percent of trips in Dhaka are school-bound. Removing even this 20 percent from main roads would significantly ease congestion. This too requires commitment, not large investments. There are lots of examples to draw from to implement the school zoning concept.

Finally, Dhaka lacks any fully functional ring road. Most major roads here are aligned north-south, while the concept of peripheral ring roads exists largely on paper. Both the Strategic Transport Plan (STP) 2005 and the Revised Strategic Transport Plan (RSTP) 2015 clearly outlined an 88-kilometre inner ring road, followed by middle and outer ring roads. Yet, these remain incomplete. As a result, an estimated 30-40 percent of traffic in Dhaka is "through traffic"—vehicles merely passing through the city to travel from

north to south of the country without any destination in Dhaka. The new government should urgently prioritise completing the inner and middle ring roads, which have already been partially implemented. As long as the full ring is not completed, north-south traffic will continue to pass through Dhaka, further worsening congestion.

It is particularly unfortunate that major infrastructure such as the Padma Bridge and the Dhaka-Mawa Expressway were completed without first completing the ring road system. The ring roads should have been operational before the expressway so that traffic travelling between North Bengal and South Bengal could bypass Dhaka altogether. Instead, we have rapidly funnelled even more traffic into the already overburdened city.

The inner and middle ring roads were partially implemented but failed to progress to a stage where through traffic could realistically avoid entering Dhaka. Additionally, the Dhaka Elevated Expressway was meant to connect with the Ashulia Expressway. If this connection is completed, the need for vehicles to enter the city would be significantly reduced.

Rather than initiating new megaprojects, the government should focus on completing these critical, half-finished projects. Partial implementation does not deliver real benefits. Cities such as Shanghai, with three ring roads, and Beijing, with seven, demonstrate the importance of such infrastructure. Dhaka, despite its population pressure, has none. As long as all highways remain Dhaka-bound, traffic issues will persist.

These five priorities are ultimately matters of political commitment, management, and enforcement—not investment.

TDS: Despite heavy investment in transport infrastructure, congestion keeps worsening. Where has planning gone wrong, and what policy corrections are most urgent?

MH: I believe our policymakers have failed to understand priorities and opportunities. There is often greater interest in projects where more money can be spent, rather than in addressing root causes. Dhaka generates nearly 2.5 crore daily trips, and traffic congestion of this scale cannot be solved through road-based transport alone. The next government must seriously think in terms of "integrated multimodal transport".

Dhaka is naturally blessed with a river loop of about 110-112 kilometres, formed by the Buriganga, Turag, Shitalakkhya, Bangshi and the Tongi canal. We must utilise this asset. We frequently talk about "sustainable transportation," but policymakers need to understand what it truly means. Sustainable transport ensures

long-term returns on investment and accessibility for all. River transport, in this context, is the cheapest and safest option.

However, previous circular waterway initiatives failed because they focused only on purchasing boats and vessels without proper planning. Integrated multimodal planning is essential. It is not just about water transport; it requires identifying appropriate landing stations, ensuring seamless connectivity with road networks, and addressing challenges such as river pollution, siltation, and low bridges with inadequate headroom. If this river loop is properly utilised, road traffic pressure will reduce significantly.

The concept of a "Blue Network," which is included in the Detailed Area Plan (DAP), remains largely on paper. If implemented, it could connect rivers, canals, and lakes within the city into a 550-kilometre network. In a city where even a 10-kilometre new road is nearly impossible, this offers a massive opportunity and could offload 30-40 percent of road traffic. But again, simply buying boats without an integrated plan will only lead to another failed project.

We can also draw lessons from cities like Kolkata, where a million people arrive at Howrah Station every morning, use the Metro, and return home via commuter trains. A similar synergy between MRT and commuter rail could reduce the need for people to live inside Dhaka. While we have undertaken many megaprojects, seamless connectivity is missing, and several projects remain partial. If the MRT Line 6 that goes towards Kamalapur is connected to commuter routes towards Narsingdi, Gazipur, and Narayanganj, the system would be far more efficient.

Our planning remains fragmented. We damaged a major highway for a BRT project while failing to launch a functional commuter rail system between Dhaka and Gazipur. Dhaka is a mature city; we cannot widen roads endlessly. We inherited a strong rail network from the British and an excellent river loop from nature. The new government must prioritise integrating and utilising these assets properly if we truly want to make Dhaka liveable.

TDS: How can vehicle regulation and the public transport system be strengthened more in fixing Dhaka's mobility crisis, and what policy actions should be prioritised?

MH: Vehicle regulation is not only about numbers; it must also consider vehicle types and areas of movement. The number of vehicles must be proportionate to road capacity. Planners often say that a city needs 25 percent road space to be livable, but I disagree. With a strong public transport system, a city can remain livable with just 7-8 percent road space.

This is where the new government has a major opportunity. What we currently call public buses in Dhaka cannot truly be described as public transport. Public transport must be schedule-based and frequency-based, which our buses are not. Metro rail qualifies as public transport precisely because it follows a defined schedule and frequency.

We can learn from Singapore, where registration policies ensure that vehicle numbers never exceed 70 percent of road capacity, reserving 30 percent for future generations. For every new vehicle registered, one old vehicle is removed. In Dhaka, however, the number of vehicles is estimated to be eight to ten times higher than road capacity, compounded by illegal, unregistered, and unlicensed vehicles. This is why establishing a proper road hierarchy is essential, as it allows for science-based regulation.

Globally, cities are shifting towards research-driven transport systems, but we are living in a fallacy. Our roads have become sites of informal job creation and dumping grounds, which undermines functionality. Roads cannot compensate for the government's failure to create jobs. Keeping roads overburdened ensures that even large investments fail to deliver results.

Transport development must follow stages: functional footpaths first, then public transport, followed by BRT, and finally MRT. Developed countries followed this sequence. We tried to impose advanced systems on top of a chaotic base, and unsurprisingly, productivity suffered.

Public transport works as the backbone for any city, then MRT is built on top as a high-capacity layer while public transport works as a feeder system. Because we lack proper feeder systems, MRT stations are now surrounded by informal transport such as ride-sharing vehicles and battery-run or paddled rickshaws. Our public transport system is so poor that informal transport ends up competing with buses—something virtually unheard of anywhere in the world. Informal modes are not compatible with buses and we must address the root cause here.

In Dhaka, only about 200-250 kilometres of roads are suitable for buses, out of a 3,000-kilometre road network, other roads are too narrow for buses to enter. So, there is no need for thousands of buses, routes, and owners for such a limited network. Currently, there are around 300-350 bus routes, which is far beyond what is required. The system cannot be fixed unless this is addressed.

We need bus route rationalisation and a franchise model with only five to

SEE PAGE 27

movement can be clearly set for each road. Simultaneously, it can also be enforced to remove unregistered, unlicensed, and illegal vehicles—especially from primary roads, whose main function is mobility.

Over the years, massive investments have been made in roads and flyovers with the sole objective of creating mobility. Yet we continue to fail because illegal vehicles prevent roads from functioning as intended. We have built around seven flyovers in the past decade and added expressways as well. However, these grade-separated structures must eventually meet the ground, where their effectiveness depends on how well intersections and junctions are managed.

I often describe intersections and