

INFRASTRUCTURE

Prioritising safety in construction

In conversation with Dr Khan Mahmud Amanat, Professor, Department of Civil Engineering, BUET

Could you explain what safe construction practices entail?

Occupational risks differ depending on the field of one's work. For example, the risk of getting physically injured or being in an accident is not as high for me as a teacher as that for people who are engaged in field work, such as in construction. Safe construction is simply ensuring that a construction worker, when he works, can do so free from physical dangers or accidents. For this one needs to ensure the work environment, the worker's uniform etc. When the measure taken to ensure safety are of an international standard, we call those safe construction practices.

Construction workers are vulnerable to mainly four types of accidents: falling from high places, getting hit by something, electrocution, and getting stuck somewhere (such as between machinery). If we minimise the risk of these, then we can move towards construction safety.

What is the state of construction safety in Bangladesh? What are the gaps?

Unfortunately, safe construction is something which is still relatively neglected in our country. This could be due to a culture of not prioritising safety issues, lack of education and not valuing human lives properly.

Because we are a developing country, we want to always minimise costs, so we tend to not prioritise safety. Incorporation of safe practices in work will increase costs, and for this the companies too are hesitant to adopt these practices in the construction process. There is no compensation or penalisation process either. So, when accidents happen, those who are responsible get away with it.

What are the challenges we face towards ensuring construction safety?

To tackle this, I think the government needs to take the primary initiative. A regulatory body for safety is necessary. Rajuk is not enough. The role of Rajuk is to see if the building is being constructed according to the approved plans. We need an independent commission or a body and to empower it to audit and investigate safety issues.

Secondly, we need educated construction workers. In many cases because of lack of training, our workers are not aware of safety issues. Training of our workers is very necessary. This could be done through establishing institutions or through universities.

Thirdly, the construction companies need to be held accountable and incentivised for adopting safe construction practices. A construction company will be enthusiastic to adopt these if they benefit from it. At the same time, punishment must be ensured for those responsible for accidents. These are the gaps in our system now, and these challenges must be overcome.

The key challenge is to address all of these in a planned way—any of these on

their own will not solve the problem.

Could you elaborate on the issue of a regulatory body?

The regulatory body would have to be empowered with executive powers through law. For example, Rajuk has executive power to demolish the part of a building if it is beyond the required distance from the road. The body for ensuring safety has to be given magistracy power to go to the construction sites for monitoring and handing out fines if necessary. These fine must be collected properly and repeat offenders must be held liable in some way.

Construction companies could also be required to obtain certification after investigation by the body every one or two months. True, this will need a lot of manpower. But to ensure safety, we have to



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ensure such a body. They body also be given any commercial role and needs to be involved only in a regulatory role.

What are the short-term and long-term initiatives we need?

In the short-term, it could be started through directing all registered companies to ensure safety measures institutionally and to start workers' training. The training could be arranged through our polytechnic or vocational institutes. The government could incentivise companies for using trained workers to promote safe construction.

In the long-term, we need to focus on creation and empowerment of the regulatory body. Maybe this could be started through our magistrates or law enforcement personnel after giving them the required training and then gradually institutionalised.

At the root, the issue of education is crucial. We must promote the issue of safety, of workers' rights, of demanding those rights and for long-term planning through our education. Institutionalisation is key to establishing this culture of safety.



PHOTO: PRABIR DAS

TRANSPORT INFRASTRUCTURE MUST BE IMPROVED TO SUPPORT GROWTH

STAFF CORRESPONDENT

Bangladesh's transport network has little scope to meet the demand of the country's rising population without becoming efficient, according to experts. They say that the solutions should serve long-term needs and be sustainable.

"You can't develop the country riding on slow-moving vehicles," says AFM Saiful Amin, a professor of the Bangladesh University of Engineering and Technology (BUET). "We need a breakthrough in the transport network to overcome the vicious cycle that is slowing down the growth."

In Dhaka, unplanned and uncontrolled growth has created unprecedented congestion: the average driving speed had dropped from 21km per hour 10 years ago to less than 7km per hour, said Qimiao Fan, the World Bank's Country Director for Bangladesh, in July last year.

Congestion eats up 3.2 million working hours each day. It causes an annual loss of between Tk 20,000 crore and Tk 55,000 crore, according to the Accident Research Institute of BUET.

Prof Amin says Bangladesh's economy is steadily growing, so the country's transport network has to be developed phase by phase keeping pace with the economy's growth. Bangladesh is spending a lot to develop its infrastructures, mostly with funds from external sources, so it has to ensure that these projects are efficient and yield value for money, according to him.

"The planners have a role to play when it comes to coordination. They have to ensure that the infrastructure is fit and can operate hand in hand with each other. The projects should be in sync."

Experts say the bus system, the main mode of transport for the city-dwellers, has rather become a burden because many companies have been allowed to operate on the same route and they are involved in fierce, unhealthy competition.

Kazi Md Shifun Newaz, assistant professor of the ARI, says that in the public transport sector, owners rent out their vehicles to drivers who indulge in reckless driving just to maximise profits by way of making as many trips as possible, but it causes accidents.

Prof Amin backs a "one city, one transportation network" system. Under this, there might be different modes, owners and operators but they will run under the network.

"As a result, unhealthy competition, which is now rife, could be checked. The system will ensure a reasonable profit."

He says that the government would have to strike a balance while fixing the fare of any modern transport mode because too low a fare might not give the return on investment whereas if it is too expensive, it may put people at bay.

According to Prof Amin, flyovers are an interim solution and one can't negate them, as these structures will supplement the future transport network.

He says that while designing flyovers, one has to keep in mind that the city may have to develop subways underneath the flyovers.

One important aspect, according to Prof Amin, of the flyovers is that they have outlined a few access routes. These flyovers might have to be reshuffled in some areas to accommodate more efficient bus rapid transit, metro rails and subways in the future.

The transport sector is getting slower with the country's economic development. "We have a lot of work to do in this area."

The question of enforcement of laws and rules of laws is also related to the issue of efficiency, and Prof Amin calls for establishing a guided track for the road network like that of the rail network, as this would lower the requirement of enforcement of laws, making the system efficient.

He says, ultimately, Dhaka would have to develop a transport network that would allow people to commute to their work in two hours.

"A gradual increase of such two hour commuting distance will not only allow people to come to Dhaka and work but it will also allow them to spend a significant portion of their incomes in the areas they live, thus boosting the local economy further."

"This will also bring to an end many other problems faced by the city and make Dhaka a liveable city."

"A vibrant economy should boost of owning a country-wide efficient and safe transport network connecting administrative and production hubs," says Prof Amin.

He says the country would have to show farsightedness when setting up a flyover, subway route, expressway or metro rail.

"We have to think and plan accordingly so that today's slow rails can be replaced by faster trains. We have to secure dedicated access routes to build a country-wide modern transport network. Everybody has to realise that our future generations will live in Dhaka or Bangladesh and we will need to have land for land transport infrastructure."

The structural engineer says because of a scarcity of land, Dhaka has little leeway to expand horizontally. So, it has to go for elevated corridors as much as possible, aligning the utilities accordingly, not jeopardising the possibilities of future subway networks.



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