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MEASURED AND HOLISTIC GROWTH IS THE ANSWER

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The poor state of Bengaluru's roads and the fact that they are exploding under the weight of private vehicles says something about

how unprepared the city has been for the pace of its urban growth of 4.6 per cent

By: Mihika Basu

Unprecedented temperatures, vanishing green cover, traffic that seems to stay in constant chaos — this isn't the Bengaluru of the '80s. In light of an IISc survey that warns of doom, Mirror talks to experts to get to the root of issues ailing the city. This one focuses on the economic side of things

For those who can observe, the signs have been all around. Unprecedented temperatures, dwindling resources, vanishing lakes, chock-a-block roads, crumbling infrastructure — this isn't a city on the way to glory. It's a city that's fighting for survival.

Can a city hope to alleviate the problems of population concentration without blocking opportunities for economic growth?

To address this issue, Balachandra Patil, professor of management studies at the Indian Institute of Science (IISc), Bengaluru, and his Mumbai-based colleague Sudhakara Reddy from Indira Gandhi Institute of Development Research, set out to gather information about the two cities.

They zeroed in on an 'indicator' approach to describe the city's current status. These indicators covered four dimensions: economic, social, environmental and governance, which together formed the foundation of a city's sustainability.

Patil said that city planning cannot be a skewed one, where planners focus on just one aspect. "It has to be a holistic development. For instance, at the national level they say GDP [gross domestic product] is good. But when you try to increase the GDP, your environment will collapse. Some people will become rich, some will become poorer. Our question is: can there be a single indicator — an urban sustainability indicator — one that becomes a target for planning? The government can then aim at improving that value," he said.

POOR ECONOMIC INDEX

The analysis revealed that on a scale of 0 to 1, where 1 is an ideal value and 0, the most deficient, Bengaluru lagged in the economic domain and the main culprits were income, infrastructure and transportation.

"The city shows lower unemployment and inflation rates, indicating good growth and development, but fared low on the overall economic index (0.519 on a scale of 0-1) primarily because of the low per capita income, per capita water and electricity consumption, lower access to public transport, poor road infrastructure and high congestion."

"When Bengaluru's sustainability indicators were also compared to those of other megacities like London, Singapore, Shanghai and Mumbai, we found that Bengaluru ranks 4, just before Mumbai and with Singapore at the top, followed by London and Shanghai. Relatively low performance on economic sustainability indicators is the main reason Bengaluru and Mumbai slip on the ladder," Patil told Mirror.

Experts are of the opinion that the ability of a city to survive and prosper indefinitely involves several major factors such as an economy, availability of jobs and services, healthcare, and attraction of the urban environment and the availability of resources, as well as space for growth.

"Economic viability at the cost of health and environment is no viability at all. Presently, this city is recklessly headed down a slippery slope, buoyed by the unreal imaginations unfurled by the avaricious real estate lobby and its influence in government policies and planning mechanisms," said Leo Saldanha, coordinator of Environmental Support Group (ESG).

"The best way forward is to invest heavily in bottom-up planning, coordinate city-wide monitoring and management tasks through a representative and transparent system, and ensure future planning is undertaken democratically and keeping in view environmental, health and ecological indicators," said Saldanha.

TRANSPORTATION, INFRA WOES

Transportation problems in cities are major roadblocks in long-term development, and are very closely related to land development, economic structure, energy policies, and environmental issues.

"Despite a number of transport proposals on the anvil, such as the Metro rail, ring roads, peripheral ring roads, etc, Bengaluru is expected to face severe traffic congestion in the coming years. The rapid economic growth will result in significant increase in traffic problems. In the absence of planned mass

transit systems, a disproportionately high share of trips will be carried by personalised modes of transport, creating chaos and straining infrastructure," said Patil.

"In Bengaluru, 30 per cent of mobility is by foot, so the government must give highest priority to footpaths. This is followed by public transport and private cars, which contribute 10 to 15 per cent of the transport demand, two-wheelers another 15-20 per cent. Hence, 60 per cent demand is met by public transport and non-motorised transport. The city planning, however, concentrates on roads and flyovers, which support cars and two-wheelers. Other cities with better facilities for cyclers and pedestrians have higher sustainability values," said environmentalist AN Yellappa Reddy.

A little attention and a relatively small investment can patch up the city's footpaths that have been neglected for years, he added.

Bengaluru is experiencing an unprecedented urban growth of 4.6 per cent. The establishment of the IT parks on the outskirts of the city has converted the city and its surroundings into a Silicon Valley of the country. It has also created a lopsided urban sprawl towards the south and east, which is not sustainable, said Bharath H Aithal, a researcher at IISc.

Unplanned concentrated growth or intensified developmental activities in a region strain natural resources, increase traffic congestion and pollution levels and also change the local climate.

"Our data indicates that residential areas of Bengaluru constitutes 43 per cent of the land area followed by approximately 21 per cent each by roads/transport and green cover. The central core in Bengaluru appears to be underdeveloped. This means that business and commercial activities that normally provide services to the city and its region have not developed fully. Instead, the city has a mix of uses, such as industrial, agricultural, residential, and waterbodies around their cores. This signals that markets have not operated to allocate land to higher value uses, such as commerce and services, as would be seen in comparable Asian cities. In effect, the land utilisation pattern is influenced by central planning controls, and this introduces rigidities into the system," said Patil.

RISE IN EMISSIONS

A multi-city analysis on greenhouse gas emissions by Aithal showed that haphazard growth and inadequate public transport system in Bengaluru and Hyderabad led to increased use of private vehicles.

Emissions from the transport sector ranged from 43.83 per cent (Bengaluru) and 56.86 per cent (Hyderabad). Aithal's findings showed that Chennai emitted the highest carbon dioxide equivalent emissions per GDP, followed by Bengaluru. Patil's study said the transport sector was the major contributor of particulate matter (PM) 10 and NOx (mono-nitrogen oxides) in Bengaluru. The industrial sector was the No 1 emitter of sulphur dioxide (SO_2).

"Transport sector of Bengaluru is a major source for PM10 emissions contributing nearly 45 per cent of the total. The main source of NOx emissions in the city is motor vehicles (75 per cent), while DG sets contribute about 20 per cent. Domestic and commercial sector combustions are minor sources of NOx. The main source of SO_2 emissions is industry. This source contributes 60 per cent of the total SO_2 emissions in Bengaluru. The other major sources are transport and domestic use," the study said.