DECCAN Chronicle (/)

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LIFESTYLE (/LIFESTYLE), PETS AND ENVIRONMENT (/LIFESTYLE/PETS-ENVIRONMENT)

You shouldn't be dying to live in the city

DECCAN CHRONICLE. | SHRAVAN REGRET IYER (/byline/shravan-regret-iyer-1)

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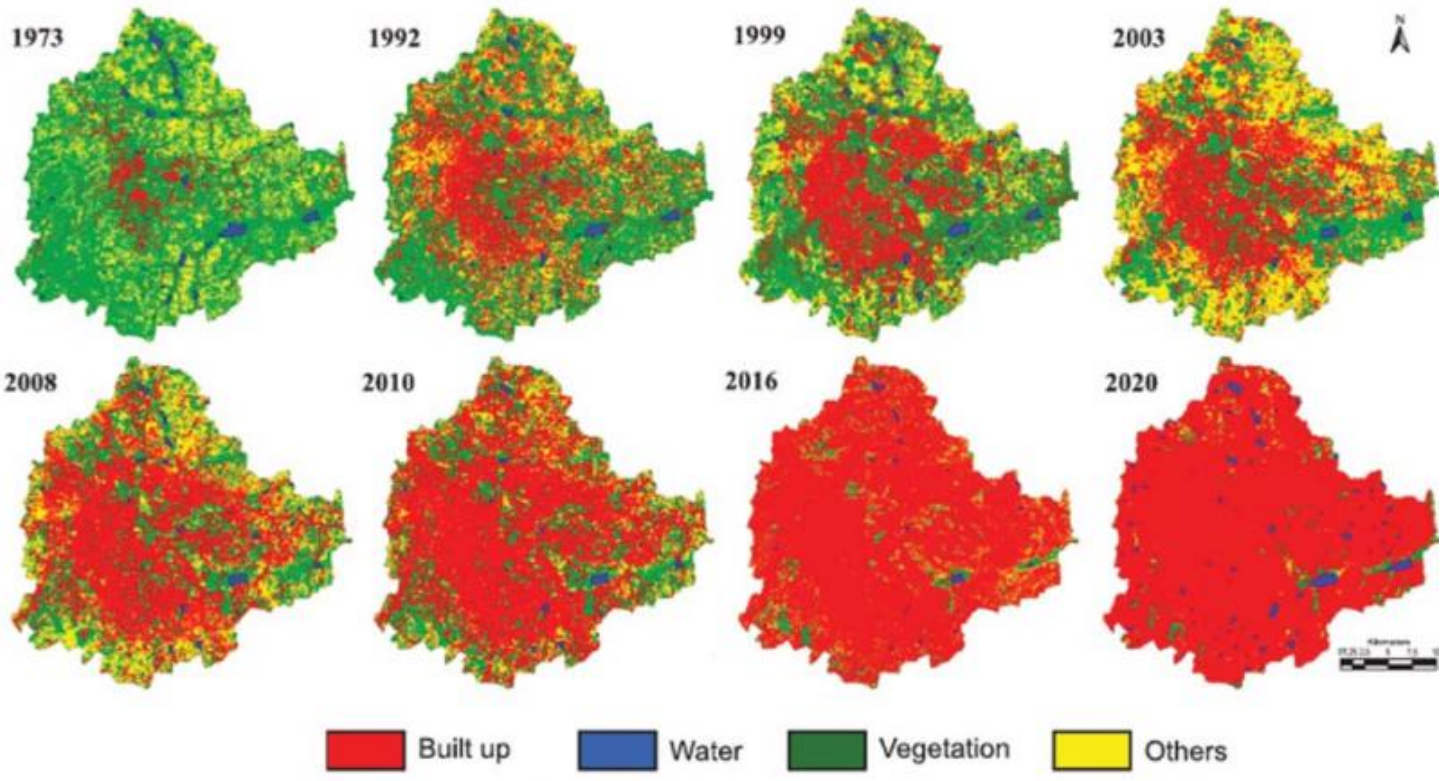
A paper written by IISc researchers in a science journal confirms, with evidence, where Bengaluru city is headed.



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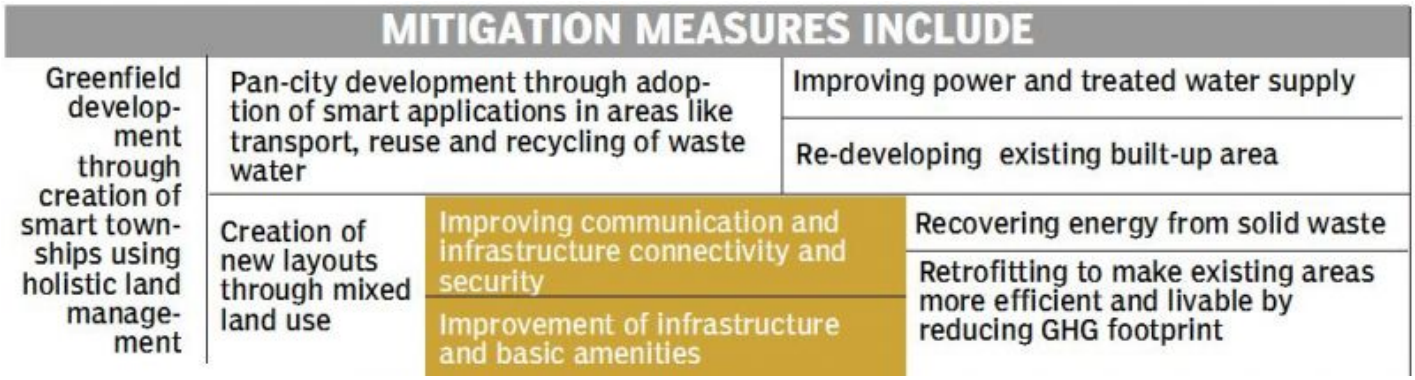
Dead fish and toxic froth in lakes, trees falling like nine pins because 'development' has cut off their roots, and waste management that amounts to garbage – we Bengalureans discuss these and our other misfortunes daily with anecdotal evidence. Now, a paper written by IISc researchers in a science journal confirms, with evidence, where the city is headed.

It's a painful fact for most old Bengalureans, who have watched the city decline over the years. But there is no escaping it now that researchers of the Indian Institute of Science (IISc.) have pieced together all the factors contributing to the city's downward spiral to warn that if they are not checked, disaster could be just four years away.

An article by Dr TV Ramachandra and Dr Bharath H. Aithal of the IISc.'s Centre for Ecological Sciences, published in the popular Current Science Journal of the Current Science Association, paints a worrying picture of the city, warning that the pollution and destruction of its greenery is going so unchecked currently that the one-time pensioners' paradise could become unlivable in a matter of a few years.

If things are allowed to continue the way they are today, 93 per cent of Bengaluru's landscape could turn into a paved surface by 2020, they believe. Painting a chilling scenario, the scientists say the drastic rise in urban cover and corresponding reduction in open spaces and greenery could make the city greenhouse gases- rich, water-scarce, non-resilient and unlivable as people will be deprived of clean air, water and a healthy environment, essential for a quality life.



With thousands of people migrating to the city in search of a better living, urbanisation has already led to an 88 per cent decline in its vegetation and a 79 per cent reduction of its wetlands, they point out. Explaining that the dire warnings given are based on the nearly 35 research papers the centre has worked on over the past six years, Dr Aithal says the threat to the city is enormous as it has already seen a 1005 per cent increase in its paved surface between 1973 and 2016.

Using remote sensing data and field census, the researchers found the city is left with only 1.5 million trees to support a population of 9.5 million, which in effect means it has just one tree for every seven persons. As trees have made way for buildings, creating heat islands in pockets, its temperature has risen by 2 to 2.5 degrees Celsius over the past three decades, they note.

Blaming private vehicles for most of the air pollution caused by vehicular emissions, they regret that mismanagement of solid and liquid waste has aggravated the situation and led to increased release of greenhouse gases such as methane and carbon dioxide into the city's environment.

More damagingly, they note that nearly 100 of the city's 105 lakes have been encroached on by illegal buildings, and 90 per cent are fed with sewage. The recent mass death of fish in the city's lakes are an offshoot of such contamination as well as their poor maintenance by the authorities concerned, according to them.

The article also recalls that the rapid urban sprawl has led to Bengaluru's water table falling from 28 meters to between 300 and 500 meters in intensely urbanised areas such as Whitefield, over a period of 20 years and encroachment of drains and removal of vegetation has led to frequent flooding even during normal rainfall post- 2000 in Bengaluru.

Bengaluru's decline

- The city could see 93% of its landscape urbanized by 2020
- Its rapid urban sprawl has already led to 88% decline in its vegetation and 79% decline of its wetlands.
- There has been a 1005% increase in the city's paved surface between 1973 and 2016
- It now has only 1.5 million trees to support a population of 9.5 million
- The decline in its green cover has led to a 2 to 2.5 degrees Celsius rise in its temperature over the past three decades
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- 100 of the 05 lakes in the city have been encroached for illegal buildings.
- Its water table has fallen from 28 meters to a depth of 300 to 500 meters in intensely urbanised areas like Whitefield

Bengaluru can still be saved, say experts

In the midst of their doomsday warnings for the city, Dr TV Ramachandra and Dr Bharath H. Aithal hold out a glimmer of hope as well, saying all is not lost yet and Bengaluru can stem the rot that has set in. But if the city has to be saved from its imminent fate, the authorities will need to wake up and take immediate action to contain the damage done, they underline, making a string of suggestions to help it recover its environment and lakes.

Their recommendations include integrated land use planning according to the city's requirements, development of mass rapid transport systems, effective greenfield development through smart townships, pan city development through adoption of smart applications, reuse and recycle of waste water, smart metering, recovering energy from solid waste, retrofitting to make existing areas more efficient and livable and improving power and treated water supply.

In another suggestion they have called for re-development of the city's existing built-up area. "These measures must be implemented quickly as most cities are in a civic and financial disarray because of senseless, unplanned rapid urbanisation," the article stresses.

Tags: solid waste management (/content/tags/solid-waste-management), indian institute of science (/content/tags/indian-institute-science), air pollution (/content/tags/air-pollution), greenhouse gases (/content/tags/greenhouse-gases), bengaluru lakes (/content/tags/bengaluru-lakes)

Location: India (/location/india), Karnataka (/location/india/karnataka), Bengaluru (/location/india/karnataka/bengaluru)

TECHNOLOGY GALLERY