

# Construction of Bengaluru suburban rail and the cost of unplanned urbanisation

On June 14, K-RIDE and BBMP held a public consultation on the Bengaluru Suburban Rail Project. Activists and citizens questioned multiple aspects of the project, with focus on its environmental cost.



Fourth MEMU suburban train introduced between Bengaluru-Mysuru, to run daily

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Bengaluru has developed rapidly over the past few decades, but residents and activists collectively agree that unplanned urbanisation of the city has done it more harm than good. Several large scale infrastructure development initiatives in the city have faced opposition from many quarters for this reason. Most recently, the construction of the Bengaluru Suburban Rail Project (BSRP) has faced strong criticism on account of the ecological cost at which it is set to be implemented.

The project has received backlash as Rail Infrastructure Development Company (Karnataka) Limited (K-RIDE) plans on cutting down close to 33,000 trees in Bengaluru. The land acquired for the Akkupete depot alone covers 18.6 hectares of forest land, from where 17,505 trees are to be cut down for construction. The Opposition expressed concerns over the effects this decision could have on the environment amid rising fears of a climate crisis.

On June 14, K-RIDE, the organisation in charge of the project, and Bruhat Bengaluru Mahanagara Palike (BBMP) held a public consultation.

Attendees questioned multiple aspects of the project at length, with focus on the environmental cost of the project.

## Bengaluru Suburban Rail Project

Residents of the Garden City have been calling for a localised rail system meant to create a network connecting different parts of the city for the past 20 years. In 2019, plans to implement a suburban rail system in Bengaluru were initiated. Nearly five years on, BSRP is on track to be completed soon.

K-RIDE has detailed the numerous potential benefits of the project from improvements in traffic flow to reduced carbon emissions. In addition, the project is also set to boost the performance of the Bengaluru Metropolitan Transport Corporation (BMTCL) and the Bengaluru Metro Rail Corporation Limited (BMRCCL), with measures to integrate all existing public transport systems to improve last mile connectivity in the city.

The project also details plans to replenish groundwater levels in the city with the use of rainwater harvesting facilities in each station. Bengaluru has been suffering from a severe water crisis in recent years, and this measure, if implemented successfully, will help alleviate the issue to some extent.

However, activists and citizens who attended the public consultation on June 14 say that the claims made by K-RIDE are not backed by clear metrics. The “vague plans” received much criticism during the meeting. As the lack of clarity regarding the measures to mitigate the effects of a project of this magnitude is concerning, attendees demanded transparency of operations and the inclusion of the public in proceedings.

## Concrete efforts to mitigate environmental impact needed

Chiku Agarwal, senior engagement associate at the campaigning organisation Jhatkaa.org, said that the ecological impact of large scale infrastructure projects like the BSRP must be evaluated, given the prevalent climate crisis. “Bengaluru has faced significant challenges this year, including water scarcity, frequent heat waves, and water-logging. Protecting the city’s green cover is crucial to maintain the ecological balance,” he said.

Chiku clarified, “We are not opposing the proposal of the BSRP but urging them to consider sustainable alternatives for the project. We ask the decision makers to identify specific spaces for compensatory tree plantation and transplantation, look over the survival rate of tree plantations in Bengaluru over the past three years, and ensure transparency by conducting an ecological impact assessment study before the project’s implementation.”

The officials at the public consultation spoke of plans to make up for the loss by undertaking compensatory afforestation in and around Bangalore.

However, it was an answer that did not satisfy the attendees.

Underlining the need to focus on developing green spaces in the city to combat the effects of tree cover loss in the city, Vinod Jacob, general manager of the Namma Bengaluru Foundation, said, “Sustainable development is crucial to protect the city’s climate and replenish the water table. The compensatory afforestation plan must ensure that microclimate changes are not disrupted and that trees are planted or relocated in the same area. While we welcome development and infrastructure, it is imperative to adopt a sustainable and holistic approach that supports environmental and social impact protection for our city.”

## The example of Akkupete

The site chosen for the Akkupete depot was taken up by the Forest Department for compensatory afforestation in 2001, and is largely populated by eucalyptus and acacia trees. The BSRP project report states that 17,505 trees are to be cut down here. This could have potentially catastrophic effects on the region.

The site’s proximity to the Devanahalli region, whose struggles with depleted water reserves have been well documented, raises cause for concern. The presence of large swathes of eucalyptus trees in the region have contributed to the issue, and while the removal of these trees may help to some extent, the loss of green cover will ultimately worsen the situation. The case of the proposed Akkupete depot underlines the need for city planning that addresses the long and short term impact of such projects on the environment.

## Unplanned urbanisation in Bengaluru

Over the course of the city’s growth, an unprecedented amount of its forest cover has been lost in the name of urbanisation. [Data compiled](#) by

scientists at the Indian Institute of Science (IISc) show that Bengaluru has lost about 88% of its tree cover in the past 51 years, coinciding with a sharp 1055% rise in built up area. It has also lost 79% of its water spread area, with the landscape that was once dotted with lakes being reduced to a concrete jungle.

According to a [statement given to the Times of India](#) by Prof TV

Ramachandra of the IISc Centre for Ecological Sciences, “Remote sensing

data for Bengaluru reveals only 1.5 million (15 lakh) trees support

Bengaluru’s population of 9.5 million (95 lakhs), indicating one tree for

every seven persons in the city. However, this is insufficient to sequester

respiratory carbon which is 540–900 gms per person per day.”

Data shows that the current tree cover in the city is not sufficient to

sequester carbon produced via respiration by humans — the carbon

emissions produced by vehicles every day is an added load on the

environment.

Besides the loss of tree cover, the loss of water spread area in the city has

had a significant impact on the groundwater levels in the city. Urbanisation

has also resulted in decreased percolation of rainwater, meaning that the

process of groundwater recharge has been affected heavily. Exploitation of

groundwater reserves, combined with rapid surge in population and

subsequent rise in demand for natural resources, led to the current water

crisis in the city.

The rapid urbanisation that Bengaluru has been subjected to over the past

years has had a significant impact on its climate, with Bengaluru acting as

an urban heat island, resulting in marked differences between

temperatures recorded in different regions in the city. Recent studies have

shown that the average temperature in the city has risen by about 1°C over

the past 42 years.

This rise in temperature can be largely attributed to the changes that

came with urbanisation, with concretisation and white-topping of roads

being deciding factors in the same.

## Bengaluru needs long term mobility solution

Ashish Varma, professor of Transport Systems Engineering at IISc,

addressed the importance of having a long term solution to the question

of sustainable mobility in the city. “The permanent and long term

sustainable solution for mobility issues in Bengaluru is only in the form of a

very dense, well spread out network of Mass Rapid Transport System

(MRTS). We should include both the metro rail system and the suburban

rail system”, he said.

Ashish went on to explain that the existence of such a system would

massively improve vehicular mobility in the city, while simultaneously

cutting down on carbon emissions by reducing the number of private

vehicles on the road.

He also stressed on the importance of improving green spaces in the city,

stating, “We should regain the lost green cover because of these

infrastructure projects. Bangalore used to be a garden city with lots of

trees. Unfortunately, because of several of these infrastructure projects, we

have lost substantial amounts of green cover. The impact of the heat

island effect was clearly felt this summer, with temperatures touching 40°C

in Bengaluru, which was totally unprecedented”.

## A toothless tree preservation law

The Karnataka Preservation of Trees Act 1976 was designed to address this

very issue. The Act speaks of “the growing pace of urbanisation,

industrialisation and increasing population” resulting in the “indiscriminate

felling of a large number of trees in the rural and urban areas of the State

of Karnataka leading to erratic rainfalls, recurring famines and floods, soil

erosion and consequent ecological disturbances”. It was effective in

protecting the trees in the city from indiscriminate chopping, with strict

regulations and laws set in place that prohibited the felling of trees without

proper permits obtained from the respective governing bodies, and

dictated that proper compensatory planting must be undertaken promptly

to make up for the loss of the tree.

However, an amendment was made to the Act in 2015, which ruled that

applications seeking felling of trees for a public purpose shall not be

refused by the Tree Officer, where the number of trees was more than 50

trees. This amendment has proven disastrous, as shown by the rapid loss

of tree cover that followed it.

It has since been criticised and opposed by different activist groups, with a

[petition](#) filed by Dattatreya T Devare, trustee of the Bangalore Environment

Trust in 2018 stating that “the very authorities constituted under the Tree

Act have, by way of their negligence and dereliction, actually facilitated the

very damage to the tree cover that they were constituted to prevent.”

The lack of protective laws that account for the loss of biodiversity in the

city and combat the effects of such loss is proving to be disastrous. The

call for definitive changes from the side of the government are now louder

than ever. The preservation of nature and development must go hand in

hand, with plans to enable the successful coexistence of nature and urban

spaces being a necessity in view of the current climate crisis.

Karnataka

Bengaluru

Environment

Climate crisis

Public Transportation