Breathing in Bengaluru: Pedalling Towards a Healthier, Happier City

by Aniket Wakhare

Bengaluru, India's 'Garden City', is facing a growing dilemma. The once green streets now suffer from thick air laden with exhaust fumes and traffic congestion, affecting commuters' health and testing their patience. The previous articles in this series explained the impact of vehicular exhaust emissions on citizen health and the need for integrated planning to promote sustainable mobility. This article focuses on the potential of active mobility to tackle pollution and congestion in Bengaluru.

Focussing on the issue and solution at hand

Owing to the growing vehicle stock, the average vehicular speed in the city has plummeted to a mere 18 kmph, leading to a significant loss in productivity and fuel wastage. As per the Bengaluru Master Plan (2031), 1.18 crore citizens lose 60 crore person-hours annually due to congestion, resulting in the squandering of almost 2.8 lakh litres of fuel per hour.

Non-motorised transport (NMT) or active mobility can be beneficial in alleviating traffic congestion and lowering air pollution in Bengaluru. Particularly, cycling and walking are sustainable transportation modes that offer benefits such as reduced reliance on fossil fuels, zero emissions, health improvements through increased physical activity, and affordability for low-income households.

Lessons from global examples

Given Bengaluru's favourable climate and topography, there is a tremendous scope to learn from international counterparts and create NMT-friendly streets. Consider cities like Oslo or Amsterdam, which stand out as prime examples of vibrant mobility. These urban centres proudly showcase a substantial modal share for active mobility of approximately 50%, a testament to the well-designed infrastructure and safety measures prioritised for their residents.

<u>Studies</u> link active mobility to improved mental and physical health as well as increased longevity. Ditching just 32% of car trips in Europe could yield an impressive annual savings in fuel costs of EUR 28 billion (~INR 252 crore), according to a study by the European Cyclists' Federation.

However, the benefits extend beyond economic savings. Cycling can not only boost financial health but also physical well-being. Researchers in the Netherlands discovered that merely 74 min of cycling per week can remarkably prevent <u>6,500</u> premature deaths annually, leading to healthcare savings of EUR 19 billion (~INR 158 crore). Moreover, the United Kingdom's Cycle to Work scheme, initiated in 1999, has successfully reduced carbon dioxide emissions by 0.13 million tonnes annually, equivalent to eliminating emissions originating from 24,000 households in the country.

Active mobility infrastructure in Bengaluru

Currently, the inadequacies in the mobility infrastructure in Bengaluru pose a major problem for the authorities. According to the Comprehensive Mobility Plan (CMP) 2020, only 47% of the road length features footpaths and dedicated cycle tracks are limited to the central business district region such as M G Road and nearby areas like Koramangala. The Directorate of Urban Land Transport reports approximately 4,000 shared bicycles in the city, a minimal number

considering the city's population and sprawl. Further, this estimate is predominantly confined to Central Bengaluru and specific IT corridors including Outer Ring Road and Koramangala. Efforts such as creating cycling lanes on 22 roads in Jayanagar have proven ineffective due to encroachment by motor vehicles. The lack of regulation and improper maintenance of existing (limited) NMT infrastructure lead to safety issues and discourage users from opting for active mobility options. Moreover, the growing affluence of residents and attractive debt products have increased the affordability of motor vehicles, making active transport unpopular and reducing investments towards NMT in the city. Limited right-of-way further adds to the onground constraints to the establishment of NMT infrastructure. Even with the proposal for constructing 548 km of footpaths by the Bruhat Bengaluru Mahanagara Palike (BBMP), the potential of cycling and walking remains largely untapped.

According to CMP 2020, the BBMP intends to construct 174 km of cycling tracks over the next 15 years, in addition to establishing approximately 550 hubs for shared bicycles. However, both the track and hub requirements far exceed the proposed numbers, addressing only 2%–4% of the actual need. Further underscoring this issue, Bicycle mayor Mr Sathya Sankaran emphasises that Bengaluru requires around 2,000 km of cycle tracks spanning the entire city. Integrated planning and multi-modal transport infrastructure projects in the future can ensure the successful establishment of NMT facilities.

Towards a greener future of mobility

As Bengaluru continues to grow, it is essential to prioritise the sustainable modes of transportation that not only benefit individuals but also contribute to the overall well-being of the community and environment. Further, active mobility can act as a cost-effective measure to reduce transport-related emissions. By investing in the cycling infrastructure, promoting awareness, and fostering community engagement, Bengaluru could build a healthier, more productive populace, reducing the stress on healthcare systems and paving the way for a vibrant and active community.

The final article in this series will focus on the implementation of Electric Mobility as a Service (eMaaS) to overcome the traffic bottlenecks in Bengaluru.

The author formerly worked in the area of Green Mobility at the Center for Study of Science, Technology and Policy (CSTEP), a research-based think tank.