

## Covid-19 forces us to rethink how we decongest Mumbai

## TANUSHREE VENKATRAMAN

In December 1898, two years after the first case of bubonic plague was detected in Mandvi, the Bombay City Improvement Trust (BCIT) was formed. By this time, tens of thousands had been killed in the city, and thousands had been forced to evacuate. The plague exposed infrastructural weaknesses and forced a redesign of Bombay. The BCIT was tasked with decongesting the city, and its efforts led to not only new east-west roads like Princess Street but new residential neighbourhoods like Dadar, Matunga and the now-famous landmark of Shivaji Park. Today, with the outbreak of Covid-19, urban planners say there is an urgent need to rethink once again the city's design and how it may be decongested.

'We have to take a major re-look at our development codes where we must use densification as a planning tool,' said Pankaj Joshi, executive director of the Mumbai-based Urban Design Research Institute (UDRI). Densification refers to the number of people in an area. 'It is possible to decongest the city in a phased-manner as large parts of the city are still being redeveloped,' said Joshi.

With a density of 31,700 people per square km (sqkm), Mumbai is the second-most crowded city after Bangladesh's Dhaka, as per the World Economic Forum. 'The density on an average would be almost 43,000 per sqkm if we do not take the mangroves and Sanjay Gandhi National Park into account,' said Joshi.

Experts say the primary challenge facing Mumbai is the uneven spread of population and amenities. 'Density is not bad, per se. Mumbai's problem is its unequal densities. Compare Malabar Hill to Dharavi,' said Hussain Indorewala, a professor and an urban planning expert.

ANDHERI STATION DURING EVENING PEAK HOURS IMAGE CREDIT: MEHAK TIKU

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Dharavi, which has several containment zones and has reported 168 cases of Covid-19 since April 1, has a current density of 66,000 per sqkm. 'Slum rehabilitation schemes in the city allow 1,200 tenements per hectare, which not only produces poor living conditions but poses a great danger to public health,' said Indorewala.

While the state government has been planning the redevelopment of congested areas like Dharavi, Bhendi Bazaar and Bombay Development Directorate (BDD) chawls, urban experts agree that the existing plans are unlikely to improve conditions. 'Dharavi needs a comprehensive plan. In the past, we have looked at self-redevelopment or community-based models for Dharavi to manage its densities. Those need to be re-looked at,' said Abhay Pethe, an economics professor at the Mumbai School of Economics and Public Policy.

So far, the state has leaned towards the cluster development model, which monetises the land to finance new construction. Experts say this model will only serve to further crowd the already-crowded clusters, with additional tenements that are being built in the same area. 'The ideal scenario is when rehabilitation schemes do not exceed by 300-400 tenements per hectare, but as long as profiting from land is a major motive, that will not happen,' said Indorewala.

Architect Vilas Nagalkar said current redevelopment plans are not likely to give families the amount of space ideally allotted to them. 'The Development Plan 2034 of Mumbai looks at 125 square metres (sqm) per family as an ideal housing scenario. At present, lower-middle-class families occupy 10-15 sqm of space. After redevelopment, it will change to 40-50 sqm per family,' said Nagalkar.

Additionally, there is the issue of creating more public spaces, which is a critical part of decongestion. Joshi gave examples of

Hong Kong, where multi-storey towers are interconnected at ground-plus-two floors to create more public space.

In the Chinese city of Shanghai, the problem of densification was tackled by merging 243 sqkm into the city between 2000 and 2004. Shanghai is among the most densely populated cities in the world, and while questions remain about the sustainability benefits, experts agree that general liveability has improved after residents were relocated from the city centre.

Expansion with an eye to decongesting Mumbai has been tried in the past. In the 1970s, Navi Mumbai was conceived for precisely this reason. 'The most important component of Navi Mumbai was to move the state government headquarters to the new city. That did not happen. There were also proposals to develop smaller satellite cities around Mumbai. That also did not happen as envisioned by the planners,' Indorewala said.

In March 2019, as part of his lecture titled 'Re-imagining Mumbai as the Indian Ocean Capital', urban planner Pedro B Ortiz suggested a 'Navi Navi Mumbai' to decongest the city. Ortiz said the city needs 14 sqkm of service land every year to meet its ever-increasing growth and avoid slum encroachment.

The Mumbai Metropolitan Region Development Authority (MMRDA) has been looking at establishing growth centres since 2012, which would help ease the pressure on Mumbai. Its regional plan 2016-36 zeroed in on four growth centres: Kharbao in Bhiwandi; Nilje in Dombivili; Shedung in Panvel; and Gass in Vasai-Virar. In 2013, the Maharashtra government had announced the formation of the Navi Mumbai Airport Influence Notified Area (Naina), a new township spread over 600 sqkm of area (larger than Mumbai) to avoid unplanned growth around the proposed international airport at Navi Mumbai. The state expects these centres to ease the transit burden towards Mumbai.

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to be dependent on its overburdened railways to connect to farflung areas within the Mumbai Metropolitan Region (MMR).

An important factor contributing to congestion is traffic and access to public transport. 'Biking and cycling have to be encouraged as last-mile connectivity options. Data has to be used to predict travel patterns and manage the dispersal of crowds. Transit frequency also has to be increased for safer, distanced and comfortable travel,' said transport expert Amruta Ponkshe, who is with the Observer Research Foundation (ORF) and has written a paper on transit after Covid-19.

According to the TomTom Traffic Index of 2018, Mumbai is the most traffic-congested city in the world. Daily, local trains in Mumbai carry 7.5 million passengers, 2.6 times the trains' capacity on average. The city continues to be dependent on its overburdened railways to connect to far-flung areas within the Mumbai Metropolitan Region (MMR), like Thane, Kalyan-Dombivili, Navi Mumbai, Vasai-Virar, Mira-Bhayander, Bhiwandi-Nizampur, Dombivili and Ulhasnagar.

'We have to look at the metropolitan region as a whole unit for a cohesive decongestion plan, but that is not happening with so many agencies handling different projects,' said Joshi.

To this end, the 13 lines of the Mumbai Metro, being implemented by the MMRDA, is expected to decongest the city significantly. A recent study commissioned by the MMRDA concluded that traffic congestion would reduce from 137% to 33% by 2031 once all the Metro lines are constructed. (Congestion percentages represent the extra time required to reach a destination.) With infrastructure projects coming to a standstill in the lockdown period, the timelines of all projects will be severely affected, a senior official from MMRDA confirmed.

At present, of the 337 km Metro network, eight lines are in various stages of development. These include line 4 (Wadala-Kasarwadavali) and its extension to Gaimukh; line 5 (Thane, Bhiwandi and Kalyan); line 8 (Chhatrapati Shivaji International

Airport to Navi Mumbai International Airport); line 9 (Dahisar East, Mira Bhayander); line 10 (Gaimukh to Shivaji Chowk); line 12 (Kalyan to Taloja); line 13 (Shivaji Chowk to Virar); and line 14 (Kanjurmarg to Badlapur).

Road congestion should also be eased by the Mumbai transharbour link, a 22-km long sea-bridge connecting Sewri in south Mumbai to Nhava Sheva in Navi Mumbai. The government rolled out the project in 2018.