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Mumbai Gets its First Manmade Dense Forest

By Nikhil Menon · 3 days ago · TWC India



Green Yatra's volunteers working on the Green Wall in Mumbai.

(Pradeep Tripathi / Green Yatra)

As we celebrate the International Day of Forests on March 21, The Weather Channel visits Mumbai's first man-made dense forest.

In a dusty corner of Mumbai's western suburbs, near the newly-built Ram Mandir station, sits a low-slung Railway warehouse packed with cement bags. Mounds of construction debris lie everywhere. Office-goers scramble to get out of the way of smoke-belching trucks rumbling down the congested lane to the warehouse. Most Mumbaikars are extremely familiar with these visuals; yet, in the middle of this concrete chaos, something rare and beautiful is emerging.

On a cordoned-off patch of land nearby, month-old saplings, ranging in height from a few inches to four feet, poke their heads tentatively out of the ground. These are the first of the 12,000 trees that

will comprise Mumbai's first urban dense forest; a man-made "Green Wall" that will, one day, act as a foil for the heat, dust, pollution and water problems of the region.

But for now, the forest doesn't look like much—just splashes of green in a colour-drained urban landscape. But as he stands squinting in the March Sun's glare, Pradeep Tripathi is convinced that in five years' time, the area will become a lush, natural paradise for both man and beast.

"Around 3000 saplings have already been planted in the first phase. Before monsoon begins, we aim to finish planting all 12,000 saplings on a one-acre stretch of land allotted to us," he says.



Pradeep Tripathi, founder, Green Yatra, poses in the month-old urban forest coming up in Jogeshwari, Mumbai.

(Photo: Rooster-Tale)

Tripathi is founder of the NGO Green Yatra, the execution partner for the Green Wall project at the Central Railyard Warehouse Company in Jogeshwari east. The team is using a technique called [The Miyawaki Method](#)—named after its inventor, Japanese botanist Dr. Akira Miyawaki—to grow over thrice the number of trees that conventional afforestation methods allow.

The trees making up the manmade forest will include different native species, planted close to each other. In the first phase, 30 species including *neem*, *kanchan*, *karanj*, *kadamb*, *jarul*, *palash*, bamboo and lemon have been chosen. No fertilisers or chemicals have been used; the Miyawaki technique calls for an all-natural approach to restoring forests.

Mumbai already has a natural forest, Aarey—often referred to as the city's lungs—that is home to around four lakh trees. But Aarey cannot shoulder the city's ecological burden on its own.

“According to a study by the Indian Institute of Science (IISc), there should be seven trees for every human. In Mumbai, you have five people per tree,” says Tripathi.

Hence the Green Wall. Tripathi’s team embarked on the project in January 2019. Having successfully used the Miyawaki system for similar projects in Bengaluru, Pune, Delhi-NCR and Ahmedabad, the team decided to replicate it in Maximum City as well.

The Miyawaki method involves plantation of native tree species at close proximity to each other. In time, these will grow into a forest with tall canopy trees blocking out sunlight (thus preventing weeds) and shorter plants and trees, forming a dense wooded area that humans and animals can only enter with some difficulty.

The trees will need two years of regular care, including watering, de-weeding, mulching and adding of beneficial micro-organisms, after which they will become self-sustaining and maintenance-free. In five years, Tripathi says, the forest will be almost full-grown, and in ten years, will “resemble a 100-year old forest”.



An urban forest in Bengaluru jointly developed by Green Yatra with another NGO, Say Trees.

(Say Trees / Green Yatra)

Tripathi rattles off a number of impressive-sounding benefits of the Miyawaki Method. “Compared to a monoculture plantation (cultivation of a single crop), these forests grow 10X faster, are 30X denser, and have 100X more biodiversity, offer 30X better CO₂ absorption, 30X better noise and dust reduction, and have a 30X greener surface area,” he claims.

If all goes according to plan, the Green Wall will be a small victory in Mumbai’s battle against vanishing green spaces. With just 13% green cover, against a desirable 33%, the city is struggling to

deal with the twin threats of vehicular and industrial pollution and falling water levels—manifested in the water cuts in many suburbs that have begun well before summer.

“Green belts help neutralise the pollution emitted by mega cities by acting as carbon sinks. They also recharge the underground water table by ensuring that rain percolates down to the ground in monsoons,” Tripathi says, adding, “The urban forest will also provide shelter to birds, squirrels and other small animals increasingly being driven away from concrete jungles.”

Building the forest hasn't been easy: Tripathi's team had to dig five feet into the rubble-strewn land to find the first layer of natural soil. More red soil had to be trucked in from outside. Even the saplings were brought in from outside Mumbai, because ironically, local nurseries favour decorative plants. All these have brought the cost of the project in the region of Rs.700 per plant. But this cost can fall to as much as Rs.300 per plant if implemented on a large scale, Tripathi says.

Costs notwithstanding, will the Miyawaki-style forest really save Mumbai and ease our pollution and water woes, at least a little bit? The good news is, we'll only have to wait five years to find out.