

## Diwali Special: Grow a new forest in the heart of Mumbai

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A Miyawaki plantation at Jogeshwari East, Mumbai. (Photo: Aniruddha Chowdhury/Mint)

The latest number in a long list of depressing statistics for Mumbai is 2,134. It is the number of trees felled in a span of 24 hours earlier this month at the Aarey Milk Colony, an issue that has brought together hundreds of citizens and activists to protest against what seems like the final blow to the city's green cover. According to an 11 October *Mint* report, Mumbai has lost nearly 60% of its vegetation and 65% of its water bodies in the last 40 years. There is very little to balance the aftermath of this ecological massacre. Curiously enough, it is a different number that offers some hope— 7,000.

This is the number of trees planted on a little patch of land in Jogeshwari East over the last eight months by the environmental NGO Green Yatra. Though small in scale, this initiative has transformed a stretch of urban wasteland into a plantation. And it is one that has been planted by ordinary citizens of the city as part of Green Yatra's Pedh Lagao project.

Their hashtag #10CroreTREESby2025 outlines the organization's objective—the aim is to reforest Indian cities.

It is a rare rain-free day in Mumbai when we travel to Jogeshwari to assist Pradeep Tripathi, founder of Green Yatra, in planting trees. The sun beats down with a vengeance as we turn off the Western Express Highway on to a side lane called Ram Mandir Road. Here, the tallest and most dominating structure is the chrome and glass-fronted Lotus Corporate Park. Today, it reflects the clear blue sky but it's also a glaring reminder of the city's unplanned urban sprawl, with massive commercial towers built in congested mixed use areas leading to further infrastructural chaos like traffic jams, vehicular pollution and water shortage. Lotus Corporate Park shares a boundary with the Ram Nagar *chawl*. There are lines of cabs, auto rickshaws, little corner shops, open drains and an overflowing garbage dump that segues into a cul-de-sac—a long shed fronted by a road under construction and half a dozen trucks. This is a massive cement storage facility for the Central Railside Warehouse Company Ltd (CRWC)—and all along its dust-caked periphery, spanning over a kilometre in length and 6m in width, is a skinny green patch of young trees at various stages of growth.

Tripathi navigates giant open drains and a crumbling wall-cum-walkway. The air is thick with cement dust and particles from the road being built as well as neighbouring construction sites. A sudden green patch provides respite, with slender young plants creating a canopy against the harsh sun. It is cooler, there is shade and the air feels cleaner. And then there are the butterflies—yellow, orange, stippled and striped—flitting in and out among the leaves. Dragonflies float in the air a few feet above our heads and sparrows chirrup noisily: an entire ecosystem is coming to life in a place which used to be a dumping ground for construction debris.

This green patch, which Tripathi has christened the Green Wall, has been grown according to the Japanese Miyawaki method which enables the creation of urban dense "forests" in a short span. The success of the NGO's first

Miyawaki project has enabled it to create and design similar plantations in other parts of Mumbai as well as the country.

Different parts of this Green Wall are of varying density, depending on when the trees were planted. And although the entire stretch is less than a year old, some of these trees are already over 10ft tall, pointing to the success of this plantation method. "We plant a minimum of 20-50 different local and native species plants on a small patch of land. Multilayered 2-3ft saplings are planted very closely and they can grow into 20ft grown trees in just two years," says Tripathi. He says it is often difficult to find these native species in Mumbai and they have to travel to Pune, Nashik, even Gujarat for them.

Green Yatra's programme gets support from corporate social responsibility initiatives as well as individual volunteers, who help with the planting and maintenance of plants in the initial stages. They use organic compost and natural pesticides like *neem* to maintain a healthy biodiversity.

"Tree selection is a very important part of our work. We don't grow any non-native trees because over the years, 60-70% of the trees that have been planted in Mumbai are not native to the place and this is damaging to our biodiversity. You won't find birds' nests in *gulmohar* trees, which are a non-native species," he says. Along with his team, he visits local forests like the Sanjay Gandhi National Park, makes lists of the species that abound naturally and then sources those specific saplings. So, there is a profusion of indigenous plants like *saptaparni*, *amla*, *jamun*, *neem*, *apta*, *tejpatta* and bamboo in his Miyawaki plantation.

The trees we are going to plant are *jamun* saplings and they are roughly 2ft tall. We have grown up seeing pavements spattered with squashed purple fruit in cities across the country, something that has become uncommon nowadays. Consequently, the *jamun* has become elusive, appearing for a short period at the local grocers and commanding exorbitant prices. It is a heartwarming thought that these three young saplings will grow into trees and bear fruit—with that peculiar mix of sweet, sour and mouth-puckering astringency—that children will be able to pluck and eat.

We help dig a shallow hole in the soft earth in one corner of the Green Wall reserved for new plants. This used to be land that was a layer cake of concrete bits, cement, broken pipes and piling. They had to remove the debris and bring in fresh earth to create a base that would sustain plants.

Normally, several suitable locations are shortlisted before identifying the best site for developing a Miyawaki grove. The area has to be a minimum of 2,000 sq. ft to design such a plantation. This is followed by an assessment of soil quality and preparation of the ground before the actual planting. "In Mumbai, there are space constraints and we had to work on this extremely difficult site, and we didn't have expectations that it would grow this well— it has surpassed our expectations," says Tripathi.

Today, Green Yatra is replicating versions of this Miyawaki forest across the country in collaboration with companies as well as by smaller-scale citizen initiatives. Apart from creating these forests, Green Yatra also ties up with schools, colleges, building societies and residents' associations, providing saplings and expertise free of cost in order to help them create or expand their existing green cover.

While this Green Wall is already thriving, there is much room to grow. This particular "forest" can accommodate another 7,000 trees and the team plants new saplings from time to time to create the different layers of vegetation that are essential to this type of plantation. Today is one such planting day.

We carefully unwrap the black plastic protective cover from the base of each sapling and slide the plant into its new bed. The soil is a mix of compost and earth and we use our hands to fill in the hole. A sprinkle of water helps compact the soil and the plant stands upright, glistening in the sun. Sitting on the ground, we look over our newly planted *jamun* trees at the functional glass buildings, the under-construction towers, the unplanned chaos of slum housing. Nothing quite fits in terms of aesthetics or urban planning, yet it is a sight that affirms hope for this city.

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