

Forests grow 10x faster and 30x denser: What is the "Miyawaki method" that is restoring native forests and greening urban Mumbai?

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As part of its Nationally Determined Contributions (NDCs), India has set itself a target of creating an additional carbon sink of 2.5-3 billion tonnes of carbon dioxide equivalent (CO₂e) through additional forest and tree cover by 2030. Considering the rapid urbanisation and the consequent clearing of forest cover, this target seems impossible to achieve, right? Not quite so.

If we say urban spaces, the image that comes to mind is of concrete jungles, right? What if we say that urban spaces can be greened by restoring forests from seeds of native trees on very degraded soils which were deforested, and without humus. Sounds too good to be true?

Meet the revolutionary method of expanding urban forest cover. Say hello to the Miyawaki Method of reforestation, developed by Japanese botanist Akira Miyawaki. This innovative reforestation has brought back the green cover in urban Mumbai. And not just brought the cover back as it was, but a growth that was 10 times faster, and the resulted in up to 30 times denser forest.

In Mumbai's Mulund, a two-year-old Miyawaki forest stands testimony to the effectiveness of the technique, even in Indian conditions. The urban re-greening project was started by a group of environmentalists in Mumbai with the support of the BMC in July 2019.

It reportedly started on a 100 square metre plot. Subsequently, an additional 100 square metre plot was provided by the BMC in Mulund. Under the Miyawaki method, the ground is prepared by digging up the entire area, unlike the traditional method in which saplings are planted in small pits. The dug trenches are then filled with a mixture of rice husk, cocopeat and soil along with other fertilizers. Another key factor is that the local species — best suited to the local conditions — are used. The Mumbai team coordinated with tribal people from the Aarey Forests and chose the kind of saplings that would grow into tall trees and form a canopy. Then came the choosing of shorter trees, herbs and creepers. The saplings were planted very closely for denser growth.

Experiments have proven that such micro forests can be grown in any city in the country in limited space and without much expense. According to an IANS report, Danfoss India has developed Miyawaki forests measuring about 1,000 square metres. Indian Oil Corporation had also launched the Miyawaki forests system as a part of its corporate social responsibility (CSR) project.

Such has been the success that the East Delhi Municipal Corporation last year decided to employ the Miyawaki method over the Ghazipur landfill site! The Greater Chennai Corporation has also developed a Miyawaki forest with an area of around 3,000 square feet near the Secretariat. The urban forestry initiative has been supported by residents' welfare associations and NGOs to improve air quality and reduce city pollution.

The question now is whether the government will consider it on a national scale. Because to achieve the NDC target, India needs to produce an additional 25-30 million hectares of forest cover by 2030 and the clock is ticking.

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