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Expanding tree cover is crucial

As climate change accelerates, tree plantation and carbon sequestration are essential for environmental sustainability. For India, a rapidly growing economy reliant on carbon-intensive industries, expanding tree cover is crucial for mitigating climate change while supporting industrial growth and rural livelihoods.

India's forest and tree cover is 25.17%, significantly below the 33% target set by the National Forest Policy of 1988. This shortfall has serious implications, as deforestation, rapid urbanisation, and industrial emissions continue to degrade ecosystems.

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Accelerating afforestation

Tree plantations act as natural carbon sinks, absorbing and storing atmospheric carbon dioxide (CO₂). However, in India, this sequestration potential needs to be enhanced through large-scale afforestation programmes. Beyond reducing greenhouse gas emissions, increased tree cover improves soil health, recharges groundwater, retains water, reduces soil erosion, and enhances resilience against extreme weather events.

Recognising this, India has introduced several policies and initiatives to accelerate afforestation efforts. The National Agroforestry Policy (2014) and the Trees Outside Forests in India Program encourage private landowners, farmers, and industries to participate in large-scale tree planting. They aim to reduce dependence on natural forests for timber and fuelwood, restore degraded ecosystems, and provide additional income sources for rural communities.

The Green India Mission, part of the National Action Plan on Climate Change, has been instrumental in reviving degraded forests and promoting sustainable forest management. According to government data, GIM has helped increase forest cover by 0.56% between 2017 and 2021.



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As India strives to achieve net-zero emissions by 2070, tree plantations and carbon sequestration will be key pillars of its sustainability strategy

Corporate social responsibility initiatives have also contributed to large-scale tree plantation drives. Companies in sectors such as automobile manufacturing, cement, and energy have undertaken afforestation projects to offset emissions. Many corporations are also integrating afforestation efforts into their carbon credit strategies, allowing them to claim emission reductions while restoring ecosystems.

Indian industries face growing pressure to reduce their carbon footprint due to stringent international regulations. The European Union's Carbon Border Adjustment Mechanism, set to be enforced in 2026, will impose tariffs on carbon-intensive imports such as steel, cement, and aluminium. As trade between India and the EU reached €124 billion in 2023, these tariffs could greatly impact Indian exporters.

To remain competitive in global markets, industries are increasingly investing in carbon-offset projects, including large-scale tree plantations. Such investments help companies align with global sustainability standards, earn carbon credits under frameworks such as the Verified Carbon Standard and Clean Development Mechanism, and offset emissions in a cost-effective manner instead of purchasing expensive international carbon credits.

Sustainability is no longer about regulatory compliance – it has become a strategic advantage. Companies are integrating sustainability into their operations by developing green supply chains, sourcing raw materials from sustainable forestry projects, and implementing energy-efficient manufacturing processes. With global capital markets increasingly favouring environmental, social, and governance principles, Indian industries must adapt to maintain their market position.

Tree plantations also offer economic and social benefits. Large-scale afforestation initiatives create millions of jobs, especially

in nursery management, forest conservation, and agroforestry. These are particularly vital for rural communities. Agroforestry, which integrates trees into agricultural systems, is a particularly promising approach. It enhances soil fertility by improving nutrient cycling, provides additional income from timber, fruits, and medicinal plants, and increases resilience to droughts and erratic weather conditions. A study by the Indian Council of Agricultural Research found that agroforestry can increase farm incomes by 20-30%.

To support community-led afforestation, government and non-governmental organisations have stepped in to provide financial incentives, training and capacity-building programmes to educate farmers and rural workers, and market linkages to help communities sell forest-based products. These foster a sense of responsibility and ownership.

Policy recommendations

Despite its benefits, large-scale tree plantation faces several challenges. One is the rising cost of carbon credits. In 2023, the average price of carbon credits under the EU Emissions Trading System was €83 per tonne of CO₂. For Indian businesses, investing in afforestation offers a more cost-effective solution than purchasing expensive carbon credits from international markets. Another challenge is the absence of a robust carbon trading policy in India. To fully capitalise on global carbon markets, India must establish a transparent national carbon credit registry, a well-defined regulatory framework under Article 6 of the Paris Agreement, and financial incentives to encourage private-sector investments in afforestation.

As India strives to achieve net-zero emissions by 2070, tree plantations and carbon sequestration will be key pillars of its sustainability strategy. The risks of inaction are too high.