

# Green infrastructure: A decisive step towards Future sustainability



*With green infrastructure in urban planning, we can protect future generations' resources as well as provide a framework for growth and development in the future*

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Infrastructure is undoubtedly one of India's top development priorities. This was evident when it was highlighted in the Union Budget 2022 as a critical component of the country's development initiatives. However, in India, infrastructure is mainly associated with 'grey' elements like engineered brick-and-mortar structures despite the fact that green projects are quickly becoming a part of modern urban planning at the national, regional, and municipal levels. We urgently need to shift our perspective on urban planning and go beyond the traditional frameworks, as sustainable infrastructure has been identified as a critical solution for addressing the aforementioned issues.

Green infrastructure could be understood as a strategically planned network of natural and semi-natural areas within the existing urban centres or new & proposed infrastructure projects which are designed and managed to use natural benefits like water purification, air quality, climate mitigation and adaptation for the benefit of society.

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The goal of green infrastructure is to obtain both economic and environmental benefits, especially to counter the challenges in an urban environment. Given that half of the structures that will exist in 2040 have yet to be created, there is ample potential and need to develop green infrastructure through a framework for future expansion while ensuring that resources are protected for future generations. The initiative can help



organise growth and regulate city expansion within the context of enhanced conservation and open space lands. Since climate change impacts human life, some cities around the globe have changed their planning and design approach to make way for more nature-driven solutions, such as blue-green infrastructure rather than grey-engineered infrastructure.

Furthermore, utilising green infrastructure creates recreational spaces, promotes community identity, and offers several other benefits. Green cities also provide rich biodiversity, reduce air and noise pollution, prevent water scarcity, ensure cool temperatures, and minimise the effects of climate change's effects. As a result, the country is likely to witness an increase in investments in strong, well-resourced, and resilient infrastructure. The transformation that will take place will also include better urban designs, shifting the development cart to smaller cities, investments in enhancing connectivity, easing information symmetry, the greening of SMEs and the local economy, as well as effective waste management systems.

Similarly, green infrastructure can help cities mitigate the effects of climate change, such as heat stress. It also reduces the impact

of extreme weather events and promotes community resilience by protecting and nurturing mangroves, wetlands, forests, and coral reefs that act as natural shock absorbers. In coastal cities, for example, planting mangroves along the coasts acts as a good sand-binder and can prevent saltwater from degrading the quality of groundwater due to increased rainfall and flooding, etc. Also, vertical gardens may not capture as much carbon as a forest already standing or a small area of trees like a park; however, it would lessen the need for thermal cooling.

Prominent among the many advantages is that advocating environment-friendly solutions could give rise to job creation, which is necessary if you want to make the country self-sufficient and independent.

In an era when climate change and environmental degradation have been identified as the two most serious concerns of our time, India has the opportunity to reverse the trends by implementing green infrastructure approaches alongside blue infrastructure. In honouring its legacy and respecting nature, India may set an example not only for sound economic policies but also for other countries to follow.

