



Creating carbon sinks through afforestation in Chhattisgarh

Government: Chhattisgarh, India

Region: Asia-Pacific

Sector: Land use and forestry

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Summary

Forests occupy nearly 50% of the central Indian state of Chhattisgarh; this is the [third largest forest cover](#) of any Indian state. Recognizing the importance of forests in determining greenhouse gas concentration in the atmosphere, the Chhattisgarh government has launched the **Hariyar Chhattisgarh Afforestation Drive** to better conserve its forest resource. The aim of the program is to create large carbon sinks that can help manage the level of greenhouse gas emissions from the state.

Chhattisgarh is employing two key strategies to ensure success of the program. Firstly, the state plans to plant 80 million trees as part of the afforestation drive. Secondly the state also plans to ensure proper land-management to create adequate green cover to absorb emissions from the industrialized and urban regions in Chhattisgarh. For example, the state capital, Raipur, is the **first Indian city to build micro-forests** within the urban ecosystem to allow for greater absorption of greenhouse gases emitted from the city.

In the context of India's goals under the 2015 Paris Agreement, the state of Chhattisgarh is taking a big step in contributing to the nationally determined contribution of creating a carbon sink of 2.5 to 3.0 billion tonnes of CO₂ equivalent. Chhattisgarh's forests contribute more than 50 million tonnes of CO₂ equivalent annual sequestration capability to India's overall goal.

Results

Under Chhattisgarh's **Hariyar Campaign**, the state government is planting 80 million trees across all its districts. The state government is also working with major cities on a land management strategy and is earmarking areas to create "oxy-zones" to manage greenhouse gas emissions and address air pollution.

As part of the land-management strategy, cities are also including bodies of water as part of the oxy-zones that will help replenish ground water in the surrounding areas. In an act of leadership, the

The state of Chhattisgarh in central India is supporting extensive afforestation and contributing to India's carbon sink targets under the 2015 Paris Agreement. Raipur, the capital of Chhattisgarh, has displaced buildings to plant trees and create micro-forests in the urban ecosystem.



capital city of Raipur has demolished more than 50 government buildings to create space for these micro-forests.

In addition to these strategies, the state has been working to implement the national government's **Green India Mission**, one of the eight missions outlined in the National Action Plan on Climate Change. As part of this mission, the state of Chhattisgarh is supporting India to protect, restore and enhance forest cover. It is also working on an **Ecosystem Services Improvement** project with support from the national government, World Bank and Global Environment Facility to improve forest quality, sustainable land management and benefits from non-timber forest produce for forest dependent communities. This project will help build up the state's capacity to demonstrate restoration models based on sustainable land and ecosystem management and benefit the livelihoods of the community's dependent on the land.

Enabling conditions

Several factors drove Chhattisgarh to recognize and preserve its extensive forest cover.

Strong political will from the Chief Minister's office as well as the leadership of the state forest department contributed significantly to the success of the initiative. City leadership allowed for development of micro-forests within the urban environment. **Interagency coordination** helped the state political and administrative leadership to work together towards the afforestation goal.

Engagement with the national government goals also supported the success of this initiative. The forest department engaged in both national and international discussions on climate change through its participation at several **high-level forums**, including the COP. The partial funding from key private-sector players, such as Jindal Power & Steel, Bharat Aluminium Company Ltd., also helped the initiative reach its present success.

Finally, the government adopted a systems approach which focused on: livelihoods, nursery development, sustainable harvesting practices, wetland management, indigenous species regeneration, canal afforestation and others. This supported the initiative significantly in **improving the adaptive capacities of vulnerable forest communities**, to further help preserve the forest ecosystems.

Challenges

- **Multi-stakeholder process:** The implementation process involved various stakeholders from various departments like forest department, revenue department, panchayat and rural development department, housing and environment department, women and child development, village industries etc. It was a challenge to build consensus among various departments with diverse perspectives and priorities.
- **Private sector participation:** The state was clear that private sector participation was key to the success of the program. However, figuring out the best model to have the private sector involved was a challenge initially.

Key lessons learned

- The Chhattisgarh afforestation model serves as a significant example of economic development through livelihood development along with resource conservation.
- Further, actions taken by Raipur in creating oxy-zones to ensure economic development while maintaining urban productivity can act as a role model for other states and cities.
- The Chhattisgarh model also exemplifies the key role of the private sector in supporting such government initiatives.

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