

India's disputed compensatory afforestation policy at odds with new IPCC report

PREMIUM

The Synthesis Report has found that the climate-mitigating potential of natural ecosystems is second only to solar power.

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A tahr seen in the Nilgiris. | Photo Credit: Periasamy M./The Hindu

Increasingly contested policy in India that has allowed forests in one part of the country to be cut down and ‘replaced’ with those elsewhere.

The finding originates in the Synthesis Report of the Intergovernmental Panel on Climate Change (IPCC), a U.N. expert body that determines the global scientific consensus on the consequences of climate change. The report was released on March 20.

“It is extremely significant that the preservation of natural ecosystems is being recognised as an important means to mitigate climate change,” conservation biologist Neha Sinha said in an email. “Environment impact assessments should now include climate costs.”

Why is afforestation contested?

Afforestation is part of India’s climate pledges: the government has committed to adding “an additional (cumulative) carbon sink of 2.5-3 GtCO₂e through additional forest and tree cover by 2030”. ‘GtCO₂e’ stands for gigatonnes of carbon-dioxide-equivalent.

Afforestation is also codified in the Compensatory Afforestation Fund Management and Planning Authority (CAMPA), a body created on the Supreme Court’s orders in 2002, chaired by the environment minister. According to the [environment ministry](#), “CAMPA is meant to promote afforestation and regeneration activities as a way of compensating for forest land diverted to non-forest uses.”

When forest land is diverted to non-forest use, such as a dam or a mine, that land can longer provide its historical ecosystem services nor host biodiversity.

According to the Forest (Conservation) Act 1980, the project proponent that wishes to divert the land must identify land elsewhere to afforest, and pay the land value and for the afforestation exercise. That land will thereafter be stewarded by the forest department.

Why does CAMPA matter?

The money paid sits in a fund overseen by CAMPA. In 2006-2012, the fund grew from Rs 1,200 crore to [Rs 23,600 crore](#). But the Comptroller and Auditor General found in 2013 that most of this

for forests to be set up in other places.

For example, in October 2022, the Haryana government said it would develop the “world’s largest curated safari” using CAMPA funds received from deforestation in Great Nicobar for development projects, 2,400 km away and of very different topography.

A [2016 article](#) in *Current Science* also said that CAMPA-funded projects endangered “landscape connectivity and biodiversity corridors” and exposed forest patches to “edge effects”. It added that planting non-native species or artificial plantations wouldn’t compensate for the ecosystem loss as well as be “hazardous to the existing ecosystem”.

Why do natural ecosystems matter?

Research has found that natural ecosystems sequester more carbon.

“We have known all along that creating single-species plantations in, say, Haryana does not really come close to a natural sal forest lost to a development project in, say, Central Indian forests in terms of biodiversity, local livelihoods, hydrological services, and sequestered carbon,” Sharachchandra Lele, distinguished fellow in Environmental Policy & Governance, Ashoka Trust for Research in Ecology and the Environment, Bengaluru, told *The Hindu* by email.

“Of these, sequestered carbon recovers fastest under fast-growing plantations, but even then, it will take many decades before it approaches the level of carbon sequestered in a natural forest. What this means is that,” he continued, “in addition to livelihood impacts, biodiversity impacts, and hydrological impacts, the climate impacts of such development projects also cannot adequately be ‘compensated’ by compensatory afforestation.

A view of deodar stumps in a deforested in Kandajan area, Budgam district, central Kashmir, December 11, 2020. | Photo Credit: Nissar Ahmad/The Hindu

“We therefore return to the question of ‘under what conditions should permission for deforestation for development projects be denied outright’, to which the [environment ministry] has no clear answer, having rejected the idea of no-go areas; having continuously diluted the criteria for even invoking forest clearance, such as exemption for linear projects; and having aggressively fast-tracked many projects”.

“Within the climate action ecosystem, [the report’s finding] also means that climate action, such as technologies to combat climate change, renewable energy farms, etc. should not come at the cost of natural ecosystems,” Dr. Sinha said.

“For example, don’t indiscriminately plant mangroves on mudflats which don’t naturally have mangroves to act as a buffer from storms. Don’t destroy grasslands and open natural ecosystems for solar parks,” she added.

How do ecosystems compare to renewable energy?

The IPCC report also found that the sole option (among those evaluated) with more mitigating potential than “reducing conversion of natural ecosystems” was solar power and that the third-highest was wind power.

But many solar parks in India have triggered conflicts with people living nearby because they render the land inaccessible and increase local water consumption.

A [2018 study](#) published in *Nature Ecology & Evolution* also found that wind farms in the Western Ghats had reduced the “abundance and activity of predatory birds, which consequently increased the density of lizards”. It concluded that “wind farms have emerging impacts that are greatly underestimated”.

However, the IPCC report also noted that “reducing conversion of natural ecosystems” could be more expensive than wind power, yet still less expensive than “ecosystem restoration, afforestation, [and] restoration”, for every GtCO₂e.

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