

Reclaim and Restore Our Lands

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5 June 2021

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This year's World Environment Day urges us to heal our ecosystems — geographic areas where organisms live in conjunction with the surrounding environment, interacting as a system (like marine-ecosystem, forests, grasslands, and wetlands) — through a pledge to “Reimagine. Recreate. Restore.” It also kicks off the [UN Decade on Ecosystem Restoration](#) (2021–2030).

With COVID eerily revealing how closely we are linked to nature, reviving our ecosystems has never been more urgent for sustaining all forms of life on Earth, including our own.

In the past 60 years, 60 per cent of the Earth's ecosystem has been degraded. Land degradation and desertification are majorly responsible for loss of ecosystems across the world.

Degrading land and disappearing ecosystems in India

In India, about [30% of land area](#) — equal to that of Madhya Pradesh, Maharashtra, and Rajasthan put together — has been degraded due to soil erosion, over-cultivation, deforestation, over exploitation, and mismanagement.

A major part of soil depletion has happened due to land over-use and the kind and quantity of products we pour on it. With water sources already scarce and contaminated, the loss of soil's ability to retain water — due to erosion and degradation — is weakening agriculture systems further.

Next, the India State of Forest Report (2019) data show that 2,145 sq km of dense forests became non-forests since 2017. In the past two years alone, a total of 32,640 hectares of forest land have been diverted for roads, irrigation, mining, and other development projects, causing forest fragmentation.

Similarly, grasslands and wetlands accounting for 24 per cent and 5 per cent, respectively, of India's geographic area are dwindling as a result of development, encroachment, and agricultural demands, adversely impacting soil and water quality, ecosystem services, and biodiversity. While India [lost 31% of grasslands during 2005–2015](#), nearly [30% of natural wetlands have been lost](#) in the last five decades alone.

The price of land degradation

Agriculture provides [employment to 44 per cent of the Indian workforce](#), and 80 per cent of the farmers are small and marginal farmers, having a land holding of less than two hectares. With the alarming pace of land degradation, farmers are already grappling with losses due to declining soil fertility, scarce water resources, and climate unpredictability, all of which have serious implications for their livelihoods.

Then again, about [40% of India's poor live on the periphery of forests](#) and more than 300 million people depend on forests for firewood, non-timber forest products, and livestock grazing. Degradation and fragmentation of forests can cause biodiversity loss, human-wildlife conflicts, infestation by invasive species, and carbon dioxide emissions. Further, fragmented forests are more vulnerable to climate change.

Grasslands and wetlands too provide vital ecosystem services such as water and climate regulation and carbon storage, forming the backbone of livelihoods for several communities. Extensive land degradation threatens agricultural productivity, water quality, and biodiversity — with far-reaching implications, especially for rural livelihoods.

The risk of climate change in India — currently ranked fifth in vulnerability by [Global Climate Risk Index](#) — is exacerbated by land degradation, putting [600 million](#) people at risk, as degraded land is a threat multiplier, limiting people's ability to use land and access resources, leading to forced migration (as livelihoods are threatened), and worsening income inequalities.

Restore ecosystems for lives and livelihoods

India has pledged to reach land-degradation neutrality by 2030, under the United Nations Convention to Combat Desertification. Also, India's Nationally Determined Contribution commitment under the Paris Agreement envisages additional forest and tree cover for creating carbon sink capacity of 2.5 to 3 billion tonnes of CO₂ equivalent, by 2030.

Since agricultural land and forests are tied to the livelihoods of a large population in India, prompt restoration measures here can bring big gains for all, including sustainable food security and climate change mitigation.

Fertility of agricultural soils can be improved through well-established restoration techniques, including conservation agriculture for water management — endorsed by the 2020 [World Water Development Report](#) — and zero-budget natural farming. Additionally, pushing for changes in diet to allow cultivation of crops that are less water-intensive and provide better nutrition (such as millets), and promotion of agroforestry for reclaiming fallow lands are important steps. Policies and incentives that encourage farmers to switch to crops that can cope with future climate risks, and tree crops (agroforestry) — particularly on less productive lands for alternate income — are also needed.

Forest ecosystems could be restored through systematic risk analysis, and implementation of infrastructure development activities that include re-routing linear infrastructure projects to avoid large forest patches, afforestation with native species, and creation or linking of forest

corridors. These are potential win-wins for climate change adaptation — as they can reclaim land, conserve biodiversity, and create carbon sinks.

As the world strives to get on a path of green recovery, India should reimagine development and ramp up efforts for reclaiming and restoring the health of ecosystems, paving the way for a healthy planet with healthy people.

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