



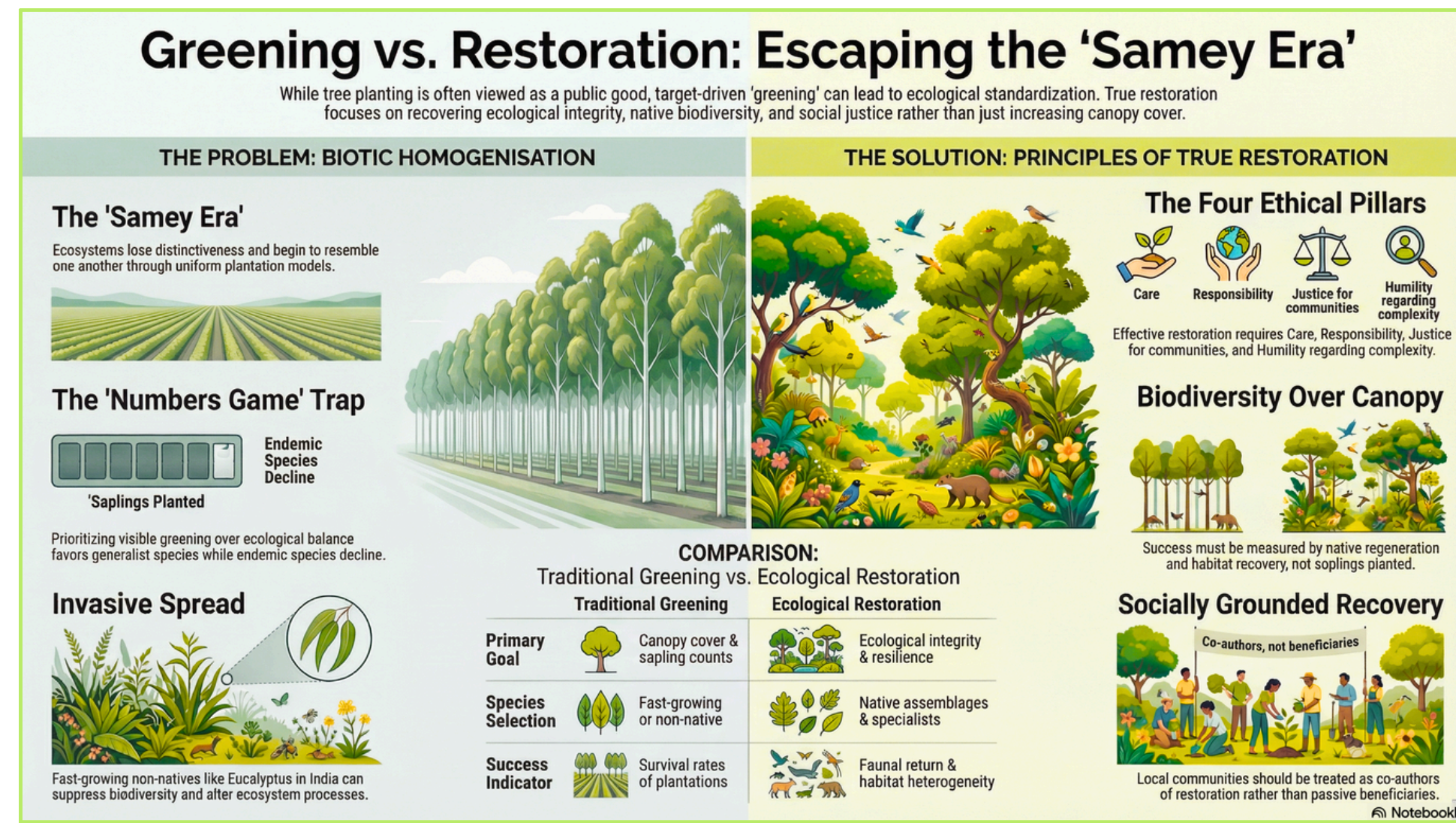
## FROM RESTORATION TO HOMOGENISATION: WHEN GREENING UNDERMINES ECOLOGICAL RECOVERY

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Ecological restoration is widely treated as an unquestioned public good in the face of climate change, desertification, and biodiversity loss. Yet restoration is not ethically neutral. While tree planting is often seen as a symbol of ecological recovery, greening alone does not constitute restoration. When afforestation is driven by short-term targets, simplified planning, or the introduction of fast-growing non-native species, it can shift ecosystems toward uniformity rather than recovery. In this way, restoration may inadvertently contribute to the loss of ecological distinctiveness.

### Greening is not restoration

Restoration should not be judged merely by increased vegetation cover, plantation extent, or sapling survival. Its real aim is to recover ecological integrity, native biodiversity, resilience, and ecosystem function. When different landscapes are restored through a uniform plantation model using the same species and the same success indicators, ecological variation is reduced. What appears to be recovery may instead be ecological standardisation.



### Restoration in the age of the “samey era”

A central dilemma in restoration is whether the goal is to recreate a historical ecosystem or to build a resilient future ecosystem under changing climatic conditions. In practice, many interventions prioritise visible greening over ecological balance. This often favours widespread generalist species, while endemic and specialist species decline. The result is **biotic homogenisation and creation of**

**the samey era:** meaning the ecosystems losing their distinct composition and beginning to resemble one another. This “samey era” weakens ecosystem functions such as pollination, water regulation, food systems, and cultural identity.

### The ethics of deciding what to restore

Restoration is also an ethical and political question. Who decides what a restored ecosystem should look like: the state, technical experts, or local communities?

In large-scale restoration programmes, decisions are often made through administrative or technical priorities. However, ethical legitimacy requires more than legal authority. It depends on ecological evidence, local participation, and procedural fairness. A project may create a greener landscape without being ecologically appropriate or socially just.

### China's Great Green Wall: restoration or simplification?

China's Three-North Shelterbelt Program illustrates the tension between restoration ambition and ecological suitability. Designed to reduce desertification and improve ecological security, the programme is often viewed as a landmark greening initiative. Yet drylands are not failed forests. Arid and semi-arid ecosystems often depend on grasslands, shrubs, and open vegetation rather than dense tree cover. Where afforestation becomes a numbers-driven exercise, it risks producing landscapes that are greener but ecologically simplified. This is a key pathway through which restoration can contribute to homogenisation.

## The Indian context: restoration failures and invasive spread

India also offers similar lessons. In many landscapes, the introduction of hardy or fast-growing species has facilitated the spread of invasive plants that suppress native biodiversity and alter ecosystem processes. For instance, the planting of the *Acacia mearnsii* (black wattle), *Eucalyptus* spp., and *Pinus* spp. in the misclassified waste land later led to the spread to the Shola grasslands of the Western Ghats contributing to habitat loss for species such as the Nilgiri pipit and Nilgiri tahr. This has turned restoration into a more complex challenge, where degradation is combined with invasive dominance. In such contexts, meaningful restoration must be place-specific, ecologically informed, and socially grounded. Where invasive species are deeply established, phased removal linked with livelihood-oriented biomass utilisation may be more practical than immediate eradication.

### Delhi's restoration moment

This debate is especially relevant in Delhi, where invasive *Prosopis juliflora* (Mesquite) was intentionally introduced in Delhi ridge and the Aravallis for rehabilitating degraded lands, stabilizing sand dunes, afforestation, fuelwood supply, and regional greening. Over time, it spread

aggressively in many dryland systems. The invasive species are now being targeted for phased removal and replacement with native species. The success of such efforts depends not only on removal, but on whether native species survive, establish, and restore ecological function over time. If native recovery remains weak, restoration may succeed on paper but fail in practice. Linking invasive species management with value addition and alternate livelihoods can reduce costs and make restoration more socially viable.

### Pillars of restoration ethics

A useful way to frame restoration ethics is through four principles of restoration ethics: care, responsibility, justice, and humility. Care requires treating ecosystems as living systems worthy of recovery. Responsibility recognises that much degradation is anthropogenic and that restoration is part of a duty to repair. Justice asks who benefits, who bears the costs, and whether communities are meaningfully included. Humility acknowledges ecological complexity and the limits of one-size-fits-all interventions. Together, these pillars move restoration beyond visible greening toward ecologically grounded and socially just recovery.

In the age of the samey era, restoration must aim to rebuild ecological difference

rather than reproduce uniformity. This means prioritising native biodiversity over planting targets, recognising that forests, grasslands, wetlands, scrublands, and drylands require different approaches, and treating local communities as co-authors of restoration rather than passive beneficiaries. It also means understanding invasive species management as a long-term ecological and livelihood challenge. Success should therefore be measured through native regeneration, habitat recovery, resilience, ecosystem function, and social legitimacy, rather than green cover alone.

### Resisting ecological sameness

The world may remain superficially green or productive yet lose its ecological uniqueness. Distinct local assemblages of species are replaced by a narrower set of widespread, resilient, and often human-tolerant organisms. Landscapes that once differed sharply from one another begin to converge. Ecological sameness can undermine ecosystem services that human societies depend on, deepening vulnerability, especially in communities already exposed to climate stress. If Anthropocene marks the age of overwhelming human influence on the Earth system, the Homogenocene captures the ecological consequences of wiping out

the specialist species.

Afforestation activities today stand at a crossroads. It can either continue as a target-driven exercise shaped by numbers, visibility, and short-term gains, or evolve into a science-based practice of ecological restoration. Governments must strengthen species-selection guidelines, post-planting care, and monitoring frameworks, while corporates must ensure that afforestation investments are rooted in native biodiversity, and landscape context, but not in mass tree plantation. In the existing Green credit programme, focusing on biodiversity targets (native species diversity, structural complexity, regeneration, pollinators, faunal return, and habitat heterogeneity) instead of canopy targets can bring about a change. Moreover, the urban greening policy should emphasize local habitat mosaics, native understory and species assemblages suited to each bioregion. The real legacy of afforestation will not be counted in saplings planted, but in ecosystems restored.

We need to remember that

**“A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community”**

**-Aldo Leopold**

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