
Retaining & recovering forest ecosystem integrity is essential for long term success of the Road Map to end deforestation & forest degradation

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Pre-requisites for a successful forest Road Map

Many factors will influence the success or failure of this important initiative. It must be framed to protect and restore forest ecosystem integrity and be enabled by: appropriate funding at scale; global frameworks and country level action; effective planning, especially at a landscape scale; robust systems for monitoring and accountability; sound scientific conceptual frameworks; and strong bottom-up governance. Three key pillars of integrity-based forest management — ecosystem integrity, strong governance, and effective planning — are elaborated in the [3-pillar framework](#).

Forest condition matters more than forest cover for climate mitigation

There is as much carbon stored in forest ecosystems as there is in fossil fuel reserves¹. Stable carbon storage over long time frames and the risk of it being released, depends on the condition of the ecosystem. Keeping carbon out of the atmosphere is the most important climate mitigation function of ecosystems. This function is dependent on retaining and recovering ecosystem integrity, which is in turn dependent on retaining and recovering their natural components of biodiversity and structural complexity. Biodiversity is the system driver upon which every ecosystem service provided by forests depends, including carbon sequestration and storage as it underpins an ecosystem's stability, resilience and adaptive capacity.

Forest ecosystem integrity is reduced by all forms of degradation, including loss and fragmentation from road incursion, logging, agriculture, mining, urban and infrastructure expansion. Each of these activities compounds threats that are increasing with climate change, like drought and fire, to increase the severity of their impacts and further damage the integrity and stability of forests.

The FAO recognize categories of forest — primary, naturally regenerating (regrowth), planted and plantation forests — which correspond with broad shifts in forest ecosystem integrity from high to low. Primary forests have the highest ecological integrity and are therefore more stable and resilient than any of the other categories of forest ([IUCN PF-IFL](#)). On average they store 50% more carbon per hectare than any of the other categories. They

¹ Forest ecosystem carbon is around 870 Pg C ([Walker et al. 2024](#)) or 3,193 Gt CO₂-e; fossil fuel reserves defined as recoverable under current economic conditions, have a specific probability of being produced, and would result in 2,900 Gt of CO₂ if combusted unabated ([McGlade and Ekins 2025](#))

are our most important forest climate asset - irrecoverable in any climate relevant timeline. Yet over 1 million hectares are lost annually ([FAO 2025](#); and [GFG report 2026](#)). Between [50-80%](#) of all terrestrial species live in forests, with tropical forests being incredibly biodiverse; supporting at least [two-thirds](#) of the world's biodiversity. The Road Map must aim to retain them through adequate incentives and effective governance and planning. It should improve the integrity of each forest category and encourage governments to recognize the climate and biodiversity benefits of allowing natural forests to recover their full ecological integrity – including larger, more stable and lower risk carbon stocks. Defining and monitoring changes in forest ecosystem condition is essential for improving management action to prevent and reverse forest degradation.

Align the Road Map with Kunming-Montreal Biodiversity Framework (K-M GBF)

A revised CBD forest biodiversity work programme to give effect to the Goals and Targets of the K-M GBF will be adopted at CBD COP 17. Goals and Targets that improve forest ecosystem integrity, reduce risks to carbon storage, and maximise the climate mitigation and adaption value of forest ecosystems include:

- Overarching Goal A to protect and restore the ecological integrity and connectivity of all ecosystems;
- Target 1 committing to whole-of-landscape spatial planning that retains all areas of high ecological integrity;
- Target 2 committing to restore 30% of degraded ecosystems; and
- Target 3 committing to protect 30% of marine and terrestrial ecosystems.

A successful global Road Map must include developed countries

Many countries have pledged to reduce deforestation in their NDCs, but most commitments come from tropical and subtropical regions. Only three countries in temperate biomes—and none with boreal forests—have made such pledges ([Land Gap Report 2025](#)). Only one country has committed to ending both deforestation and forest degradation, but has no national policy process to do so. Five of the top ten forested countries hold most of the world's temperate and boreal forests (Australia, Russia, Canada, China, USA) underscoring the need for action in these countries; collectively they are responsible for around 40% of the world's total forest cover ([FAO 2025](#)). It is incorrect to assume that forest degradation and/or deforestation are insignificant issues in developed countries.

Improved accounting, monitoring and reporting

Improved and more consistent accounting to track different states of ecosystem condition and monitor a range of forest degradation characteristics is critical to guide fair and effective action. A 'global forest accountability framework' is needed to ensure transparent, consistent and equitable standards, definitions, monitoring and reporting. Comparable monitoring and reporting standards should be developed across the Rio Conventions to ensure equitable and transparent forest protection and restoration, recognising differing national and ecological contexts. The UN System of Environmental Economic Accounting Ecosystem Accounting ([SEEA-EA](#)) framework should be utilized to provide consistent accounts, definitions, classifications, indicators, and capacity-building to produce standardized forest reporting for the Global Stocktake and national GHG inventories. These accounts should capture gross forest area change linked to ecosystem type and condition; carbon stock losses from deforestation and degradation; and gains from restoration; and link the quantity of carbon stocks to their quality in terms of ecosystem condition as per the SEEA-EA protocols.

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