

How the Map was Made

The map presents a globally consistent picture. Each of the scientific research projects behind the map has applied the same definitions and data collection methods for the entire world.

The world's historical forest cover is the area where climate conditions are believed to have permitted forest growth some 8,000 years ago. This map was developed by classifying the world's ecoregions (Olson, *et al.*, 2001) into forest, sparse forest, and non-forest, and then adjusting the result with a map of original forest cover compiled by the World Conservation and Monitoring Centre (WCMC) for the World Commission on Forests and Sustainable Development (WCFSD, 1999). Corrections were made for New Zealand, Australia, Madagascar, South America, and Iceland.

The world's current forest cover is the area where forests grow today. This map was developed using the Continuous Vegetation Fields dataset of University of Maryland/South Dakota State University, which was produced using satellite images (Hansen, *et al.*, 2003).

The extent of historical deforestation is the difference between historical and current forest cover. Closed and open forests were mapped separately. Deforested lands were classified according to current land cover, using the Global Land Cover Map from the European Commission Joint Research Centre (JRC, 2003).

The extent of recent tropical deforestation is shown according to an analysis of tree cover in satellite images for the years 2000–2005 (Hansen, *et al.*, 2008).

An intact forest landscape is a large, unbroken expanse of natural ecosystems within areas of current forest extent, without signs of significant human activity, and having an area of at least 50,000 hectares. Intact forest landscapes were mapped using Landsat satellite imagery representing the year 2000. (Potapov, *et al.*, 2008).

The Global Partnership on Forest Landscape Restoration

The Global Partnership on Forest Landscape Restoration (GPFLR) is a worldwide network that unites influential governments, major UN and non-governmental organizations, companies and individuals with a common cause. **We believe that ideas transform landscapes.** The partnership provides the information and tools to strengthen restoration efforts around the world and builds support for FLR with decision-makers and opinion-formers, both at local and international level.

This leaflet, with its original map, was prepared for the GPFLR by the World Resources Institute, South Dakota State University and IUCN.

Sources

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IDEAS TRANSFORM LANDSCAPES

The World's Forests from a Restoration Perspective — Preliminary Map

Since the most recent ice age, more than three quarters of the world's forests have been cleared, fragmented, or degraded.

But forest landscapes are landscapes of opportunity.

Yesterday's loss can be tomorrow's gain. Many of these landscapes can be restored, and climate and other benefits will grow with the trees.

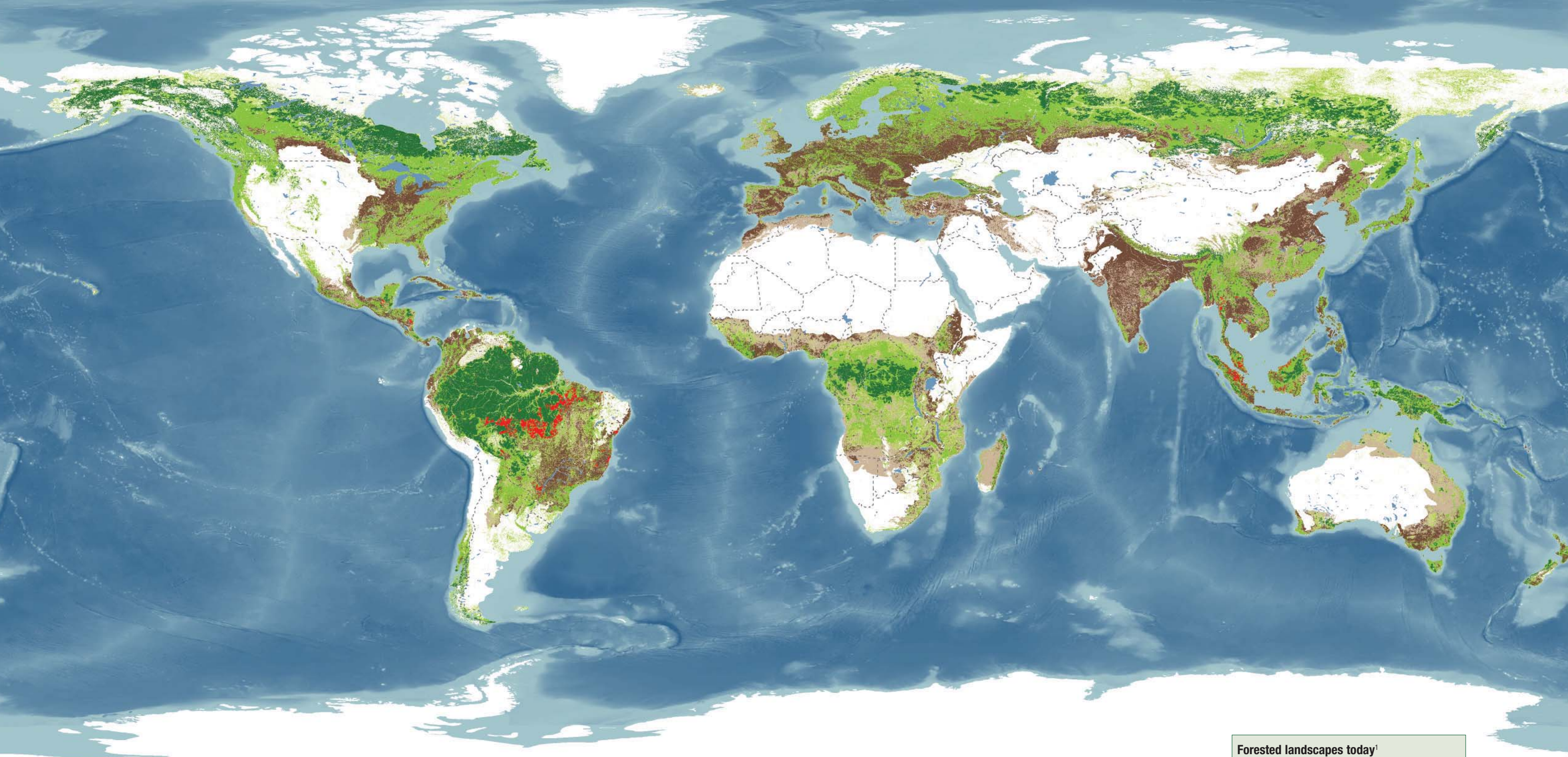
The global carbon sequestration potential of afforestation and reforestation is more than 150 gigatons CO₂ by 2100, comparable in scale to avoided deforestation.

Restored lands will support livelihoods and biodiversity, supply clean water and reduce erosion, and produce biomass fuel and forest products.

But where are these lands located? How much is available?

Answering these questions will help pinpoint the most important places for investment. To find out more, turn the page.





The problem

Forests once covered almost twice the area that they do today. Large expanses have been converted or degraded to produce food, timber, and energy. The loss is continuing at a rapid rate. Just one fifth of the world's original forest cover remains in large tracts of relatively undisturbed forest.

The opportunity

But forests can recover. Restoration of degraded lands is receiving increasing attention because of the vast opportunities involved: climate change mitigation through carbon sequestration and substitution of fossil fuels with biomass; climate change adaptation through creation of shade and

buffers; contributions to rural livelihoods through outgrower schemes and better access to firewood; increased food security; reduced risk of flooding and mud slides; biodiversity conservation through habitat improvement and migration corridors; and production of forest products to serve markets near and far. (IPCC, 2007; FAO 2005 and 2006; MA, 2005).

Not all converted or degraded forests, however, are suitable for restoration. Some of the world's most productive agricultural lands are former forests, and significant areas that were once covered by trees have been converted to urban and industrial uses. But vast areas of marginally productive lands and pastures could grow trees once more and be part of multifunctional forest landscapes.

The analysis

In response to this opportunity, the Global Partnership on Forest Landscape Restoration (GPFLR) is conducting a global restoration potential assessment. Preliminary results will be available in 2009.

This map begins to illustrate the scope, scale, and location of the opportunity by showing the area that was once covered by forests. But the map merely shows where forests can grow. A refined analysis is needed to show where restoration is possible and beneficial in light of competing demands.

Forested landscapes today¹

- Intact forests²
- Managed/fragmented forests²
- Sparse managed/fragmented forests³

Formerly forested landscapes

- Recent tropical deforestation⁴
- Croplands/built-up areas
- Pastures/grasslands

1. As of 2000
2. Tree canopy cover >30%
3. Tree canopy cover 15–30%
4. 2000–2005