

## Restoration of forests and landscapes

Forest landscape restoration is an approach that is complementary and enriching more narrowly defined approaches to afforestation, reforestation, and ecological restoration that have been tried in the past. Central to this approach is the need to improve both human livelihoods and ecological integrity. Forest landscape restoration has the following characteristics:

- A focus on restoring or enhancing the functionality of a landscape (that is, its supply of ecosystem services) – not on maximizing new forest cover;
- Restoration applied to whole landscapes – not to individual sites. This allows trade-offs to be made;
- Local stakeholder consent and participation in decision making and implementation;
- Use of a range of restoration options that include active promotion of spontaneous (“natural”) re-growth of trees (e.g., by reducing pressure from grazing and fire), as well as planting, avoiding conversion of natural forests and other important ecosystems into plantations;
- Land-use complexity and dynamics are accommodated by adaptive management. Provision is made for monitoring and learning.

### A landscape is a canvas to be painted according to societal needs.

A restored landscape can be configured to accommodate a suite of land uses including, for example, protected reserves, ecological corridors, regenerating forests, well-managed plantations, agroforestry systems (or other agricultural systems that make use of on-farm trees) and plantings along waterways.

Restored lands support livelihoods and biodiversity, supply clean water, reduce erosion, provide biomass fuel and produce forest products. Trees in agricultural landscapes can enhance soil fertility, conserve soil moisture, and boost food production.

Forests and trees can also mitigate climate change by sequestering carbon; on a large scale, restoration could reduce the concentration of carbon dioxide in the atmosphere. Restoration can help people weather the impacts of climate change, helping us to adapt to global warming by ensuring water supplies or reducing the impacts of catastrophic storms. The “plus” in the REDD-plus mechanism provides an incentive for restoration activities and could allow many countries that have already lost significant forest areas to participate.

**The Global Partnership on Forest Landscape Restoration** 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 forest landscape restoration with decision-makers and opinion-formers, both at local and international levels.

## Mapping restoration opportunities

We first mapped where forest and woodlands could grow according to climatic conditions, i.e. their potential extent absent human influence. Dry areas such as the Sahel were not included in the extent of this study, although trees play an important role there.

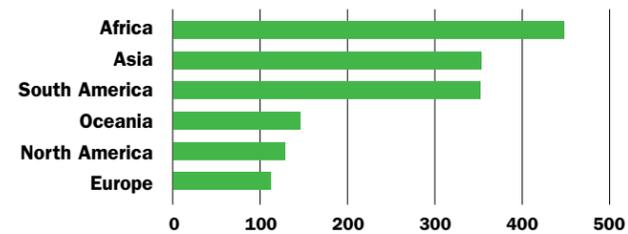
Second, we mapped the current extent of forests and woodlands. Forest maps were derived from global 250m resolution satellite imagery.

Third, restoration opportunities were identified by comparing potential and current forest extent in light of information about current land use. Intact forest landscapes and managed natural forests and woodlands were considered to have no need for restoration. Lands with a low likelihood of offering restoration opportunities were identified by mapping human pressure as a combination of population density and land use.

Deforested and degraded forest lands were divided into three categories, resulting in a map of restoration opportunity areas (with resolution of 1km x 1km):

- **Wide-scale restoration** — Population density of less than 10 persons per square kilometer and potential to support closed forest.
- **Mosaic restoration** — Moderate human pressure (between 10 and 100 persons per square kilometer)
- **Protective restoration** — Intensive human pressure (density over 100 persons per square kilometer), croplands, and urban areas.

### Global restoration opportunities (million hectares)



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# An Opportunity for Africa

Nearly 450 million hectares of Africa's deforested and degraded landscapes offer opportunities for restoration



# Opportunities for Forest and Landscape Restoration in Africa

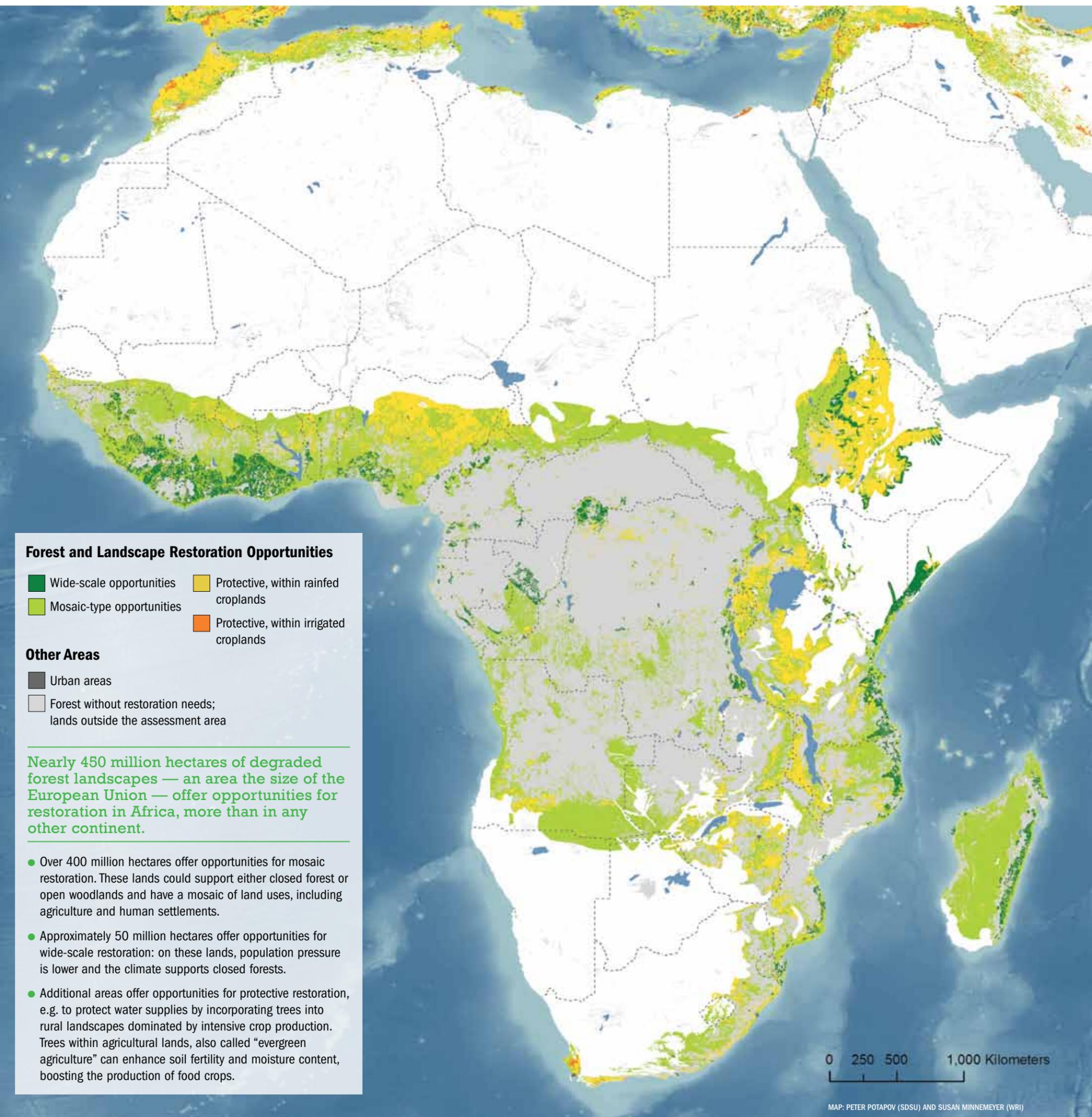


PHOTO: C. MICHAEL HOGAN

**Wide-scale restoration** of forest landscapes is possible in sparsely populated areas without intensive land use. In these areas forests can regrow on a large scale once barriers to regeneration, such as fire or grazing, are controlled.

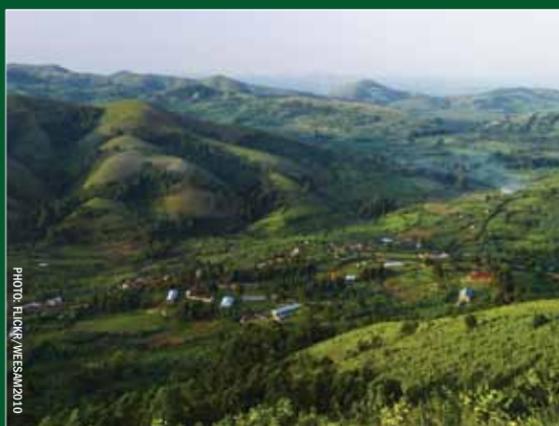


PHOTO: FLORENZ WESMANN/2010

**Mosaic-type restoration** of woodlands and trees occurs at a smaller scale within landscapes that mix forest and non-forest land uses. Population density is higher, and remaining forests, often highly degraded, are interspersed with agriculture and other land uses.

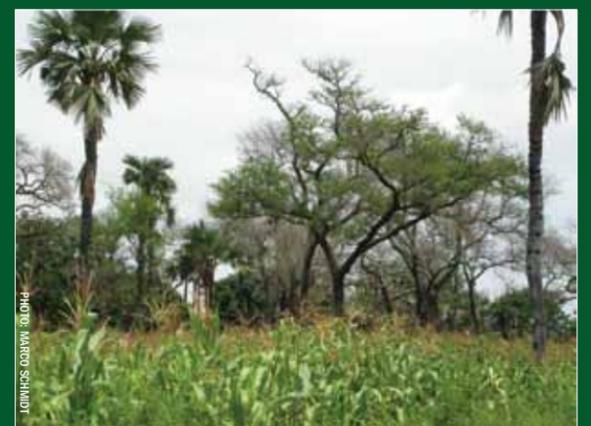


PHOTO: MARCO SCHMIDT

**Protective restoration** is possible in densely populated and highly altered landscapes where most land is being used for intensive food production or settlements. In rural and urban landscapes, trees prevent soil erosion, protect waterways, and enhance soil moisture capacity.