

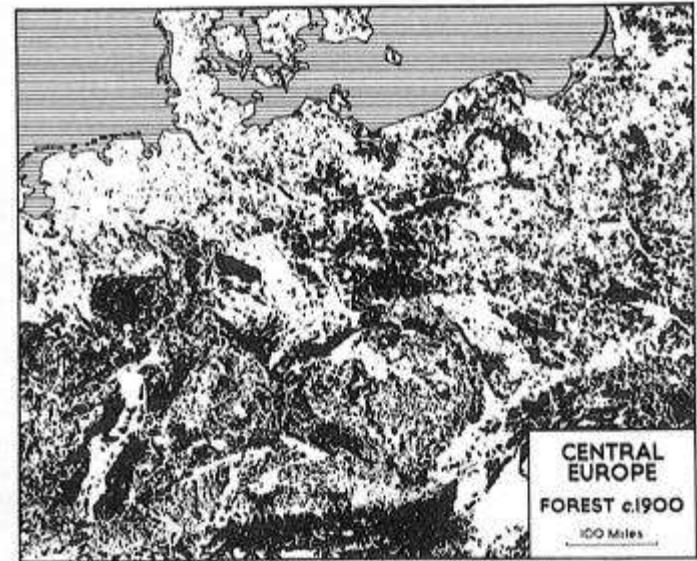
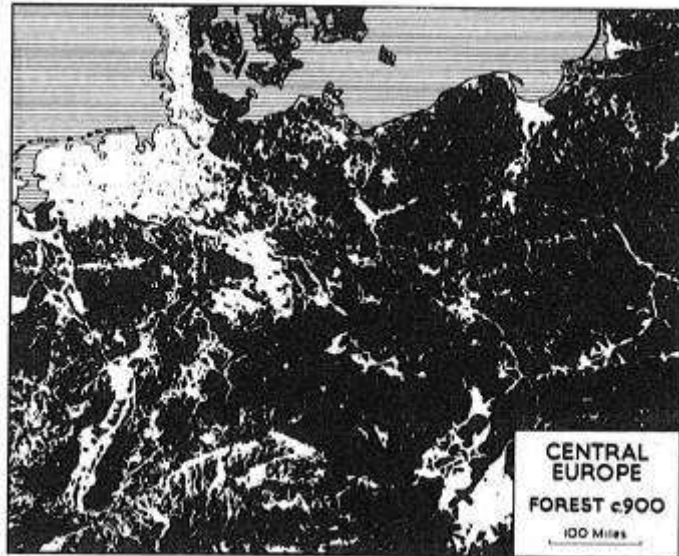


# Restoration of Forests and Landscapes



# Deforestation and degradation have a long history

Central Europe, 900-1900



Source: Williams 2006

# Deforestation and degradation have a long history

United States, virgin forest, 1620 - today



# Restoration is possible!

Heathlands in Southern Sweden

100 years ago



# Restoration is possible!

Former heathlands in Southern Sweden

Today



**Restoration is possible!**

**Shinyanga, Tanzania - then**



**Restoration is possible!**

**Shinyanga, Tanzania - now**



# Restoration has major benefits


The former “*Desert of Tanzania*” now benefits from

- 500,000 ha of new forests
- A further 1.5 million ha of new agroforestry
- Improved food security
- Children stay in school
- Women empowered
- USD 14 per person per month compared to national monthly avg. of USD 8.50



# The "How" of Restoration Matters

Forest and Landscape Restoration (FLR) is about more than trees

- 
- Restore entire landscapes; not individual sites
  - Restore functionality and ecosystem services; not “original” forest cover
  - Balance local needs with national and global priorities
  - Use a package of restoration strategies – no “one size fits all” approach
  - Scale up existing good models
  - Adapt to circumstances over time

# The "Where" of Restoration Matters

Avoid primary forest



Seek out degraded lands



# Engage local people



GBI Portal



# FLR is Not a Standardized Blueprint!

There is no “one-size fits all” solution



# Different Landscapes – Different Approaches

Each landscape calls for its own kind of restoration

**Protected  
Primary  
Forest**

**Degraded Primary Forest**

**Plantations**

**Secondary forest**

**Secondary forest**

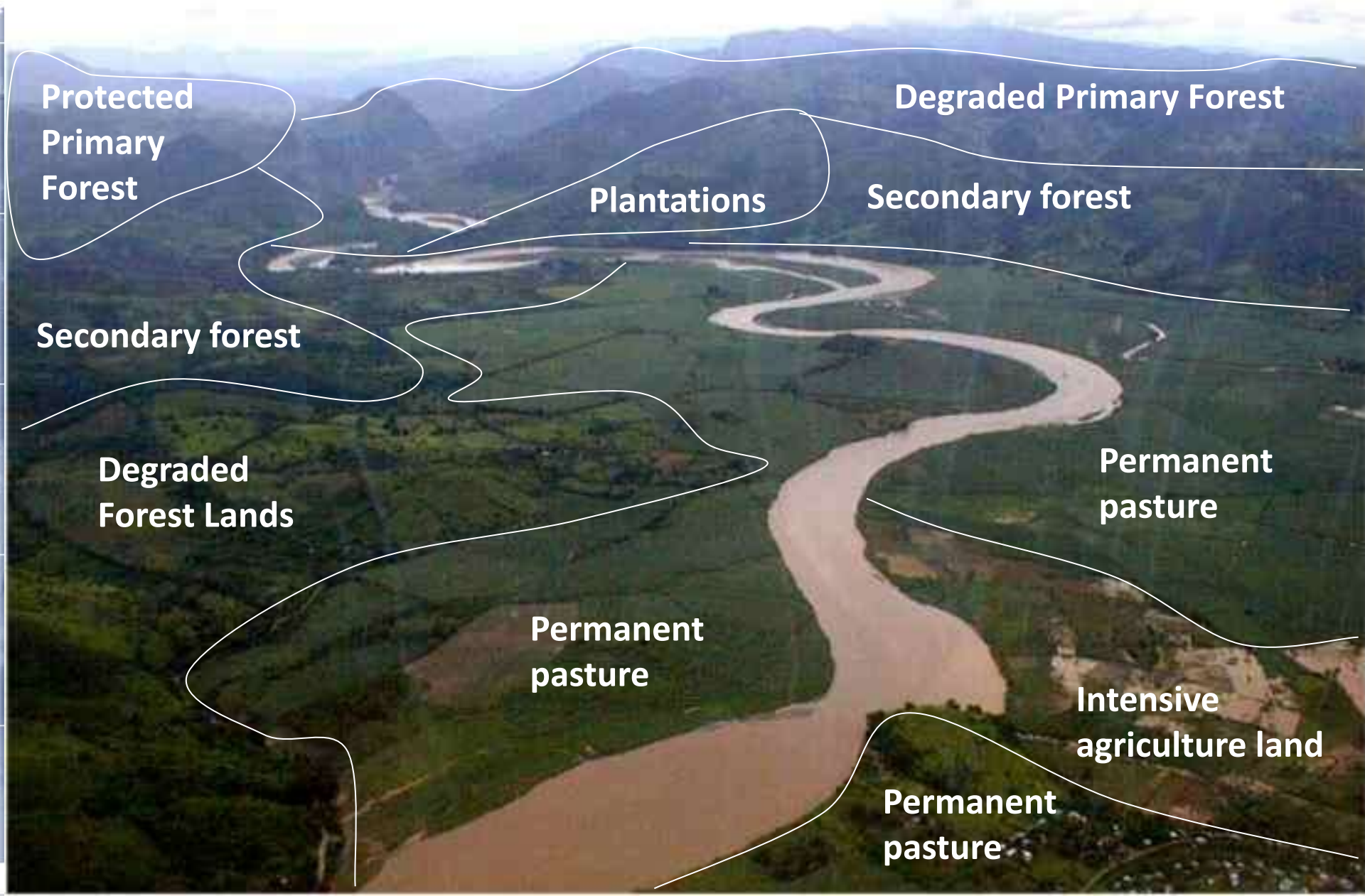
**Degraded  
Forest Lands**

**Permanent  
pasture**

**Permanent  
pasture**

**Intensive  
agriculture land**

**Permanent  
pasture**



# Different Landscapes – Different Approaches

Each landscape calls for its own kind of restoration

Protected  
Primary  
Forest

**Wide-scale restoration**

Degraded Primary Forest

Plantations

Secondary forest

Secondary forest

Degraded  
Forest Lands

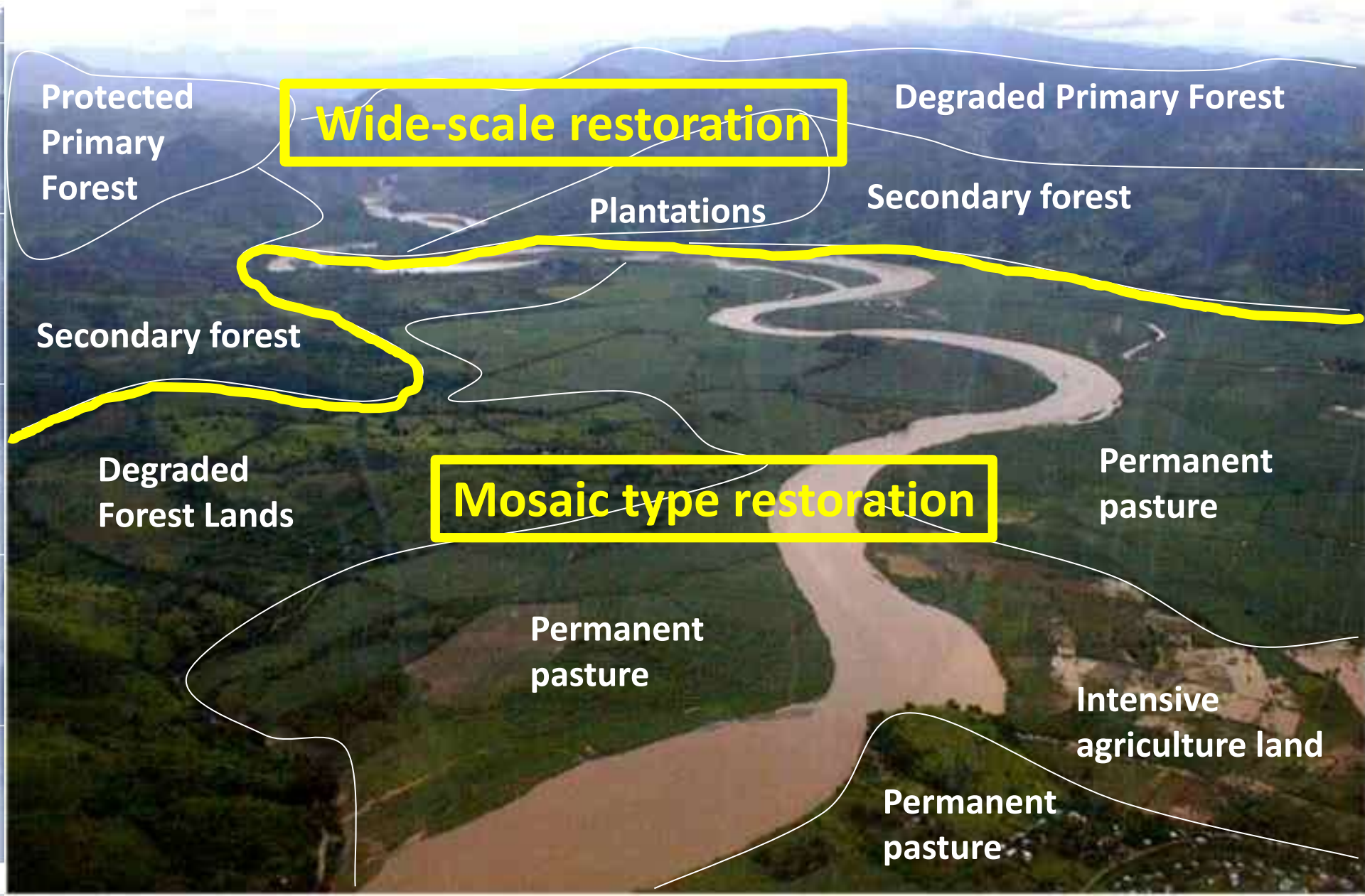
**Mosaic type restoration**

Permanent  
pasture

Permanent  
pasture

Intensive  
agriculture land

Permanent  
pasture



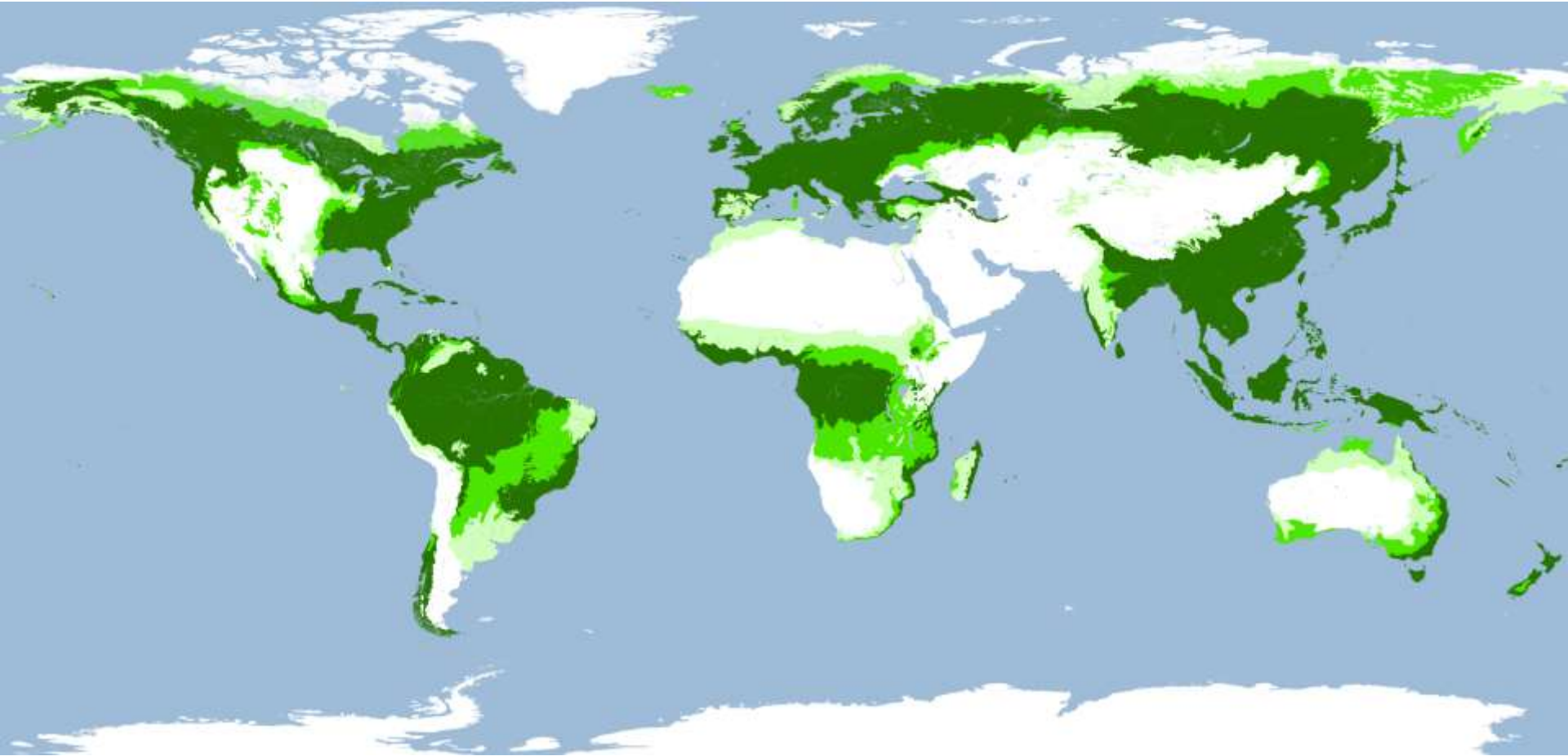
# The Opportunities for Restoration are Great

- Vast areas of once-forested land have been cleared or support only degraded forests
- Some of these lands can be restored



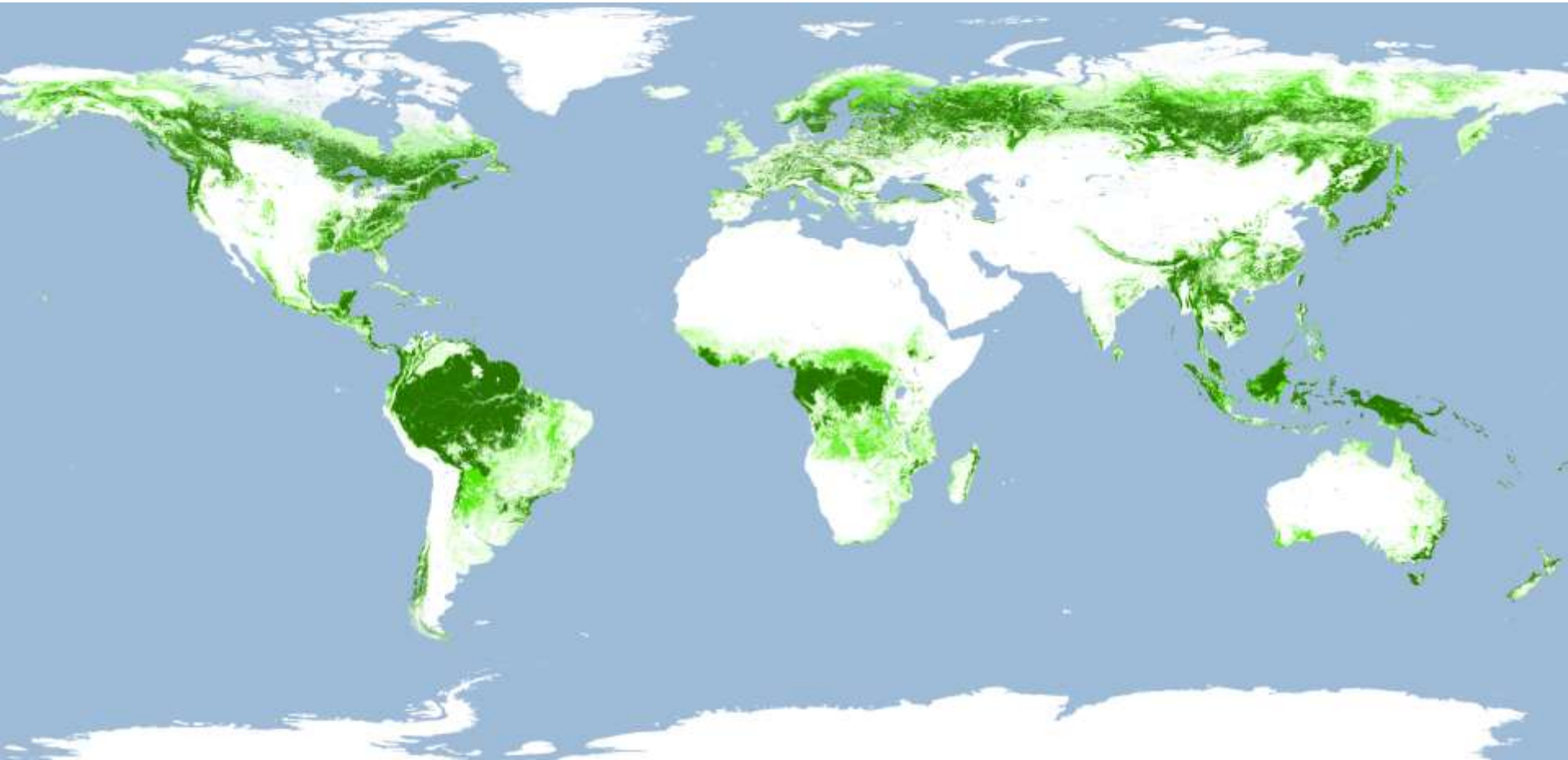
# The Baseline: Potential Forest Extent

Where forests and woodlands would be if climate and soils decided



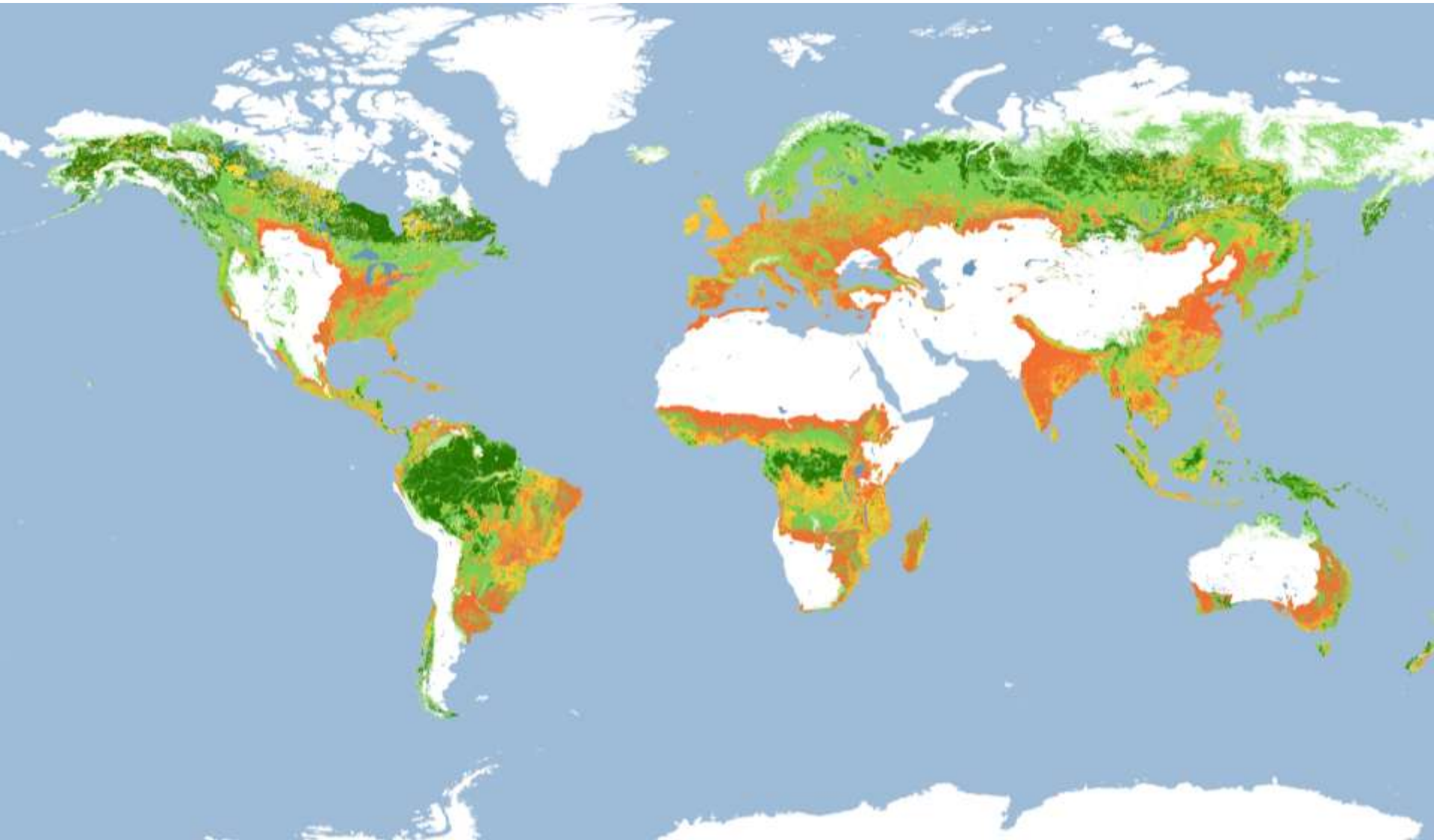
# Today's Forest

Where forests and woodlands are today



# Lands Where Forests Can Grow – Current Status

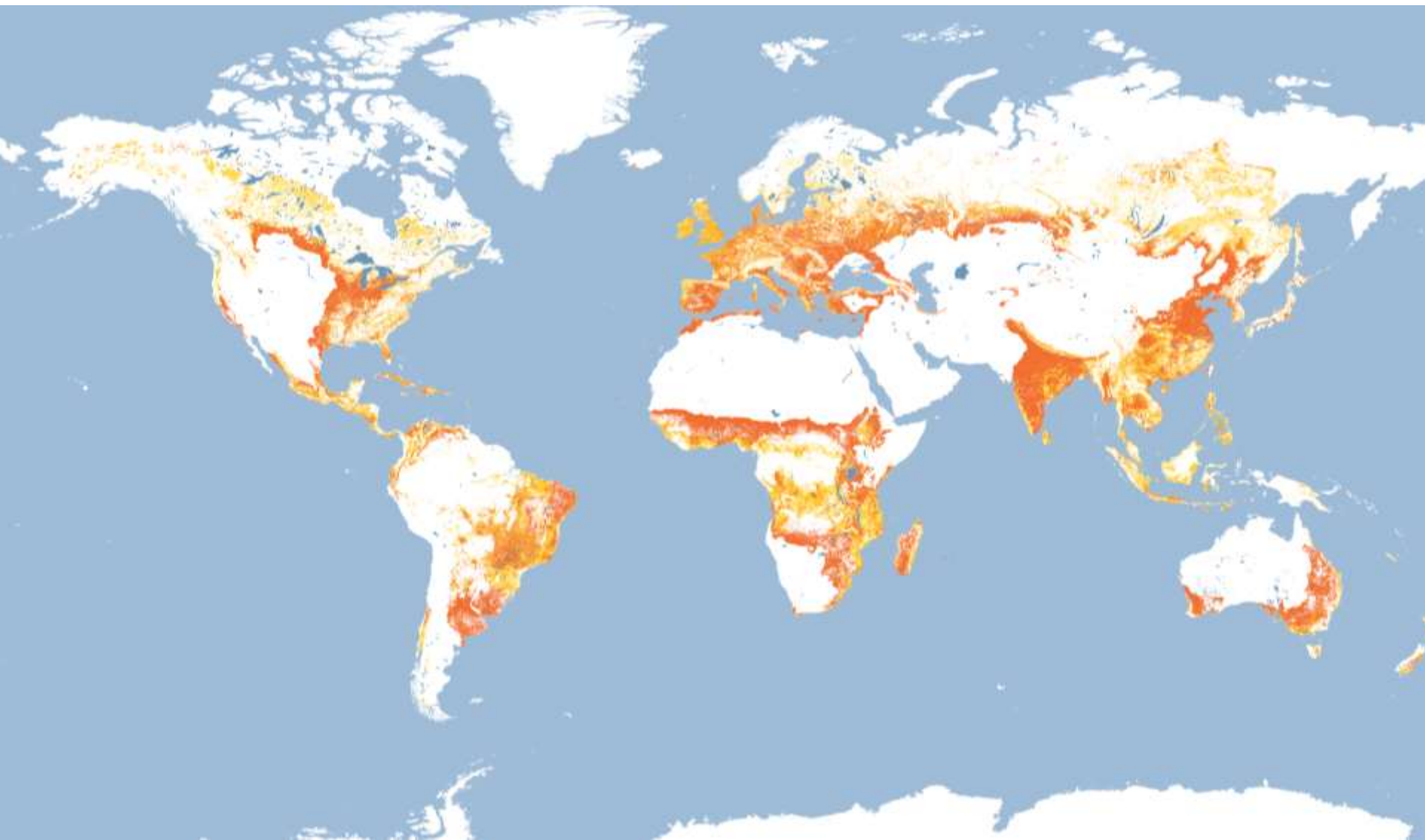
A quarter has been deforested, another quarter has been degraded



■ Intact ■ Fragmented ■ Degraded ■ Deforested

# Lands That Have Been Degraded or Deforested

Some of these lands can be restored



 Degraded  Deforested

# Agricultural Lands – Not for Restoration

Croplands are not included in the restoration opportunity map

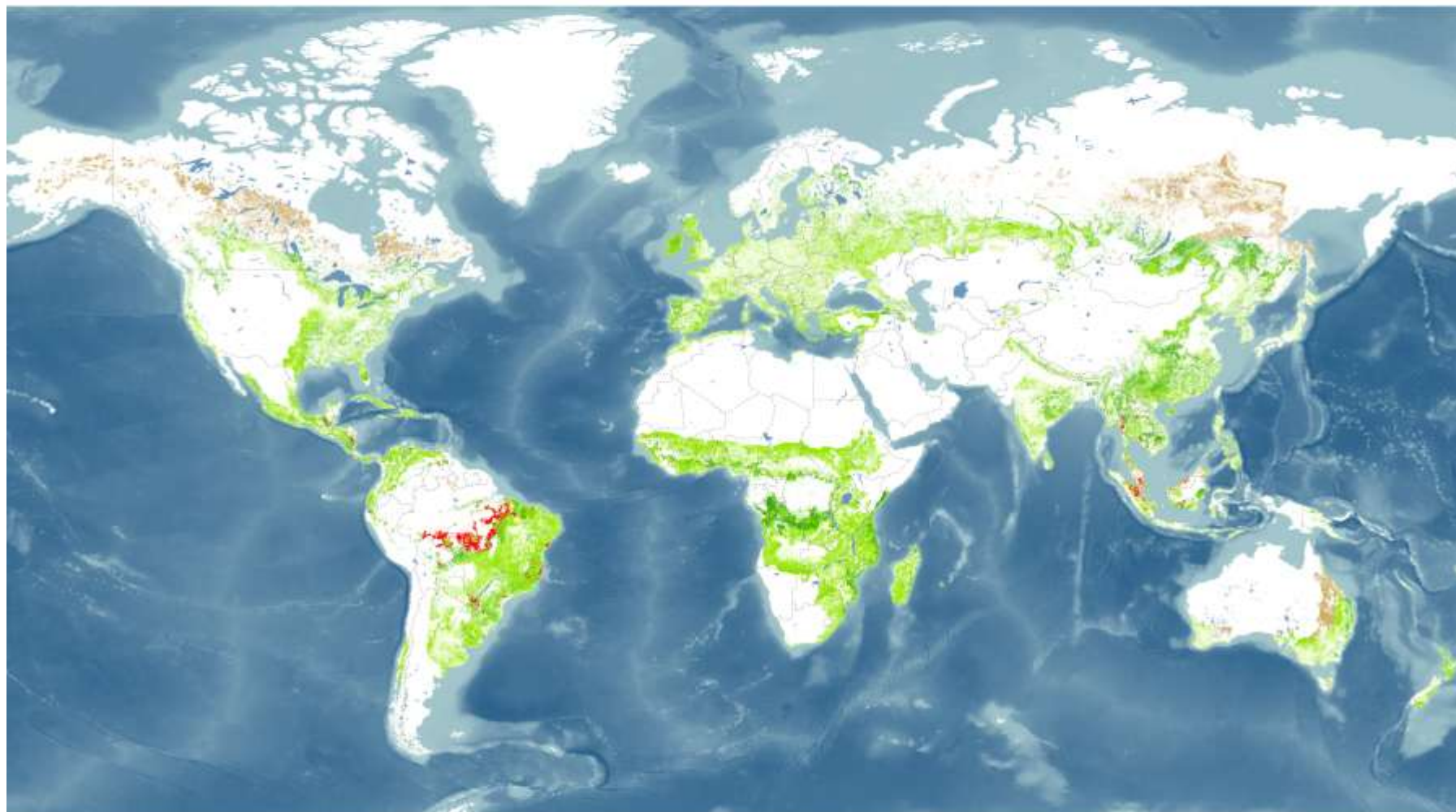


However, **protective restoration** may be an opportunity in the agricultural landscape.

Trees can help prevent soil erosion, protect waterways, absorb storm water, increase soil fertility, and enhance soil moisture capacity.

# Lands of Opportunity

## for Forest and Landscape Restoration



### FOREST AND LANDSCAPE RESTORATION OPPORTUNITIES

- Wide-scale restoration
- Mosaic restoration
- Remote restoration

### OTHER AREAS

- Recent tropical deforestation



# Wide-Scale Restoration

Restoration to forest – only or mainly



Most likely in areas with

- Less population
- Less intensive land use

# Mosaic-Type Restoration

Restoration to a mix of people and trees



Most likely where

- Population density is higher
- The land use is mixed
- Closed forests cannot grow

The result is a mosaic of forest, trees, and other land uses, including agroforestry and smallholder agriculture.

# Opportunities in Remote Areas

Unpopulated – less likely to be restored

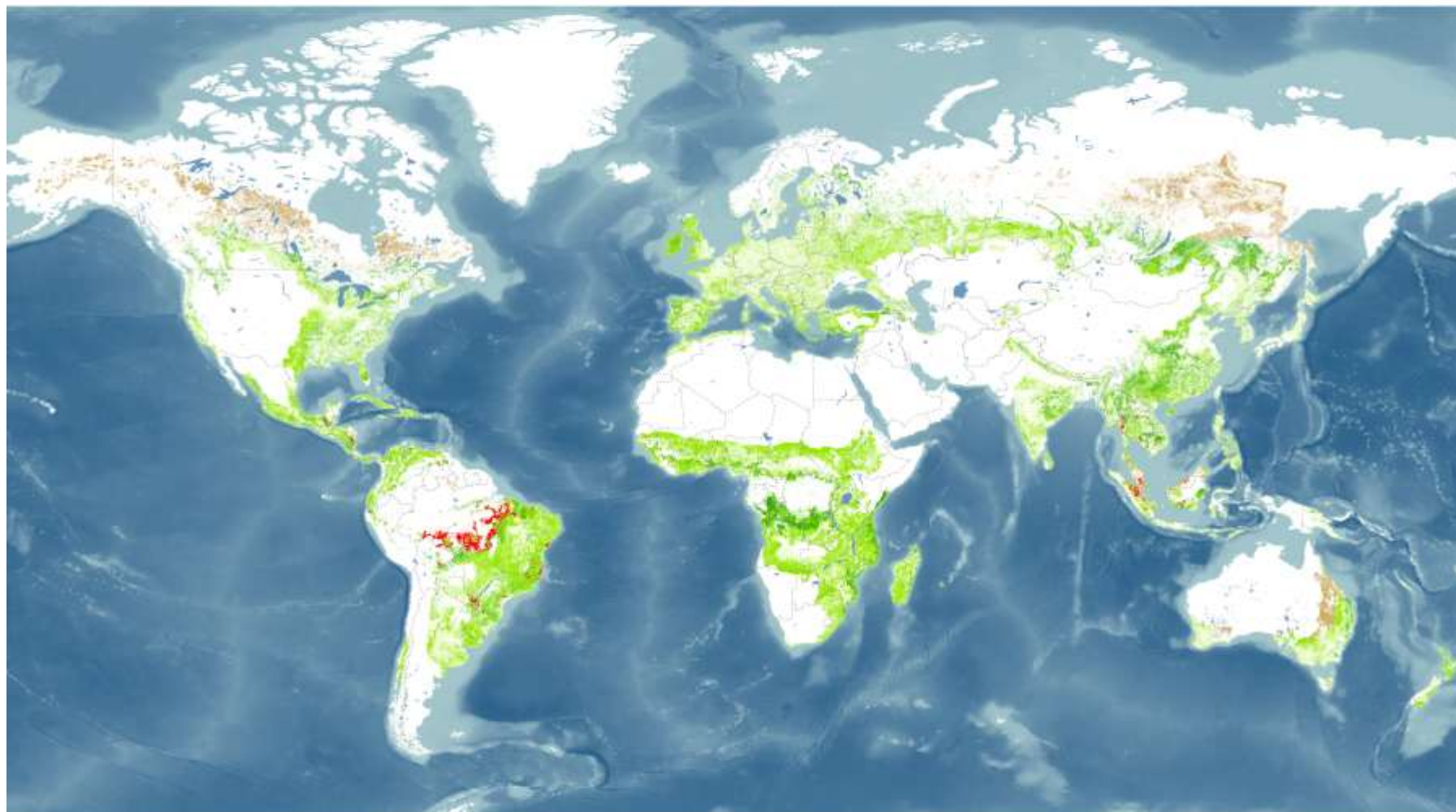


Degraded by fire, drought, extreme climatic events, or pests and disease

These areas are so far from human habitation that restoration may not be feasible

# Lands of Opportunity

## for Forest and Landscape Restoration



### FOREST AND LANDSCAPE RESTORATION OPPORTUNITIES

- Wide-scale restoration
- Mosaic restoration
- Remote restoration

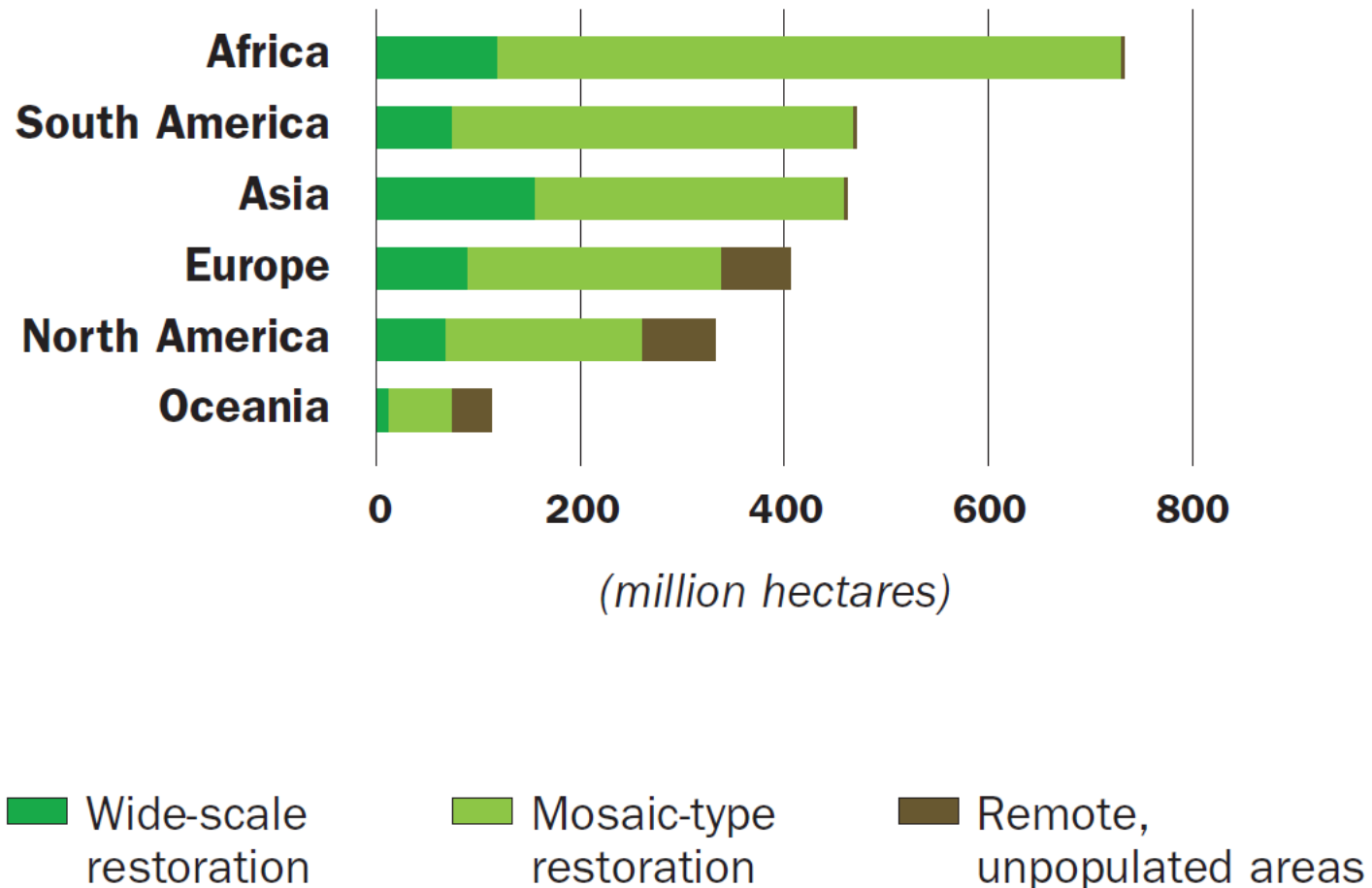
### OTHER AREAS

- Recent tropical deforestation

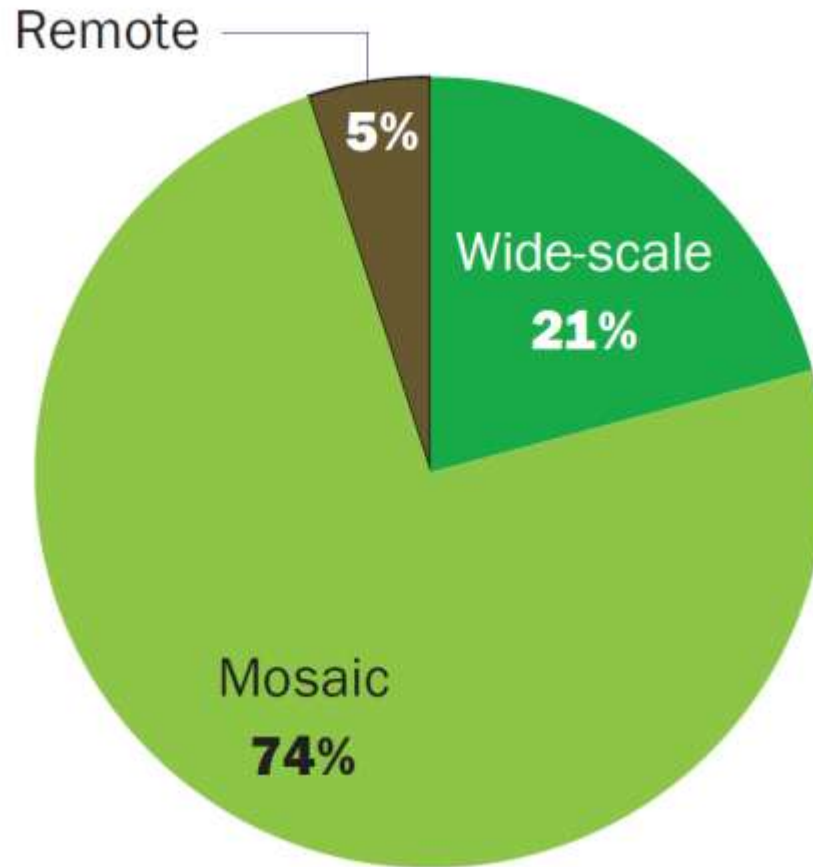


# There are Opportunities Everywhere

The total opportunity area is 2 billion hectares



# The Greatest Opportunities are in the Mosaic Landscape



# Global Agreements Call for Restoration

## Convention on Biological Diversity

- Restore 15 percent of degraded ecosystems by 2020

## REDD-Plus

- Slow, halt, and reverse forest cover and carbon loss

## UNFF

- Implement forest landscape restoration





# The Bonn Challenge

Restore 150 million hectares of lost forests and degraded lands by 2020

Thereby delivering on global commitments

[www.ideastransformlandscapes.org](http://www.ideastransformlandscapes.org)



# Meeting the Bonn Challenge: Economic Benefits



What is likely economic impact of restoring 150 million hectares of deforested and degraded forest landscapes worldwide?

**More than \$84 billion per year in net benefits**

- Direct additional income for forest dependent communities
- Contribution to national and global economies





# Collaborative Forest Landscape Restoration Program Creates Jobs and Income

- Supports **collaborative work** of communities and local landowners
- Focused on **landscapes** (>20,000 ha) over 10-year period
- 1<sup>st</sup> year **results**:
  - 1,500 local jobs
  - \$59 million of labor income
  - Reduced wildfire risk
  - 107 million board feet of timber
  - At a federal program cost of \$10-40 million/year
  - \$219 million in matching funds over next 10 years



<http://www.fs.fed.us/restoration/CFLR/index.shtml>

# Meeting the Bonn Challenge: Climate Benefits

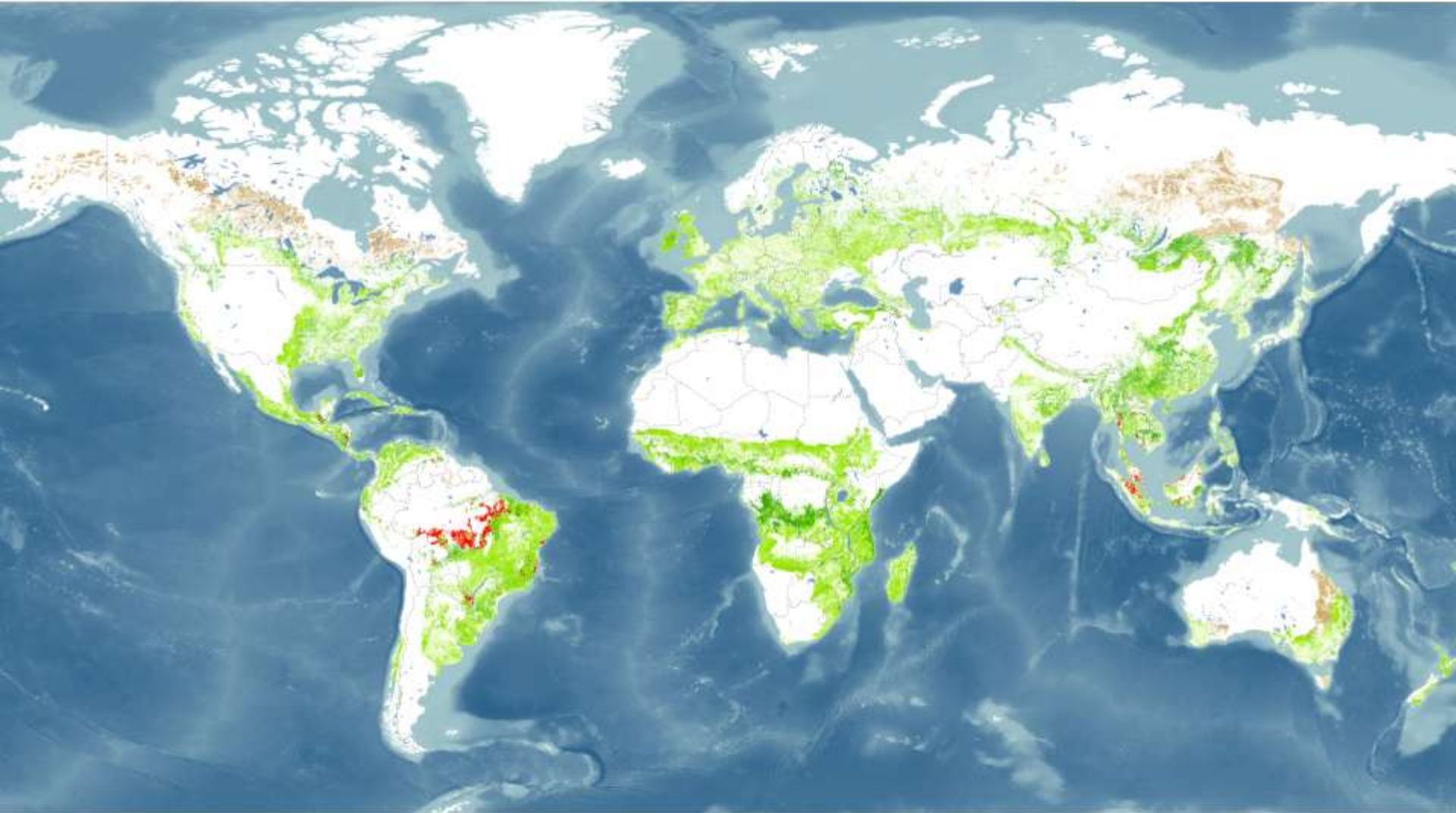


Achieving the Bonn Challenge target would:

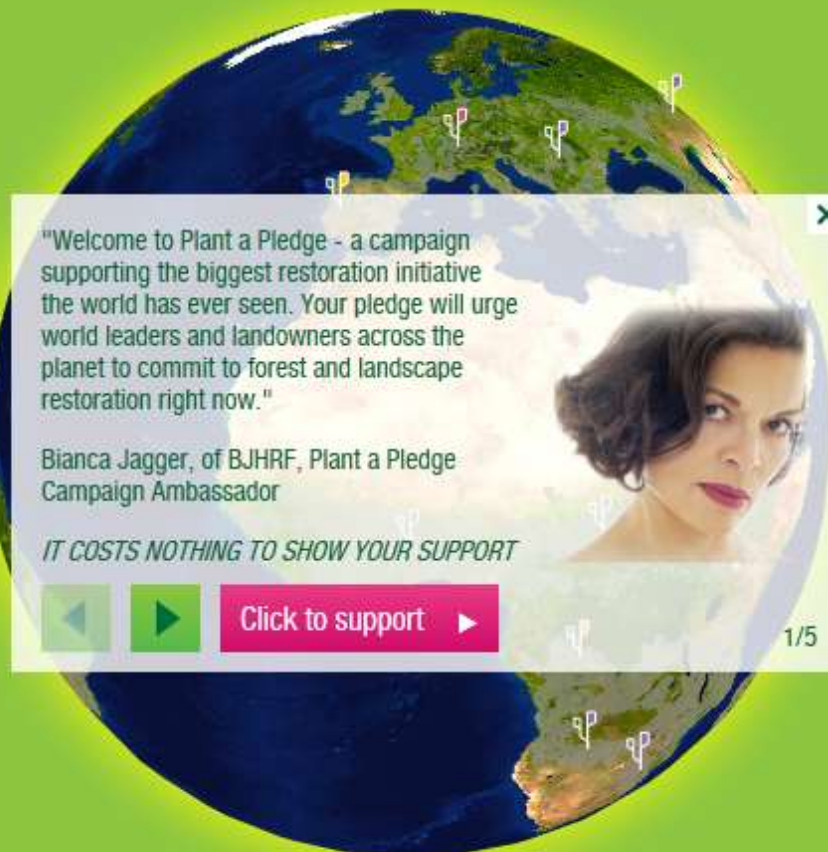
- Sequester **47 GtCO<sub>2</sub>e** (at an approximate rate of 1 GtCO<sub>2</sub>e per year)
- Reduce the current “emissions reduction gap” by between 11% to 17%.



**Restore 150 million hectares of  
deforested and degraded lands by 2020**



## Get involved !



[plantapledge.com](http://plantapledge.com)



[www.ideastransformlandscapes.org](http://www.ideastransformlandscapes.org)