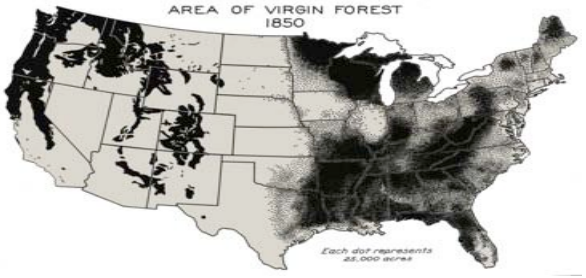
Forest Landscape Restoration Project

Gretchen Walters
Global Forest and Climate Change Program

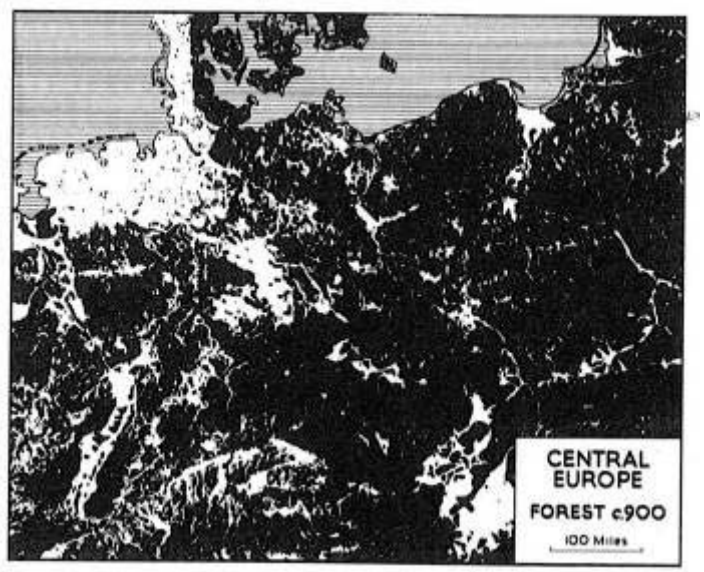
IUCN

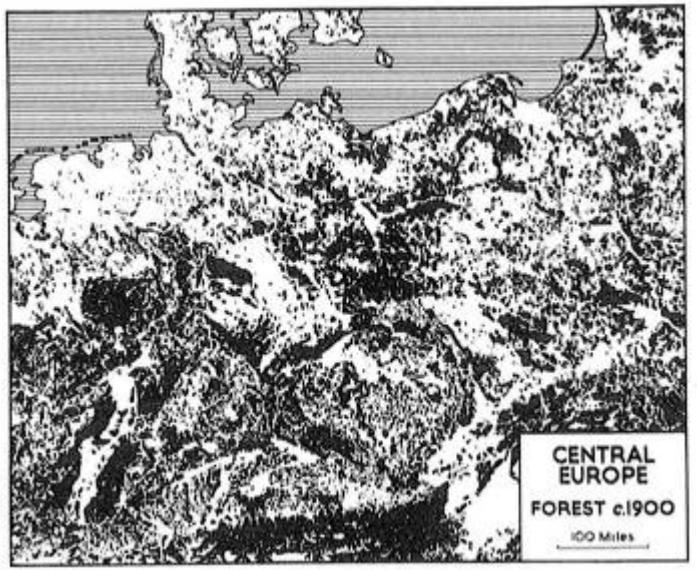
Deforestation and degradation is nothing new: Forest cover in the U.S. (1620 - today)



Source: Greeley, 1925 (in Williams 2006)

Deforestation and degradation is nothing new: Forest cover in Central Europe





Restoration is possible! What could this become?

A carbon sink … A habitat for wildlife …

A source of income …

Southern Sweden: today and 150 years ago

Nature based solutions:

Restoring for drinking water

West Bengal, India - Photo: M. Aubry

Nature based solutions: Restoring for power generation

Mangrove planting, Kiribati Photo: S. Baba

Nature based solutions:
Restoring for shoreline protection

Mangrove restoration, Banda Aceh Photo: R. Cavalcanti

Nature based solutions:
Restoring for shoreline protection

Nature based solutions:
Restoring for food security

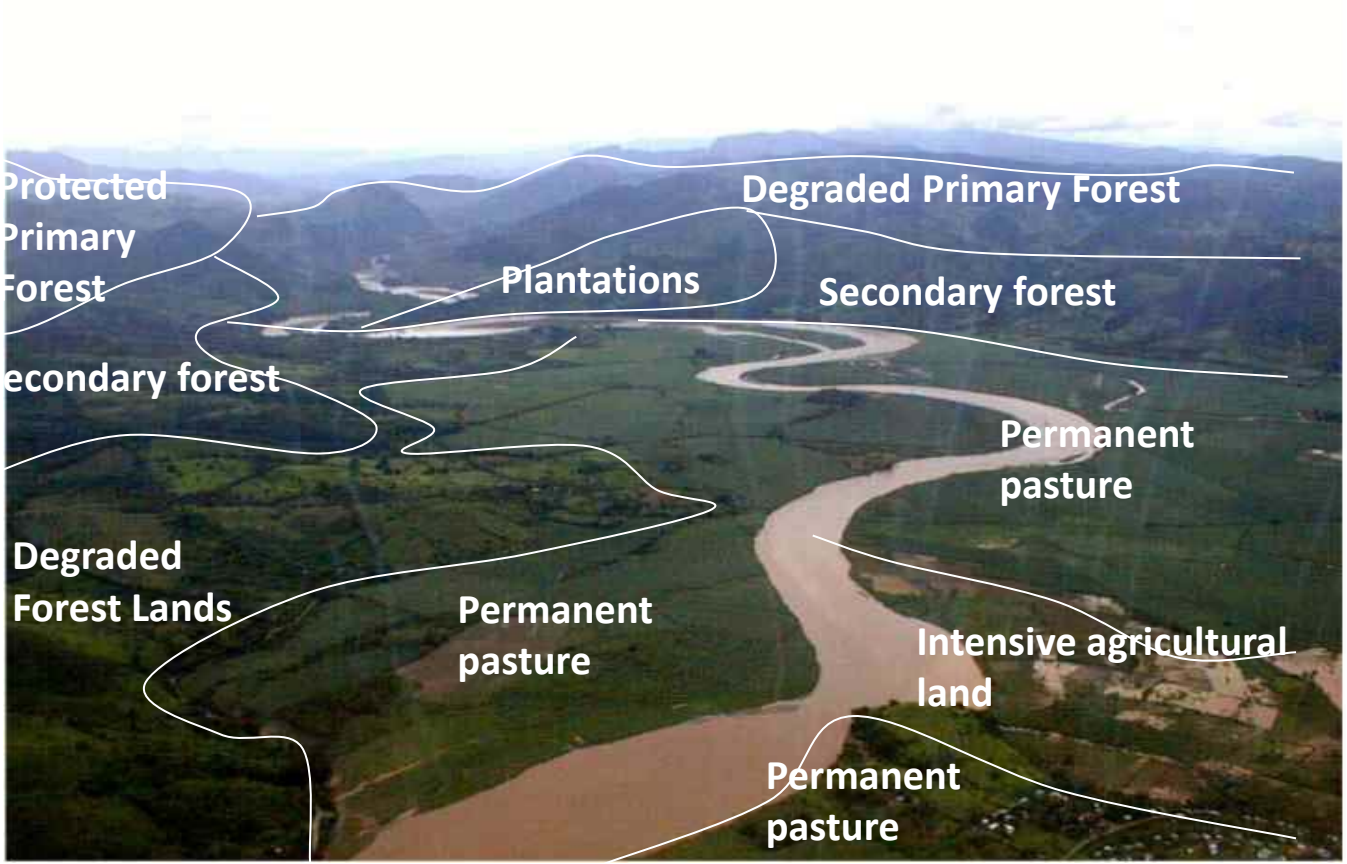
Restoration as an NBS:

Protective restoration of croplands and settlements

Examples include buffering of streams and waterways alongside agricultural fields, watershed protection, prevention of erosion on steep slopes, lessening stormwater runoff in urban areas

Restoration has other benefits too:

- Creates rural jobs
- An investment in sustainable growth
- Directly benefits the poor
- Reduces workload of women to collect firewood
- Helps mitigate climate change, (e.g., increases carbon storage in landscapes)
- Sustains biodiversity (and research shows that more diverse ecosystems are more resilient)


Protected Primary Forest
Degraded Primary Forest
Plantations
Secondary forest
econdary forest
Permanent pasture
Degraded Forest Lands
Permanent pasture
Intensive agricultural land
Permanent pasture

Forest and Landscape Restoration:

Not a top-down, one-size fits all solution

- Bring people together to identify, negotiate, and implement practices . . .
- . . . that restore an agreed optimal balance of the ecological, social, and economic benefits of forests and trees . . .
- . . . within a broader pattern of land uses

Forest and Landscape Restoration: Characteristics

Think long time/big space.
Monitor, learn, adapt.

Treat the landscape as a mosaic of sites

Restore functionality and productivity, not ”original” forest

Balance local needs and high-level priorities

Manage natural regrowth or plant new trees

Use trees to enhance food production (agroforestry)

Three types of restoration assessed

Three schematic restoration opportunities are assessed:

- Wide-scale
- Mosaic-type
- Remote

Wide-scale restoration

Wide-scale restoration of forests is most likely to be possible in sparsely populated areas where the land-use pressure is low and forests can grow more freely

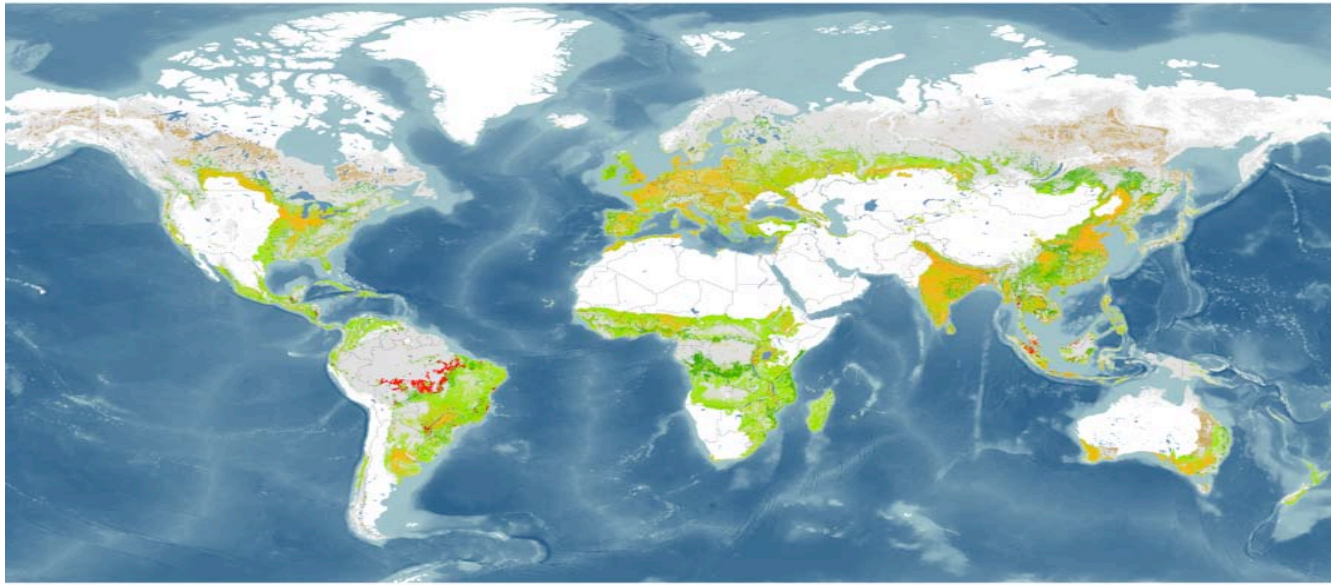
Mosaic-type restoration

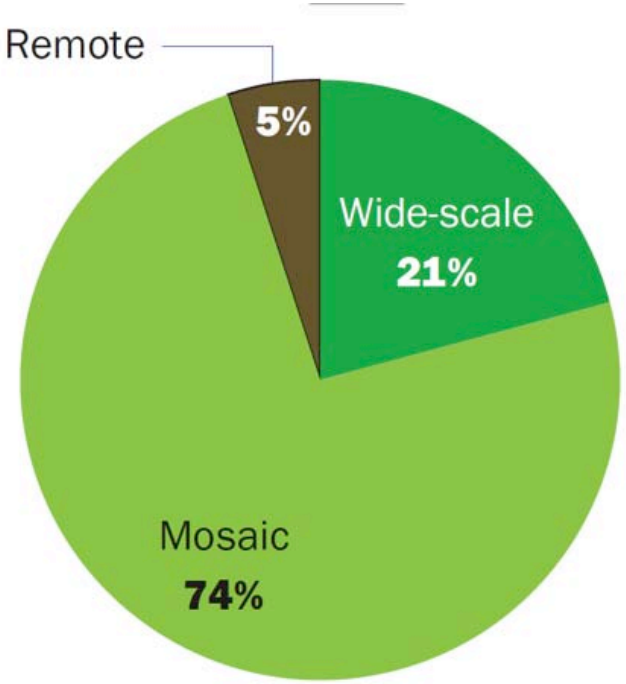
Mosaic-type restoration of woodlands and trees is smaller-scale restoration within a landscape with mixed forest and non-forest land uses. Population density is higher and remaining forests, often highly degraded, are interspersed with agriculture and other land uses

Remote restoration

Remote opportunities for restoration are similar to wide-scale opportunities but occur in unpopulated, remote areas.

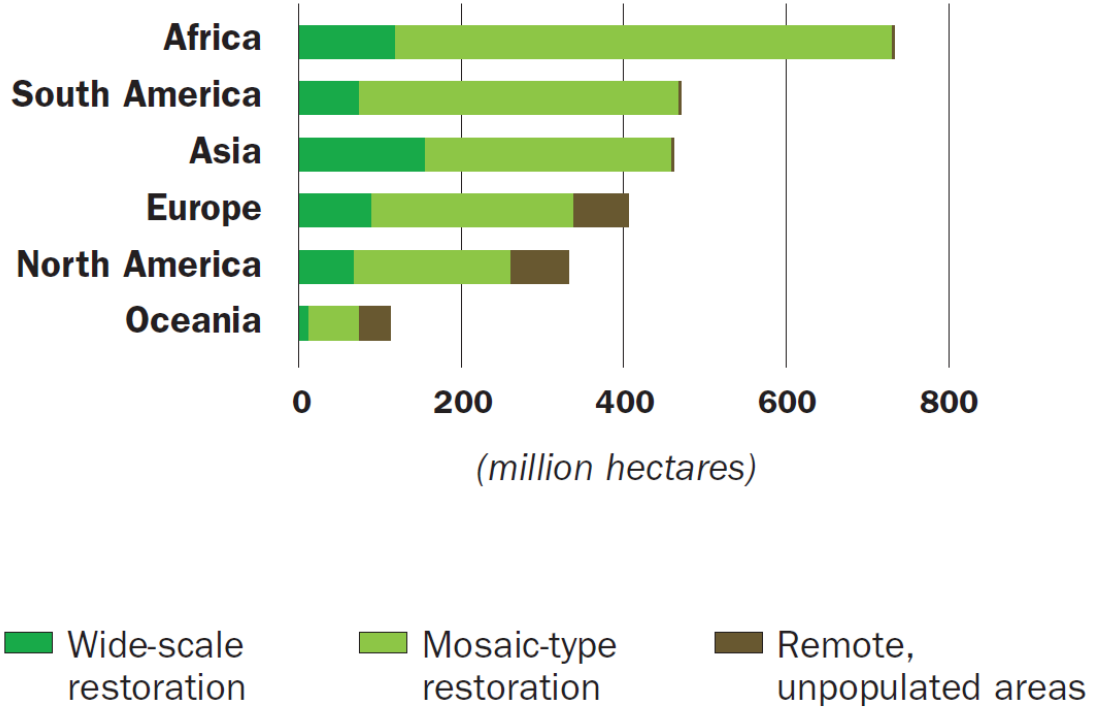
A World of Opportunity
for Forest and Landscape Restoration



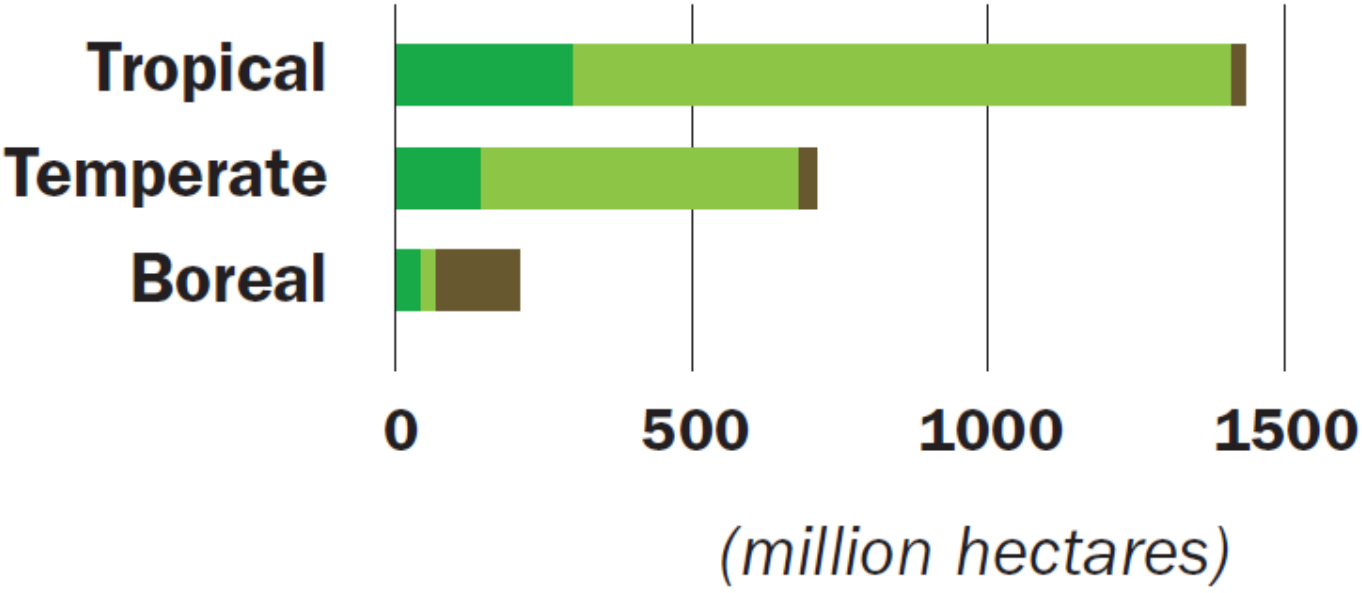


Mosaic restoration is the most widespread opportunity

Africa has the greatest restoration opportunity area



Most restoration opportunities are in the tropics

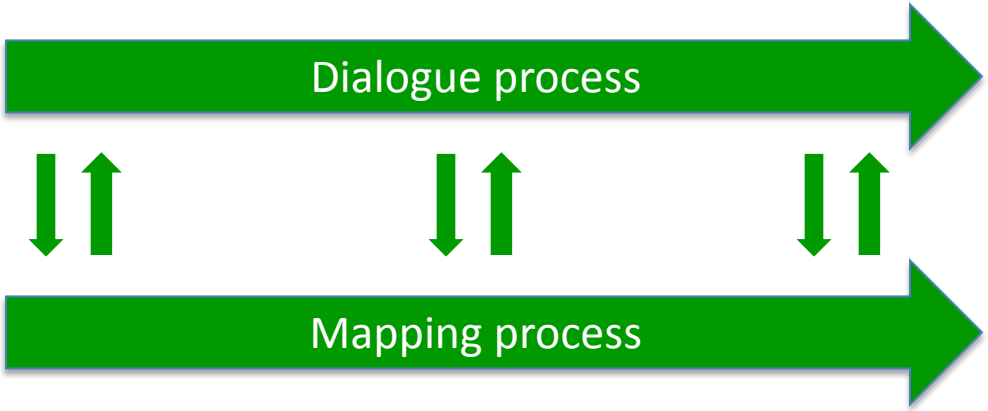


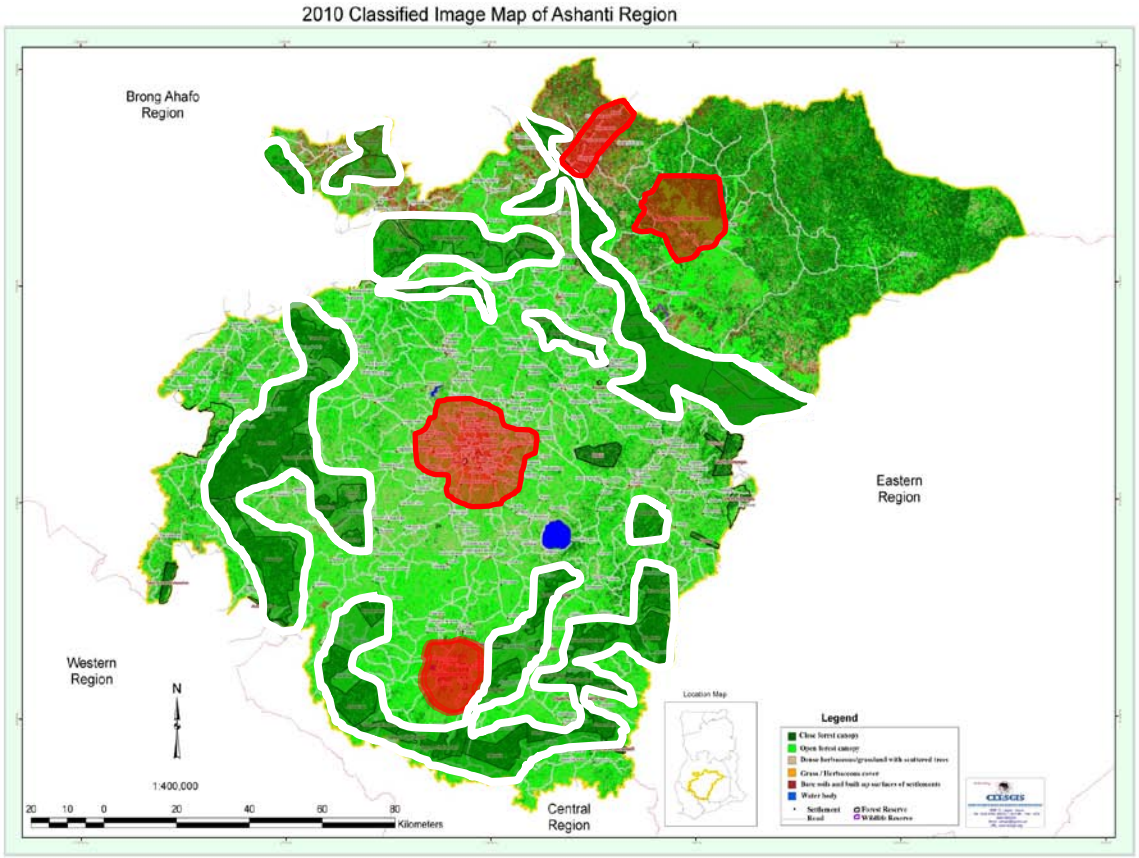
Ghana on the Global Map

- Less degraded lands
- Degraded high forest, lower population
- Degraded high forest or woodland, higher population
- Croplands

National assessments: Ghana and Mexico

National assessments: ”best knowledge, best science”



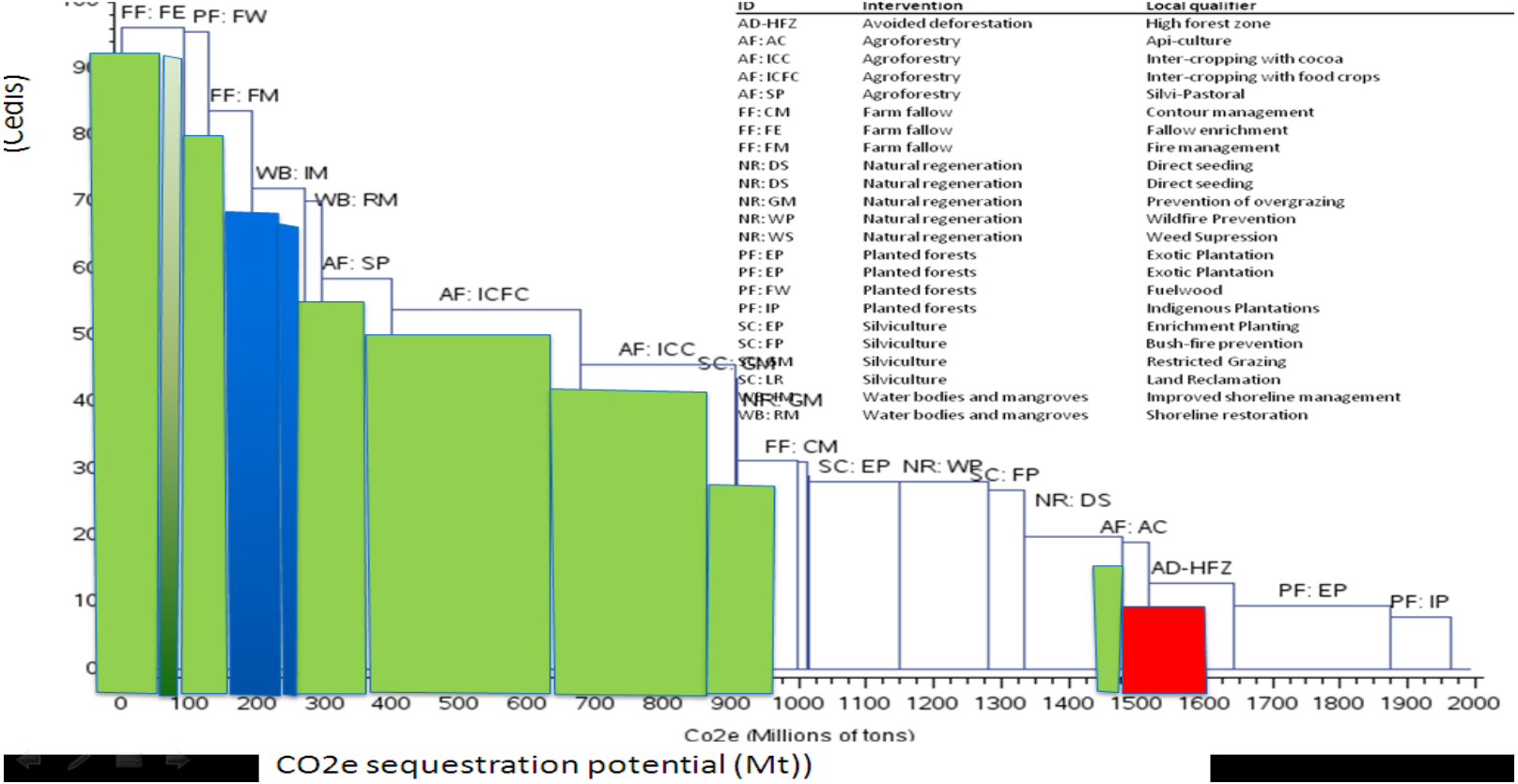


Locate Areas for Wide-Scale Restoration

Identify opportunities for wide-scale restoration

Understanding the potential net return (Ghana)

(Ledis)



ID	Intervention	Local qualifier
AD-HFZ	Avoided deforestation	High forest zone
AF: AC	Agroforestry	Api-culture
AF: ICC	Agroforestry	Inter-cropping with cocoa
AF: ICFC	Agroforestry	Inter-cropping with food crops
AF: SP	Agroforestry	Silvi-Pastoral
FF: CM	Farm fallow	Contour management
FF: FE	Farm fallow	Fallow enrichment
FF: FM	Farm fallow	Fire management
NR: DS	Natural regeneration	Direct seeding
NR: DS	Natural regeneration	Direct seeding
NR: GM	Natural regeneration	Prevention of overgrazing
NR: WP	Natural regeneration	Wildfire Prevention
NR: WS	Natural regeneration	Weed Supression
PF: EP	Planted forests	Exotic Plantation
PF: EP	Planted forests	Exotic Plantation
PF: FW	Planted forests	Fuelwood
PF: IP	Planted forests	Indigenous Plantations
SC: EP	Silviculture	Enrichment Planting
SC: FP	Silviculture	Bush-fire prevention
SC: SM	Silviculture	Restricted Grazing
SC: LR	Silviculture	Land Reclamation
WB: IM	Water bodies and mangroves	Improved shoreline management
WB: RM	Water bodies and mangroves	Shoreline restoration

CO2e sequestration potential (Mt))

The Restoration Assessment Toolbox

- Spatial/mapping
- Analysis of net economic costs and benefits
- Carbon mitigation cost abatement curve
- Enabling conditions diagnostic

Future analyses or layers to the Toolbox

- mitigation/adaptation
- Livelihoods
- Tenure
- Biodiversity

A window of opportunity for restoration: REDD Plus

the role of conservation, sustainable management of forests and ***enhancement of forest carbon stocks*** *in developing countries*

REDD Plus

A window of opportunity for restoration: CBD

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced through conservation and restoration, including the restoration of at least 15% of degraded ecosystems, thereby contributing to climate-change mitigation and adaptation and to combating desertification. *(Strategic Plan, Target 15)*

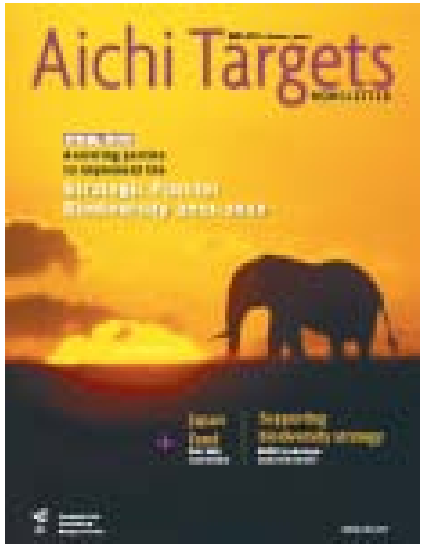
The Bonn Challenge: Restore 150 Million ha by 2020

1 September, 2011
Restoration Leaders' Meeting

2 September, 2011
Ministerial Roundtable

BONN CHALLENGE 2011

An implementation vehicle for existing global commitments



United Nations
Framework Convention on
Climate Change

UNCCD
United Nations Convention
to Combat Desertification

WE CAN END POVERTY 2015 MILLENNIUM DEVELOPMENT GOALS

Thank you!