# Forest Landscape Restoration: method and opportunities

## Global Forest and Climate Change Programme

## WPC 17 November 2014

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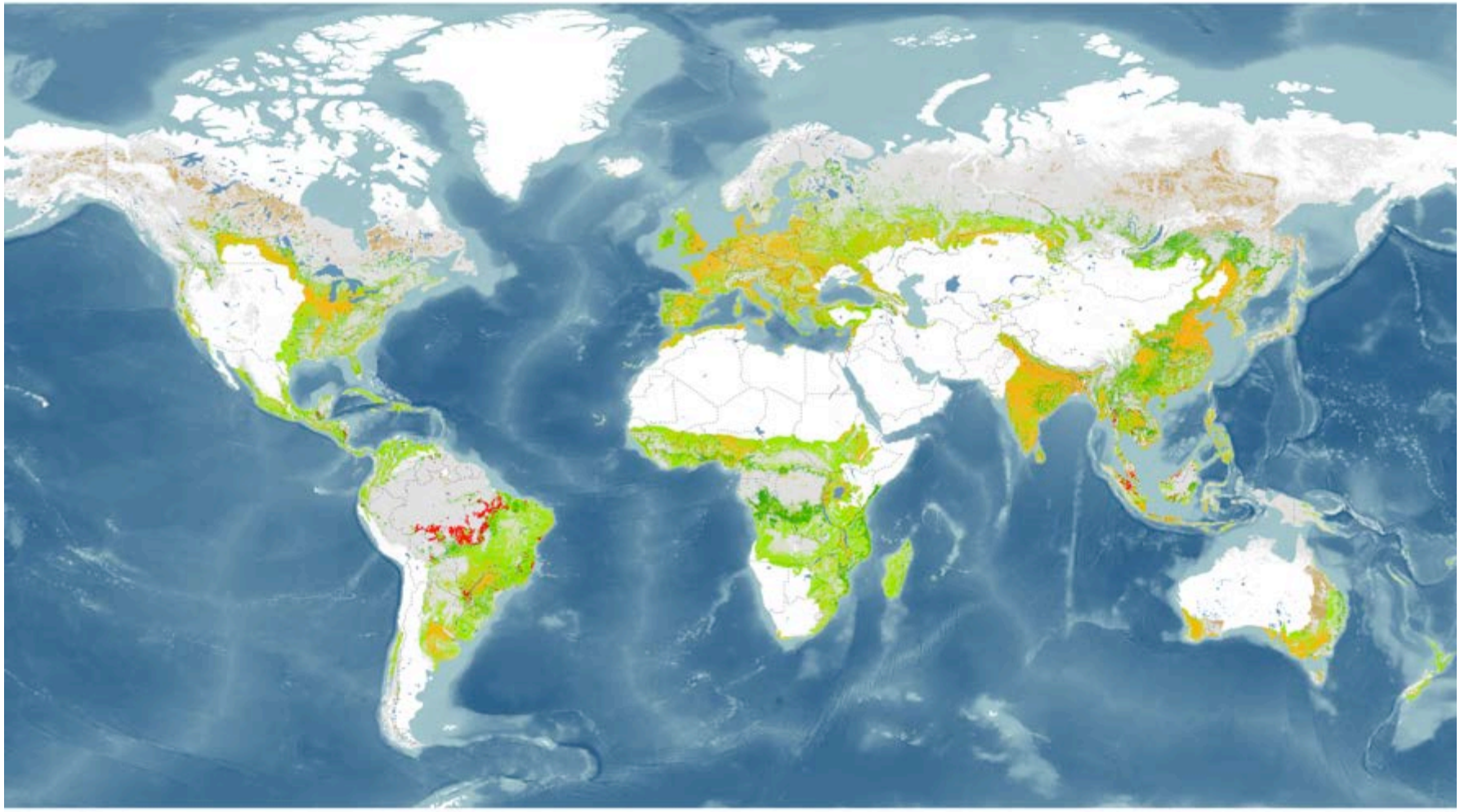
BONN CHALLENGE
on forests, climate change and biodiversity 2011

# A World of Opportunity
## for Forest and Landscape Restoration



2 Billion hectares of land offer opportunity for restoration across the world

BONN CHALLENGE 2011

# The Bonn Challenge has started the movement

A global goal to restore

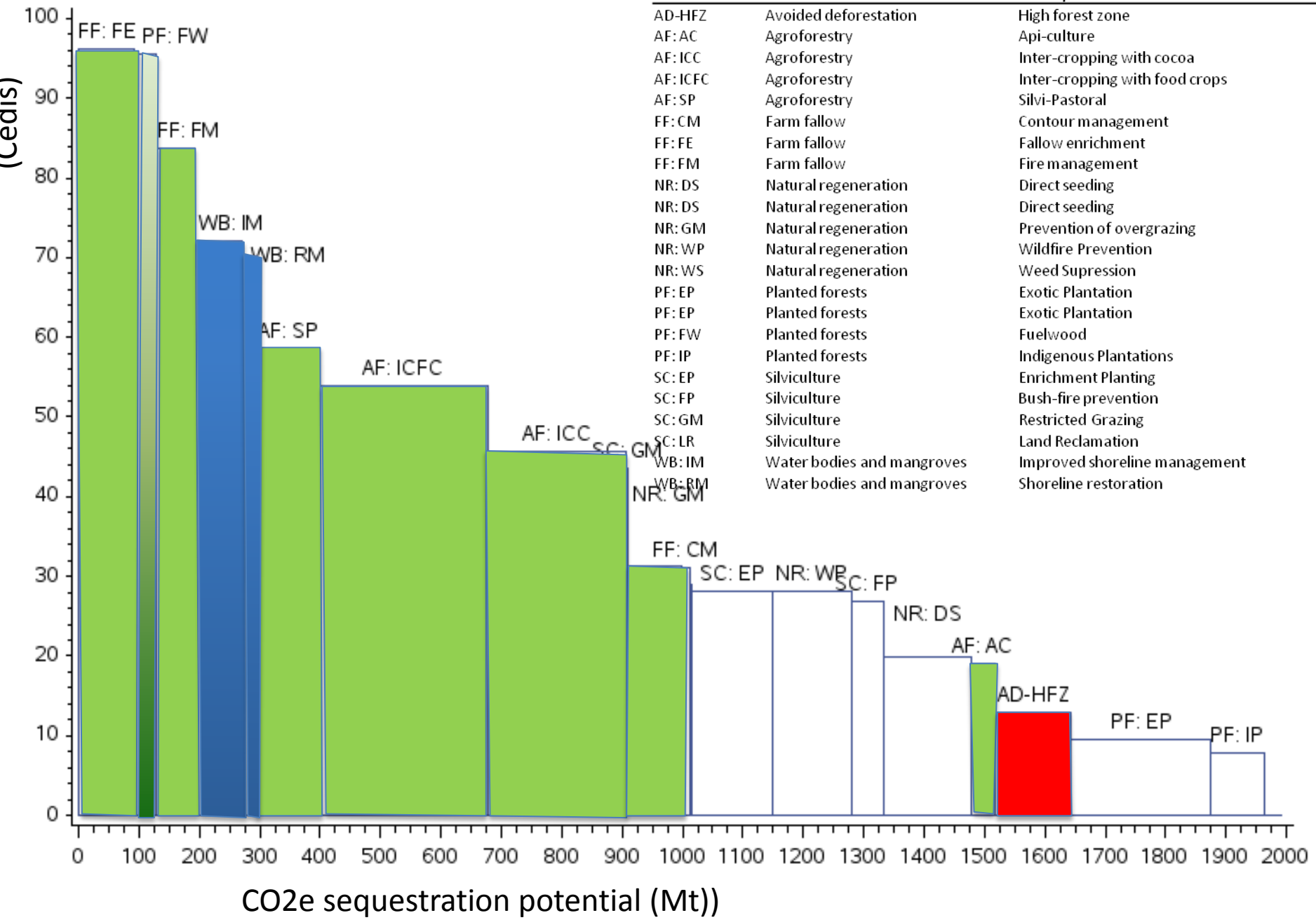
**150 million hectares**

of degraded and deforested lands

by 2020

# The benefits of successful restoration will be tremendous

# Understanding the potential net return (Ghana)




| 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: GM | 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 |

# But “more trees” will not necessarily bring society the full range of benefits natural lands provide

# Diversity delivers a broader range of forest goods and services…

Across different land uses

For different social groups

But only if we work to restore at a sufficient “landscape” level

# Forest Landscape Restoration is an approach that delivers ecological integrity and human well-being through multi-functional landscapes

**It involves**

Bringing people together to identify, negotiate, and implement practices

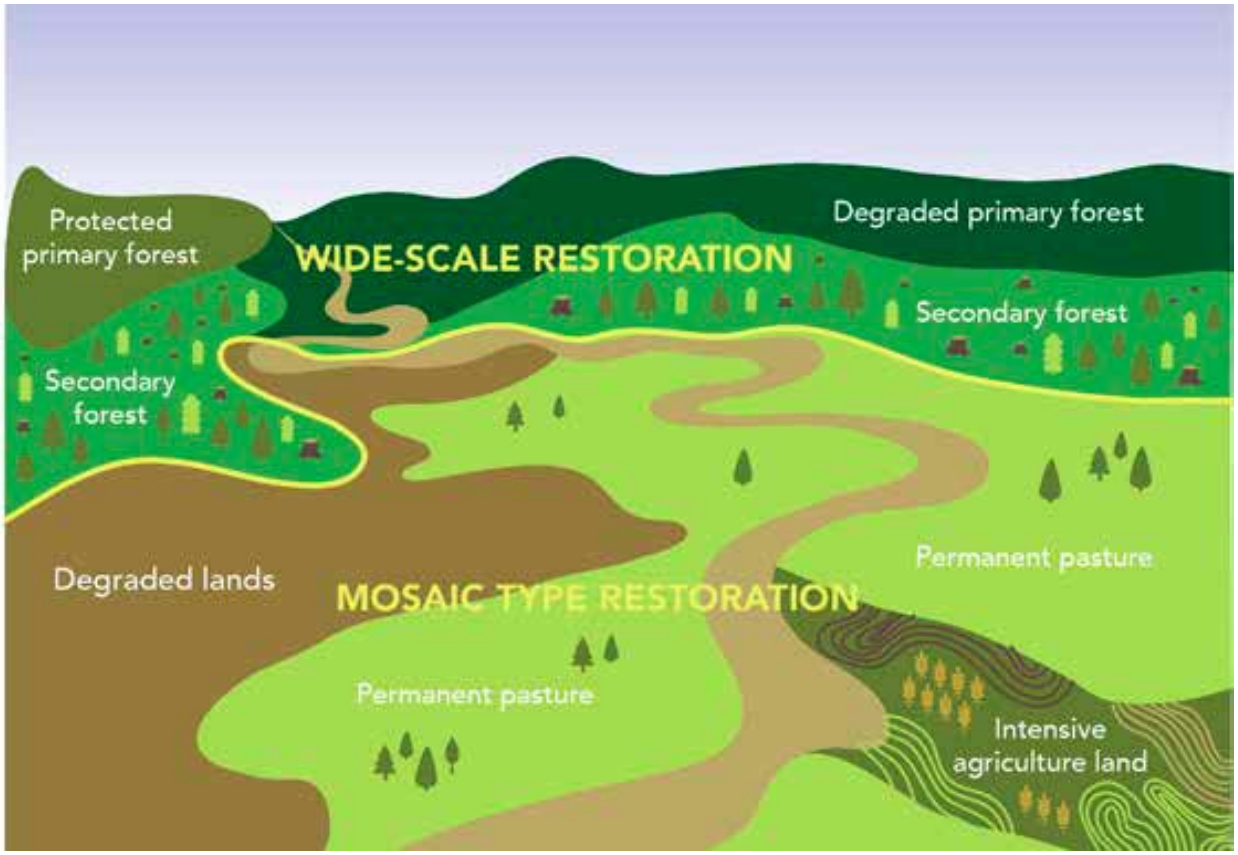
that restore an agreed optimal balance of the ecological, social, and economic benefits of forests and trees

within a broader pattern of land uses.

**Great Lakes Landscape**

Women association making their own nursery for landscape restoration in Bugarama (Kayanza, Burundi )

**A restored forest landscape incorporates many diverse land uses -** based on the context of the land and the needs of the community



# But we need to emphasize & quantify all the benefits

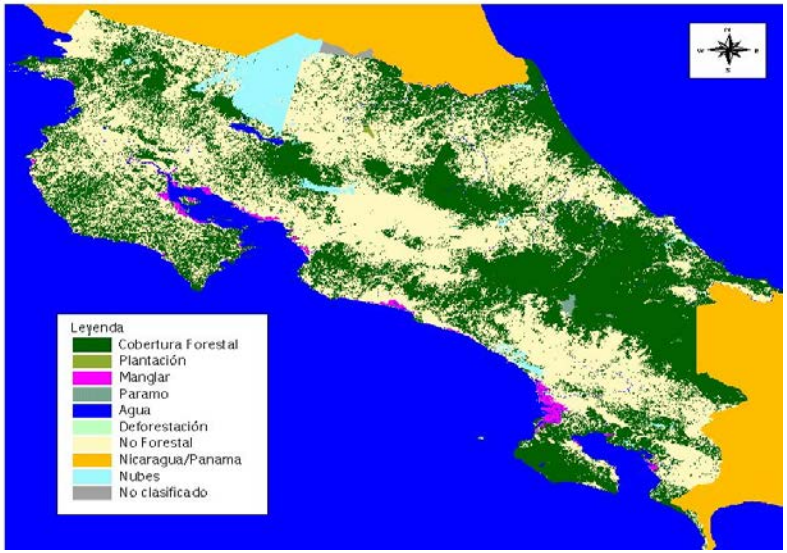
Example:

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
- More children stay in school
- Women are empowered
- USD 14 per person per month compared to national monthly avg. of USD 8.50
- 42 Mt $CO_2e$ sequestered

## To achieve this vision we need to:-

overcome the myths that landscape approaches cost too much and take too long:


25% forest cover

45% forest cover

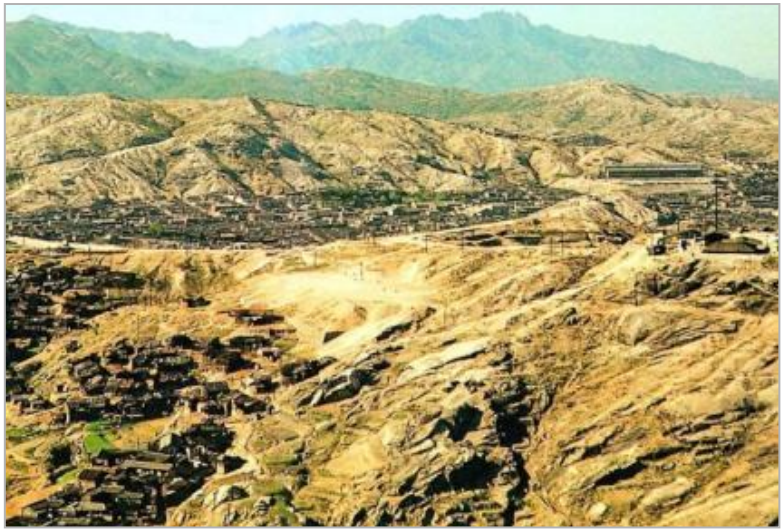
# Costa Rica – 25 years

# Pohang, Gyeongbuk Province, Republic of Korea - 2000

**Between 1953 and 2010; economy x 300; population doubled;**

**National forest growing stock has increased x20 fold!**

# To achieve this vision we need to:
# Overcome the myths that restoration costs too much or takes too long



**Investment (budget in 2011)**

| | |
|---|---|
| KFS | USD 1.4 bil |
| Local governments | USD 0.6 bil |
| Total | USD 2.0 bil |

**Benefits**

| | |
|---|---|
| Forest products | 4.7 bil |
| Public benefits | 70.0 bil |
| Reduced medical costs | 2.4 bil |
| Landscaping & carbon | NA |
| Total (approx.) | USD 100 bil |

# Republic of Korea – 50 years

# GLOBAL PARTNERSHIP ON FOREST LANDSCAPE RESTORATION

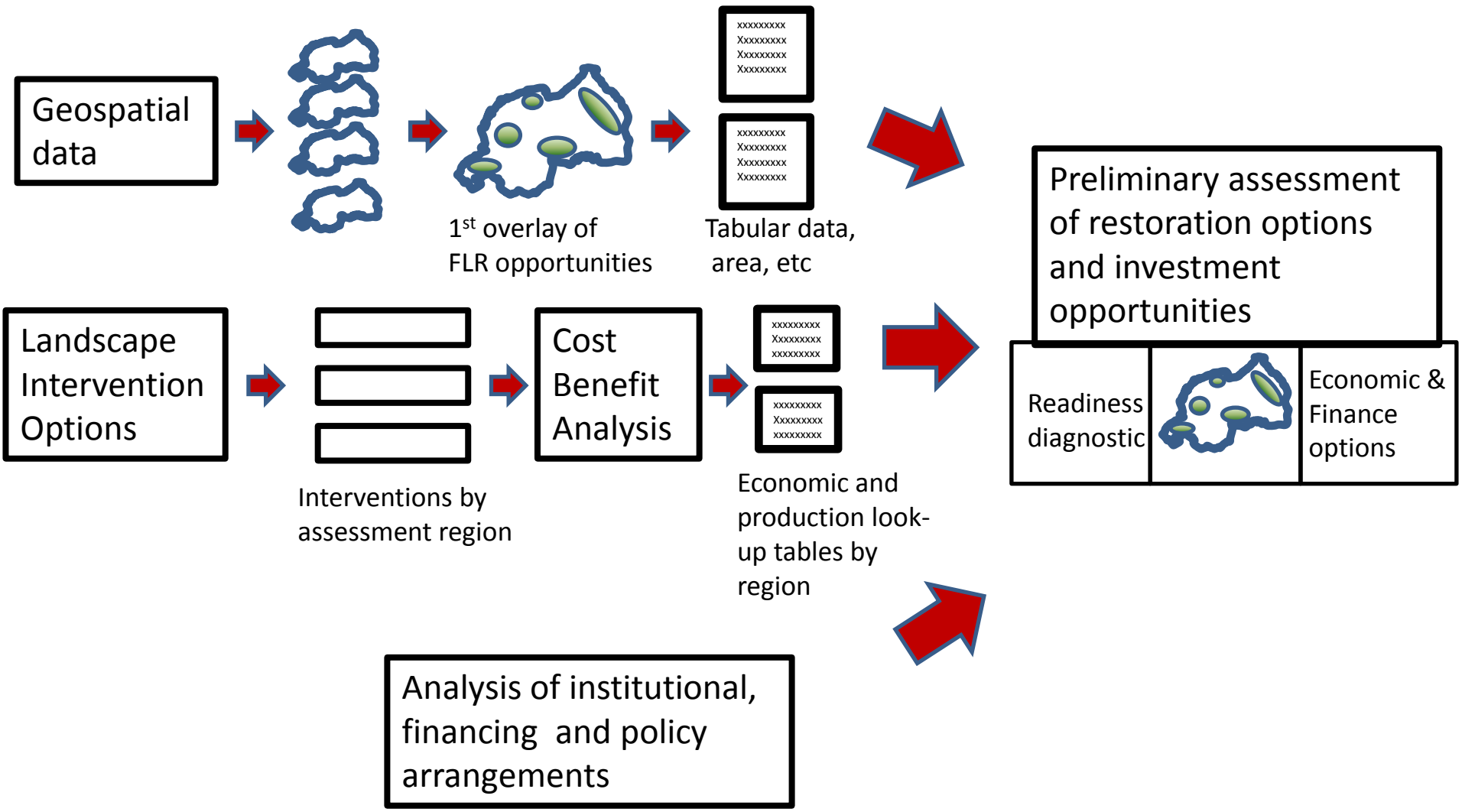

- CBD - Secretariat of the Convention on Biological Diversity
- CIFOR - Centre for International Forest Research
- FAO - UN Food and Agriculture Organization
- IUCN - International Union for Conservation of Nature
- IUFRO - International Union of Forest Research Organizations
- ITTO - International Tropical Timber Organization
- Tropenbos International
- UNCCD - Global Mechanism, Convention to Combat Desertification
- UNFF - Secretariat of the United Nations Forum on Forests
- UNEP World Conservation Monitoring Centre
- World Bank/PROFOR
- Wageningen Centre for Development Innovation
- WRI - World Resources Institute

- China
- El Salvador
- Germany
- Ghana
- Rwanda
- The Netherlands
- South Africa
- Switzerland
- United Kingdom
- United States

# Restoration Opportunities Assessment Methodology

www.iucn.org/ROAM

# Securing, analyzing and processing data



# Broad-based stakeholder consultation, revision and verification

Preliminary assessment of restoration options and investment opportunities

Readiness diagnostic

Economic & Finance options

As required, additional geospatial and economic analysis

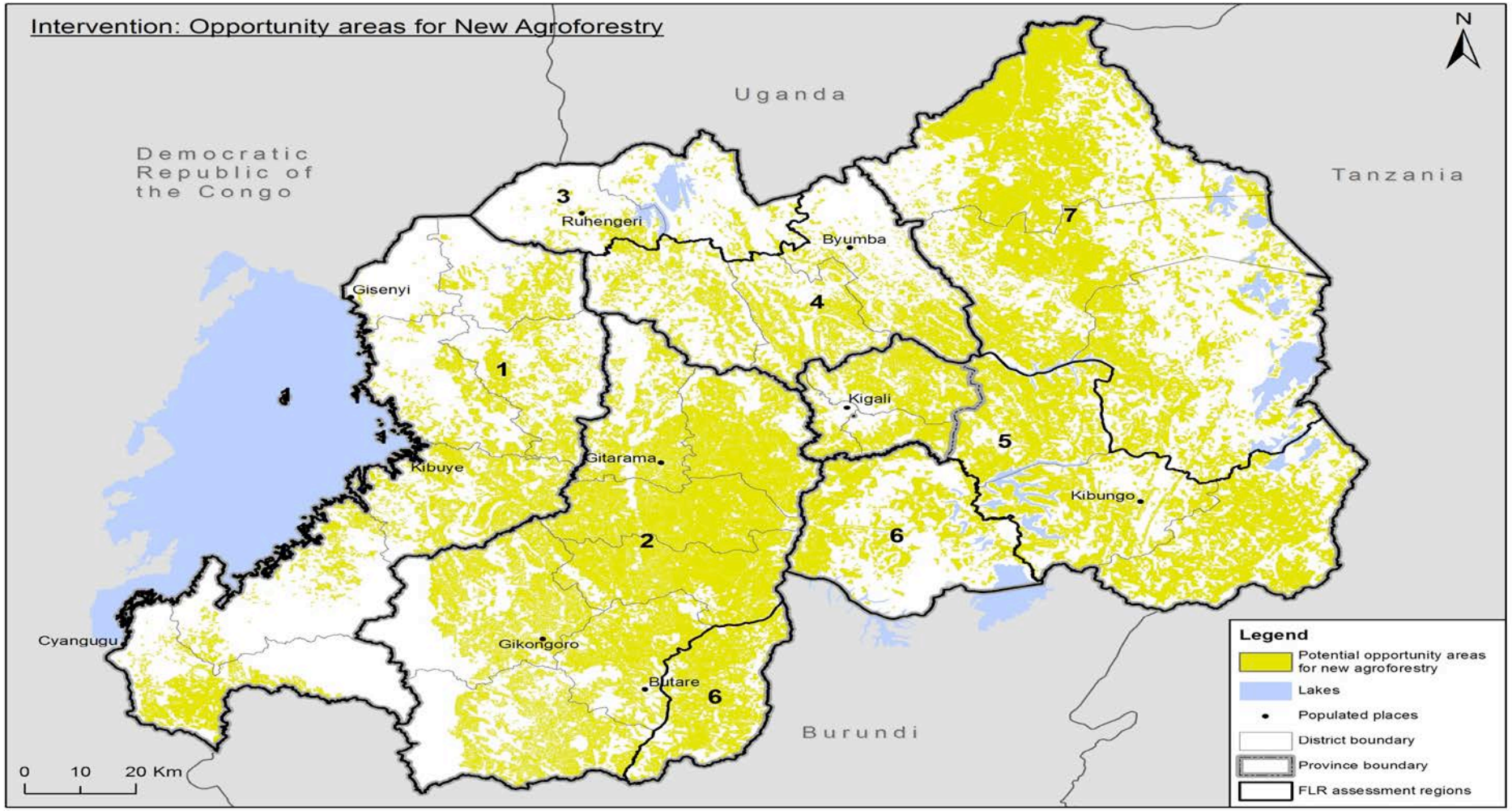
Final assessment of restoration options and investment opportunities

Readiness diagnostic

Economic & Finance options

workshops

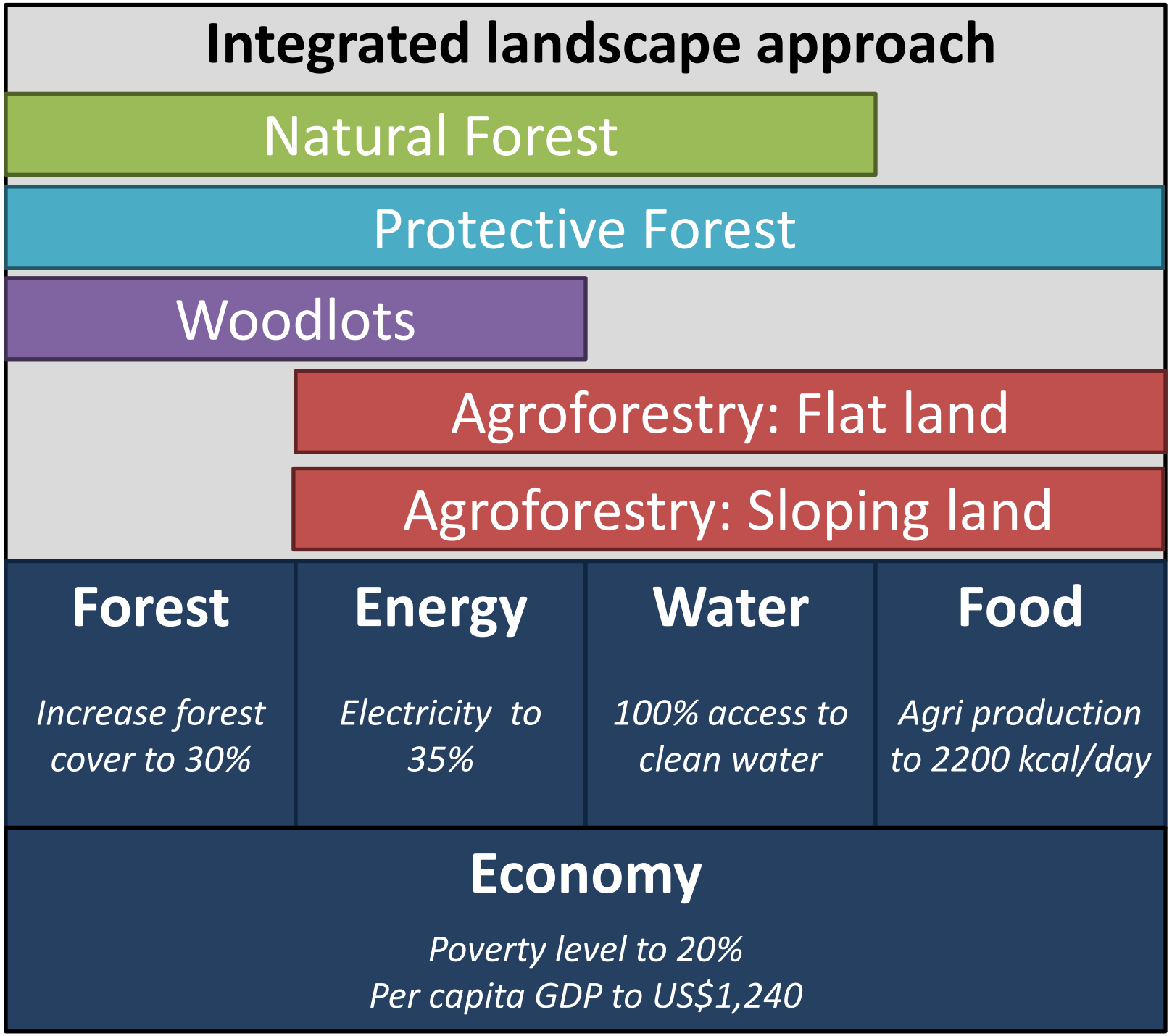
Revise and iterate the finding and recommendations based on consultations and new analysis

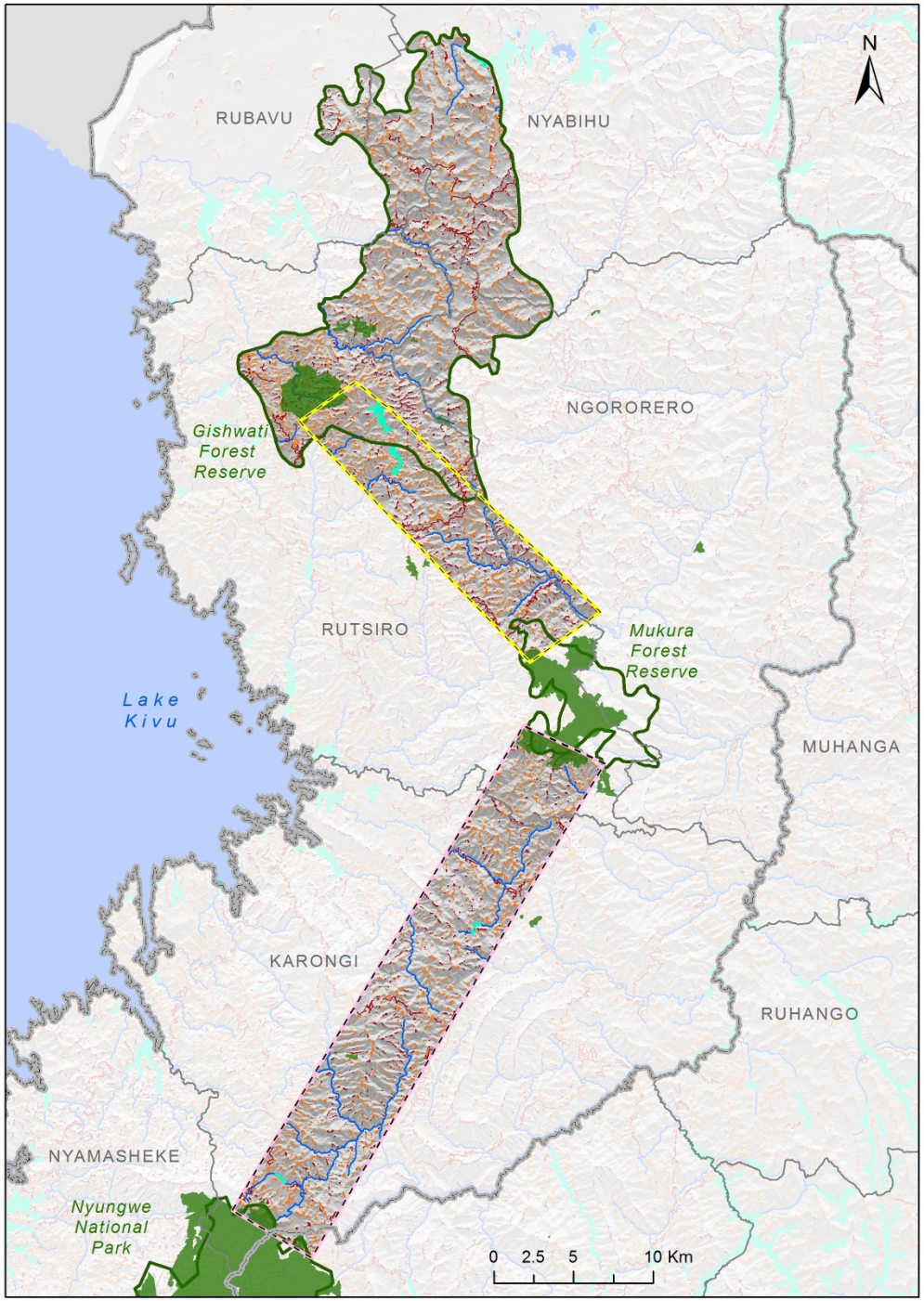



## Benefits to society

## Benefits to farmers

| Annual crop value (Rwf/ha) | Annual woody biomass value (Rwf/ha) | Annual reduced erosion (t/ha) | Additional carbon (t/ha) | Average Return on Investment |
|---|---|---|---|---|
| -99,000 to 189,000 | 75,665 to 132,980 | 22 to 27 | 251 to 449 | 28% |


Integrated landscape approach
Natural Forest
Protective Forest
Woodlots
Agroforestry: Flat land
Agroforestry: Sloping land
Forest
Increase forest cover to 30%
Energy
Electricity to 35%
Water
100% access to clean water
Food
Agri production to 2200 kcal/day
Economy
Poverty level to 20%
Per capita GDP to US$1,240




Gishwati Forest Reserve, GIshwati-Mukura Corridor and Nyungwe-Mukura Corridor

**Legend**

- Gishwati-Mukura corridor
- Nyungwe-Mukura corridor
- Ridge tops with Very Steep slopes (>55%)
- Ridge tops with Steep slopes (20% - 55%)
- Wetlands - Buffered 50m
- Rivers - Buffered 20m
- Closed Natural Forest
- Reserves and National Parks
- Lakes
- District boundary
- Province boundary

Hillshade (Elevation)
High
Low

thank
you