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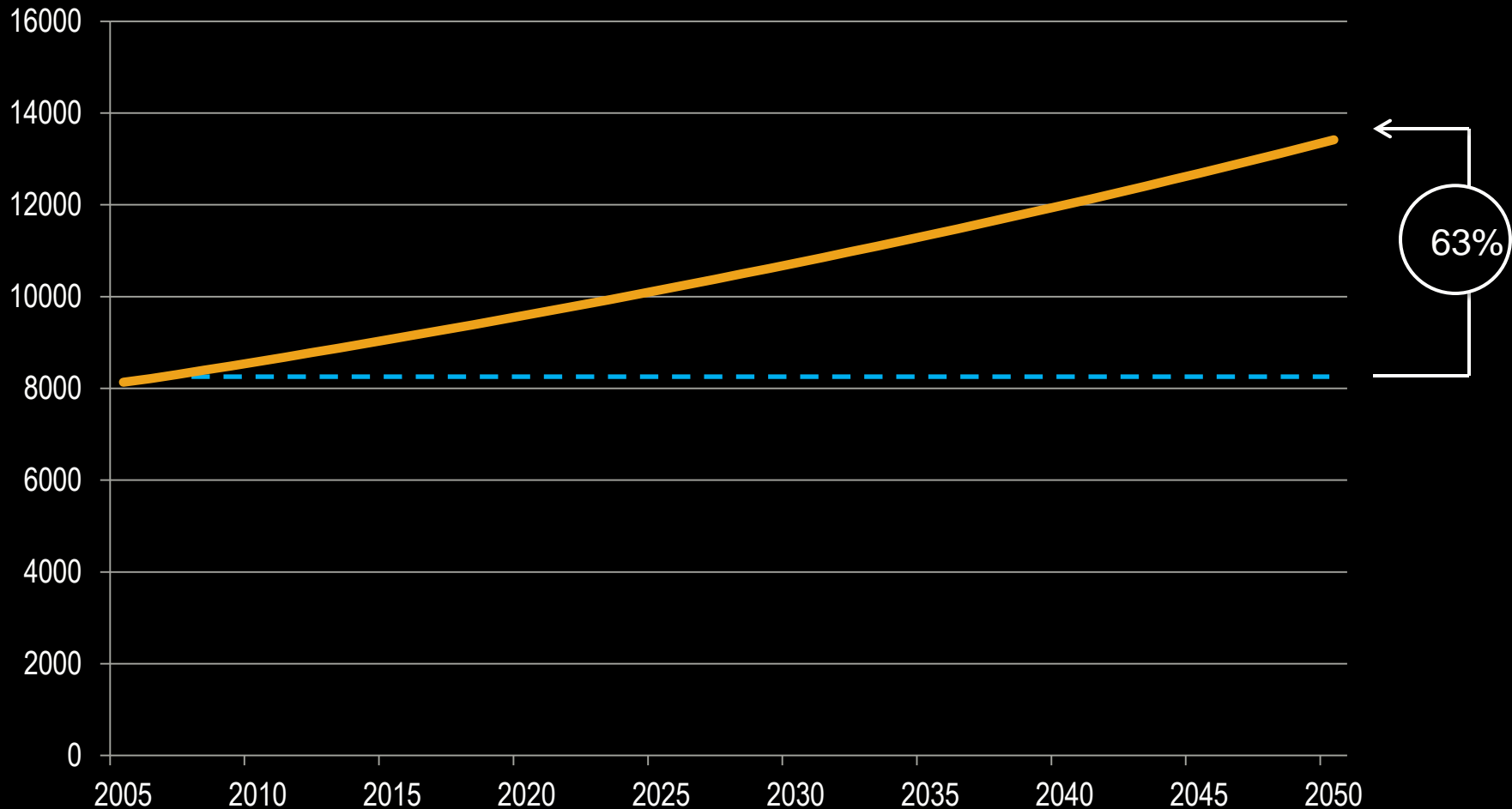
LANDS OF OPPORTUNITY: Achieving AICHI Target 15



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Global food production needs to increase 63% from 2006–2050

Kcal (trillions)



Source: WRI analysis based on "World agriculture: Toward 2015/2030. Interim Report." 2006. FAO; and United Nations Population Division Projections (online).

**SAHEL: drought in the
1970s and 1980s, 2005,
2009, 2011**



Erosion - Kenya



**THE CONVENTIONAL AGRICULTURAL
MODERNISATION PARADIGM IN ACTION:
NOT SUSTAINABLE
NO RESILIENCE
NO EQUITY**

**AGROFORESTRY IS THE PILLAR OF AGRICULTURE
IN DRYLANDS AND SUBHUMID REGIONS**



Land degradation - Haiti



Mudslide - China



Biodiversity and carbon loss - Indonesia

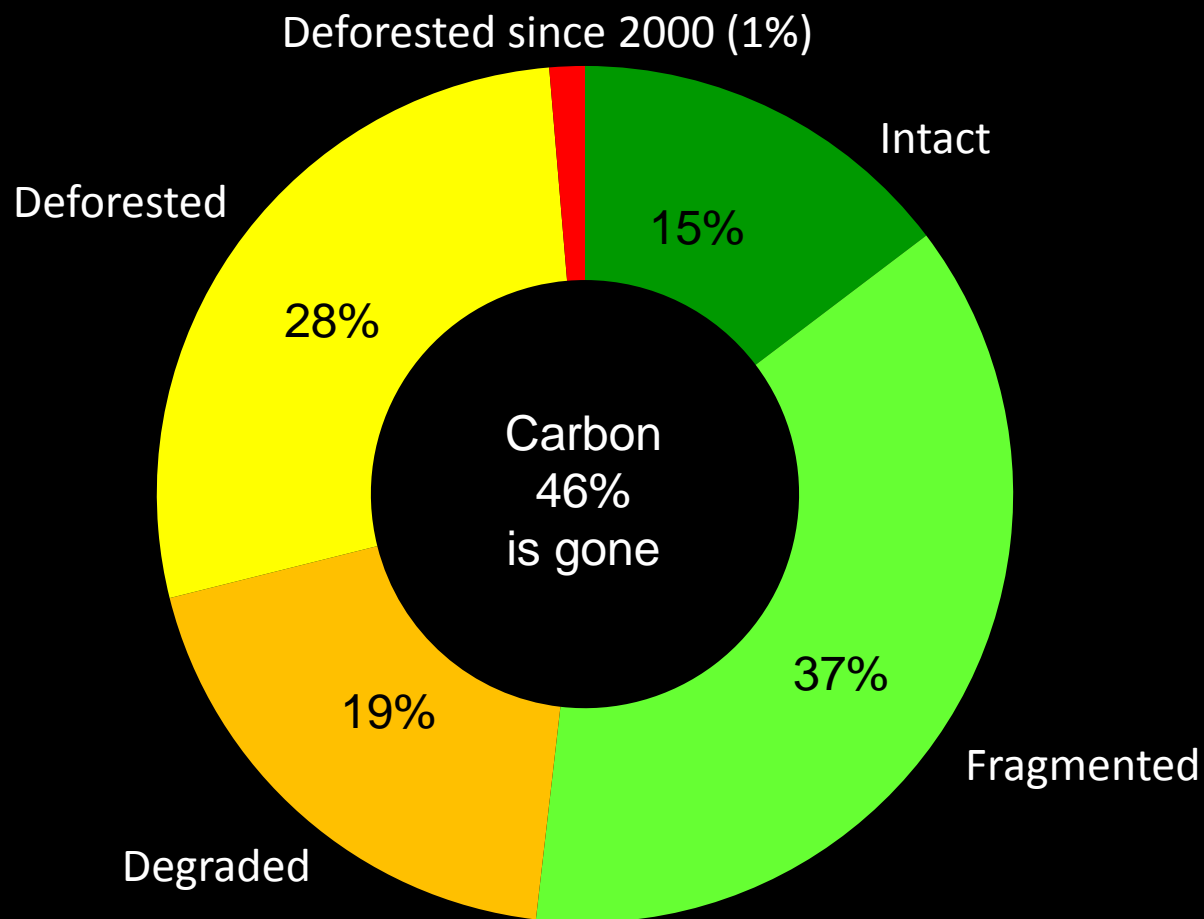


Forests in decline

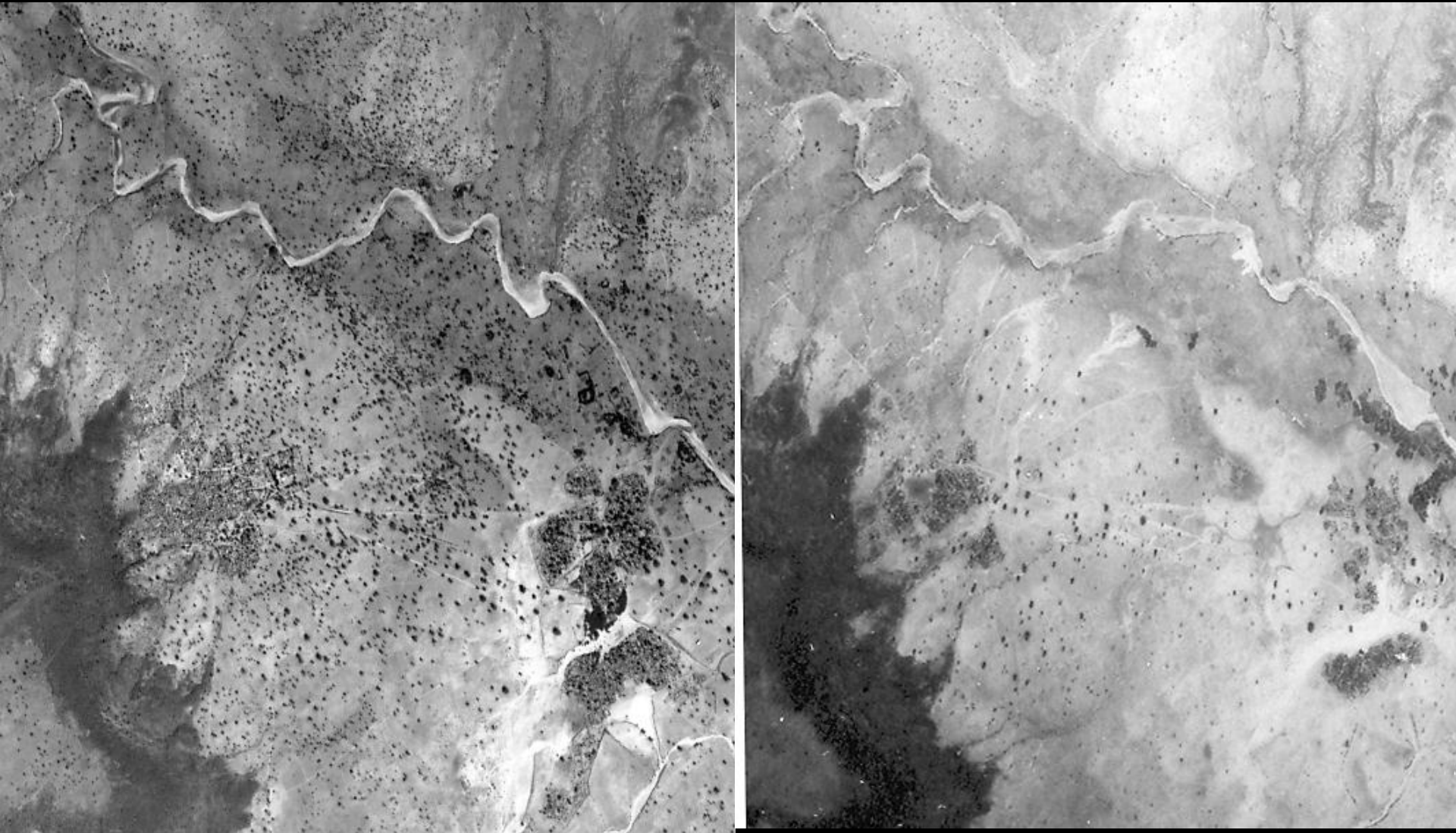
Current status of lands where forests can grow

Land area: 100% = 7.5 billion ha

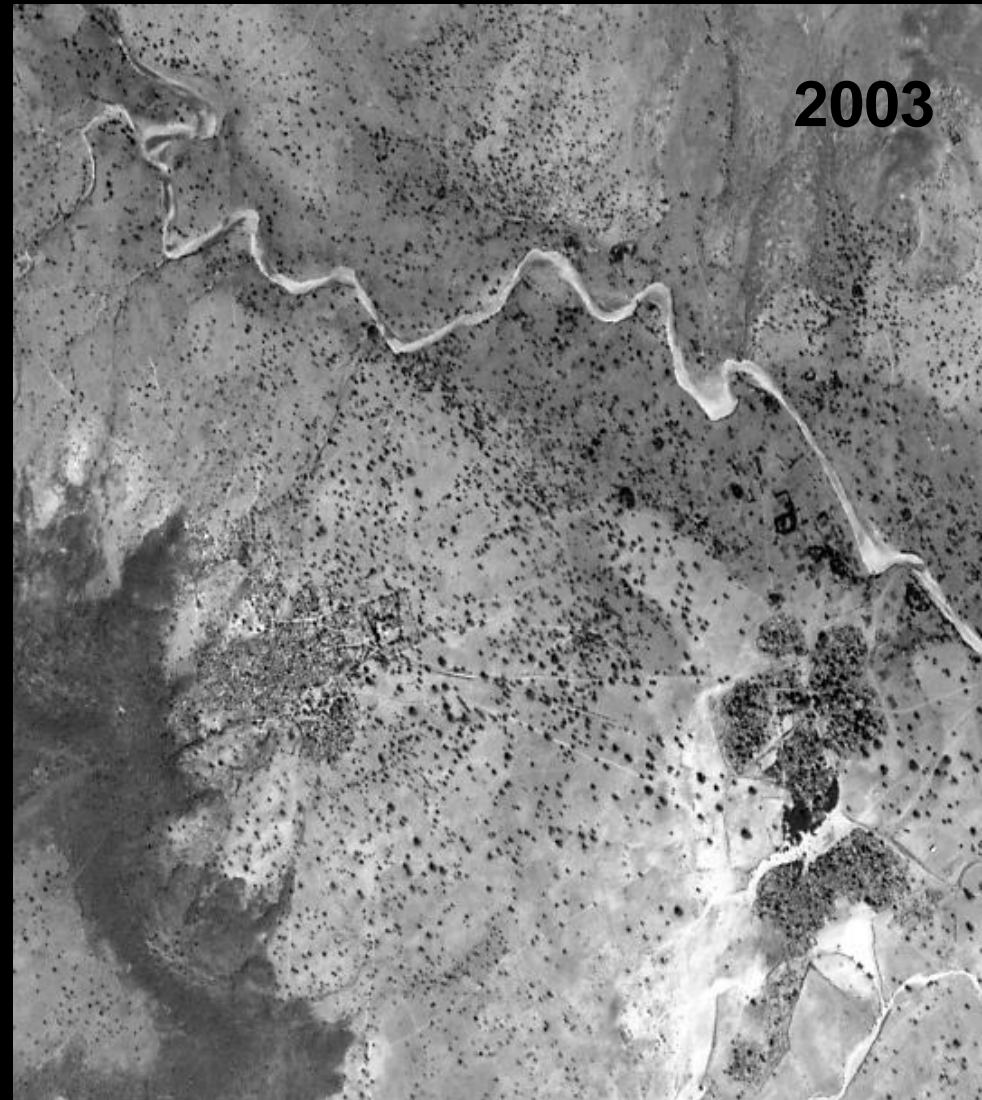
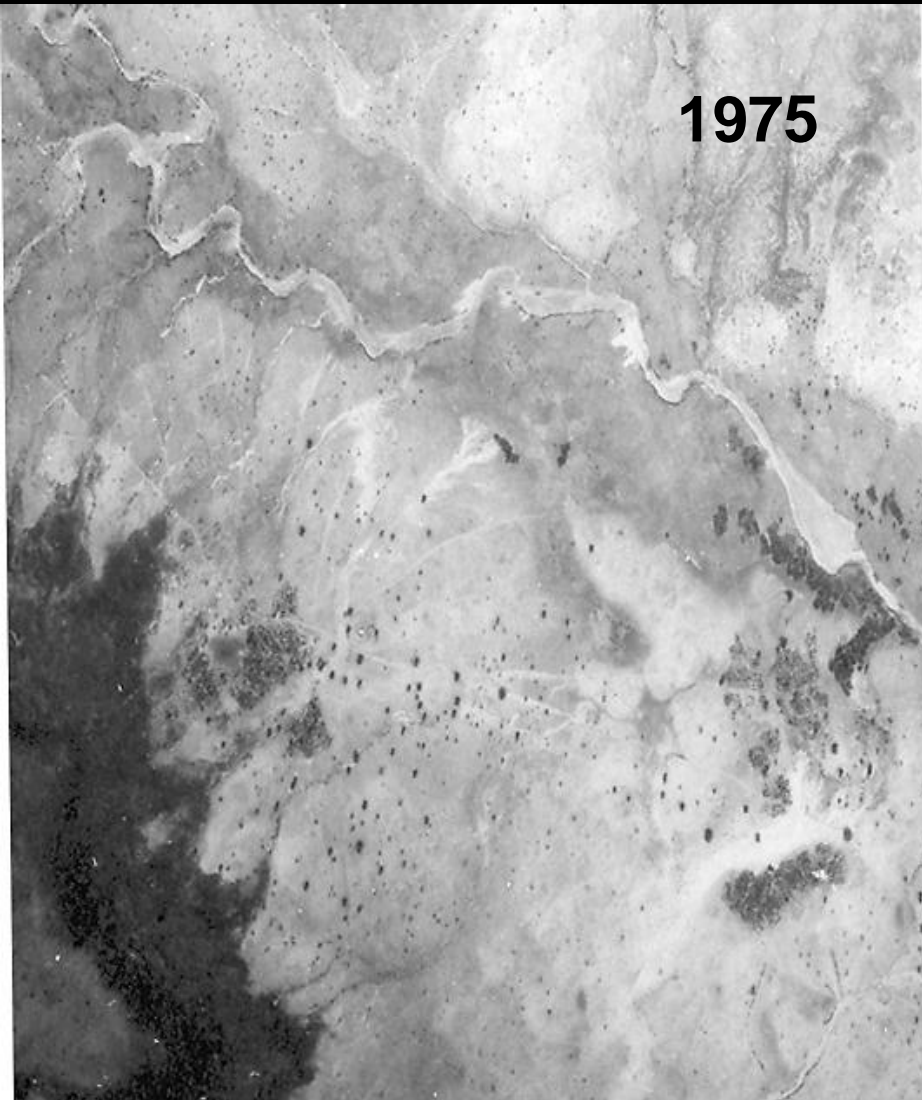
Forest biomass carbon: 100 % = 997 Gt C



Niger: vegetation in Galma in 1975 and 2003



Niger: vegetation in Galma in 1975 and 2003





FARMER-MANAGED RE-GREENING IN NIGER

- 5,000,000 ha re-greened in 20 years
- 200 million new trees (not planted)
- costs about 20 \$/ha
- additional cereal production/year: 500,000 ton
- 2.5 million people fed
- 1.25 million farm households involved

This is what it looks like on the ground
In southern Zinder





Grain surplus Kantché District (Zinder/Niger) 350,000 inhabitants; high on-farm tree densities

- 2007 + 21,230 ton**
- 2008 + 36,838 ton**
- 2009 + 28,122 ton**
- 2010 + 64,208 ton**
- 2011 + 13,818 ton**

Source: National Committee for the Prevention and Management of Food Crises and FEWS

Quoted by: Yamba and Sambo (2012)

SOUTHEASTERN UNITED STATES



Source: Hanson, C. et al. 2010. *Southern Forests for the Future*. Washington, DC: World Resources Institute

POHANG, REPUBLIC OF KOREA

Before: 1960



After: 2000



Shinyanga, Tanzania- then



Shinyanga, Tanzania- now



Humbo, Ethiopia



Before: 2000



After: 2007



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LARGE-SCALE RESTORATION OF DEGRADED LAND IN TIGRAY, ETHIOPIA



**80 % OF CULTIVATED LAND IN CENTRAL AND EASTERN
TIGRAY HAS BEEN TREATED WITH TERRACES AND BUNDS**

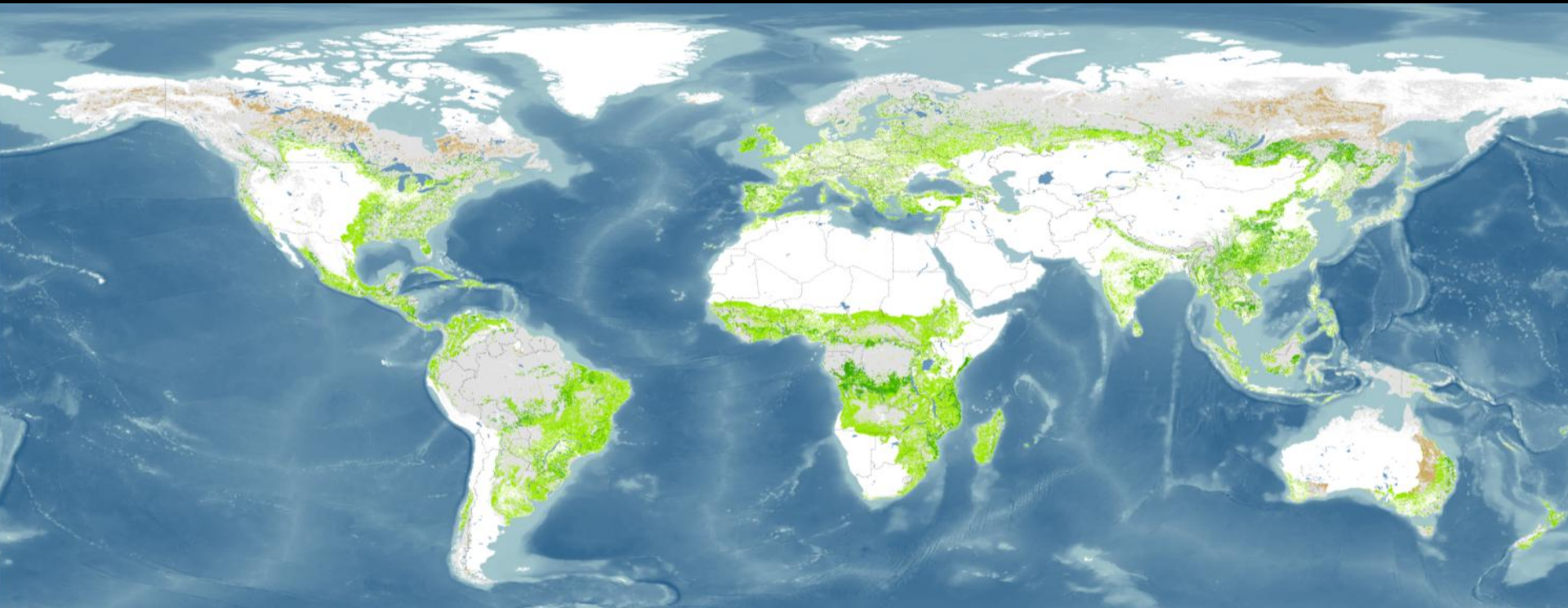


Is it happening in more places? . . .

- Brazil's Atlantic Forest
- China - Loess Plateau Watershed Rehabilitation Project
- Ethiopia – Large scale restoration in Tigray
- Ethiopia - Assisted Natural Regeneration in Humbo
- Costa Rica - Guanacaste - Secondary Forest Regrowth
- Kenya's Green Belt Movement
- Nepal - Community Forestry
- Niger - Farmer Managed Natural Regeneration
- Panama Canal Watershed
- Sweden - Reforestation in the Southwest
- Tanzania - Woodland Regeneration Shinyanga
- TIST - Small Group Tree Planting
- United States - Reforestation in the South
- Vietnam - Mangrove Restoration

“Lands of Opportunity”

More than one billion hectares has potential to contribute to enhanced food security, job creation, conserving biodiversity, and protecting the climate



FOREST AND LANDSCAPE RESTORATION OPPORTUNITIES

- Wide-scale restoration
- Mosaic restoration
- Remote restoration



Wide-scale restoration

Restoration to forest – only or mainly

- Less population
- Less intensive land use



Mosaic restoration

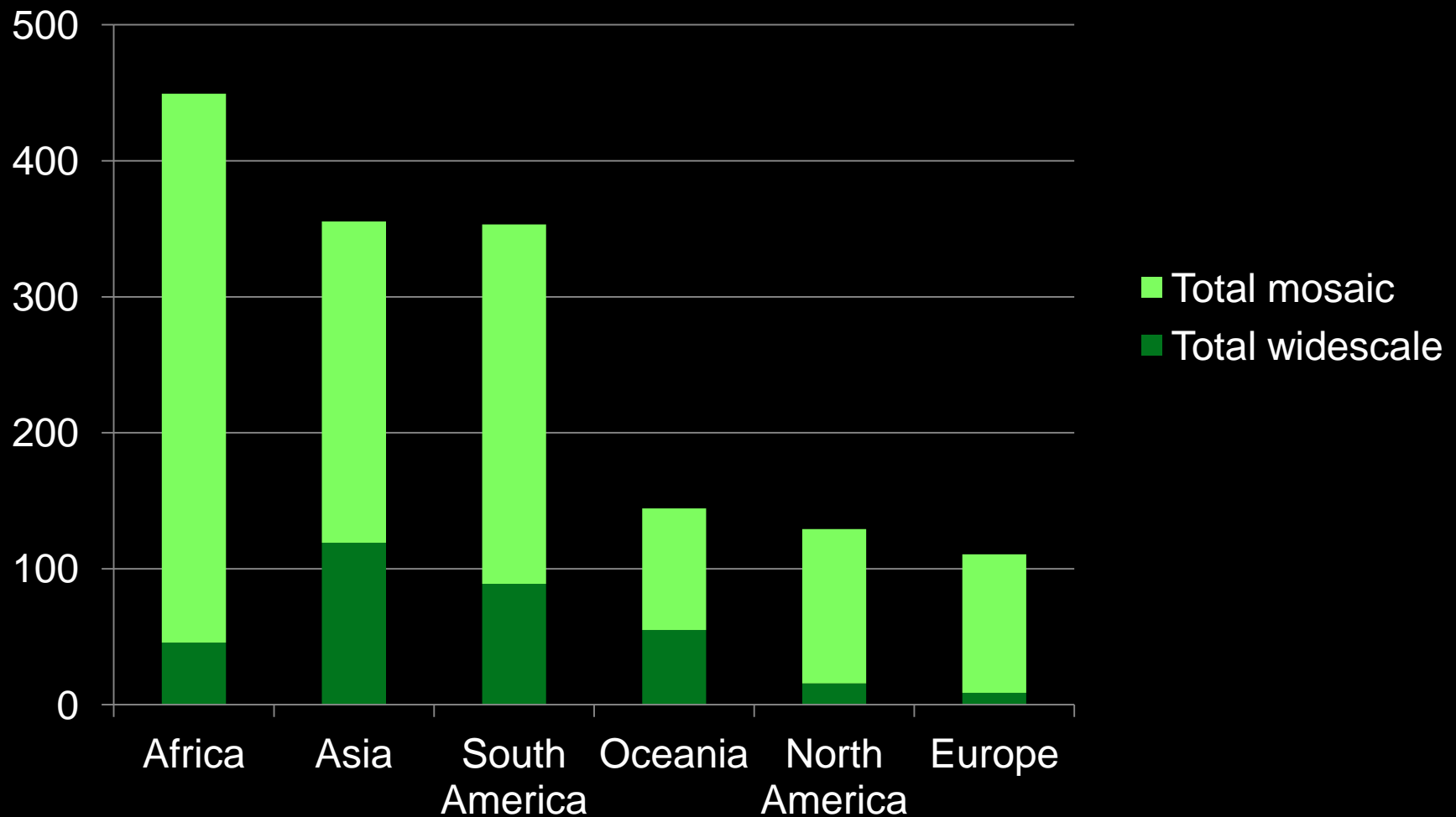
Restoration to a mix of people and trees



- Population density is higher
- The land use is mixed
- Closed forests can grow, but not at scale



Restoration opportunities by continent (million hectares)



GPFLR and the Bonn Challenge

- Target of “The Bonn Challenge”: restore 150 million ha of degraded forest by 2020



Status of pledges

20 m ha Pledges announced

- USA: 15 million ha
- Rwanda: 2 million ha
- Brazil Mata Atlantica Restoration Pact: 1 million ha
- El Salvador: 1 million ha
- Costa Rica: 1 million ha


30 m ha in pre-pledges

- Alianza Mesoamericana de Pueblos y Bosques: 20 million ha
- India: 10 million ha



Monitored by GFW 2.0


www.globalforestwatch.org



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Find out what is happening
in forests right now



5,075
Forest clearing alerts in
the last 30 days

Crowdsourcing

Analysis tool

Stay updated

Africa's drylands

Opportunity area Africa total

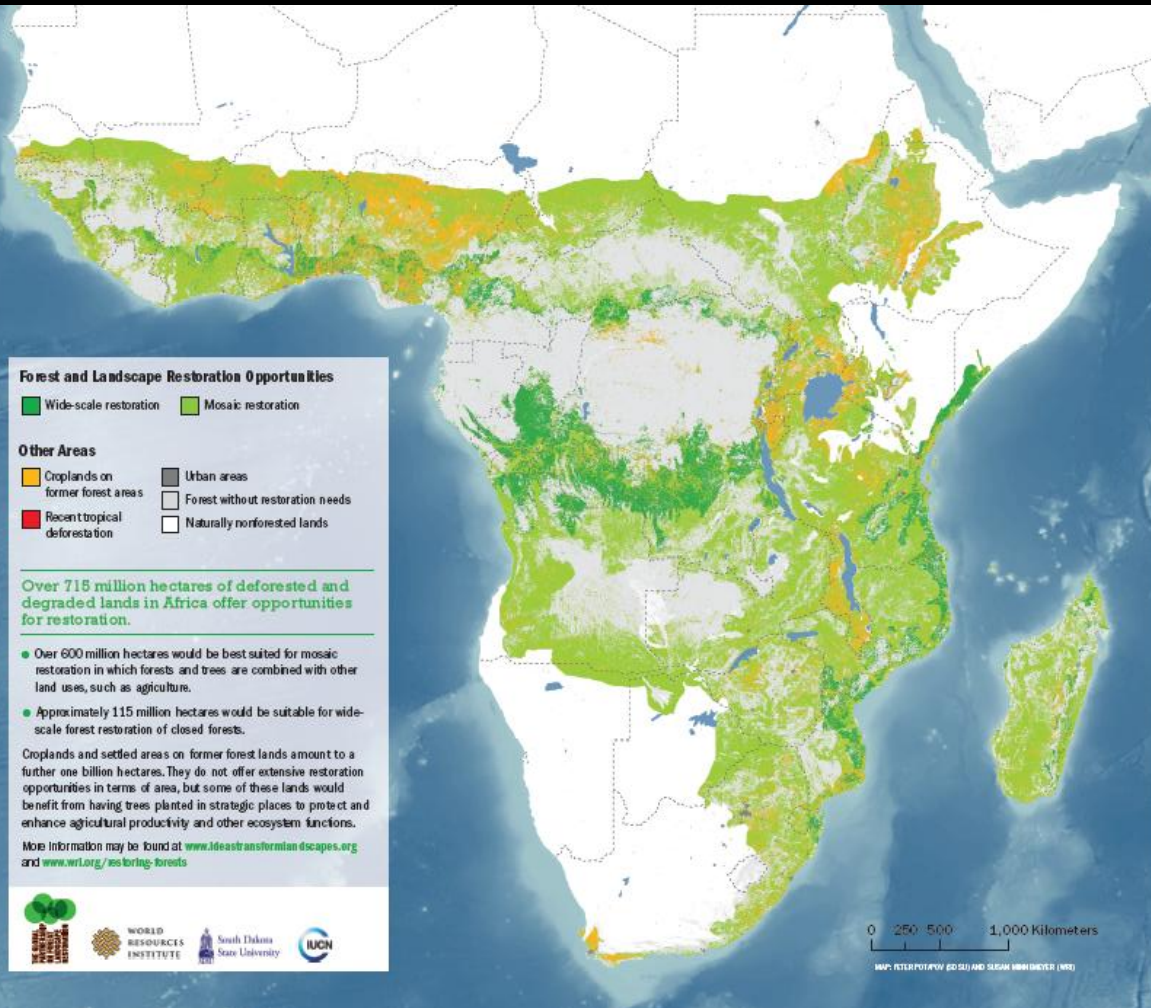
- Widescale: 115 m ha
- Mosaic: 600 m ha

Strategy

- Initial focus: Sahel, Rwanda, Mozambique
- Partners: ICRAF, Africa Regreening Initiatives

Funding

- Needed





Water harvesting



Agroforestry



Micro-dosing

Benefits of agroforestry include fodder, poles, and fuel wood



Photos: C. Reij

WATER HARVESTING AND AGROFORESTRY



Zai



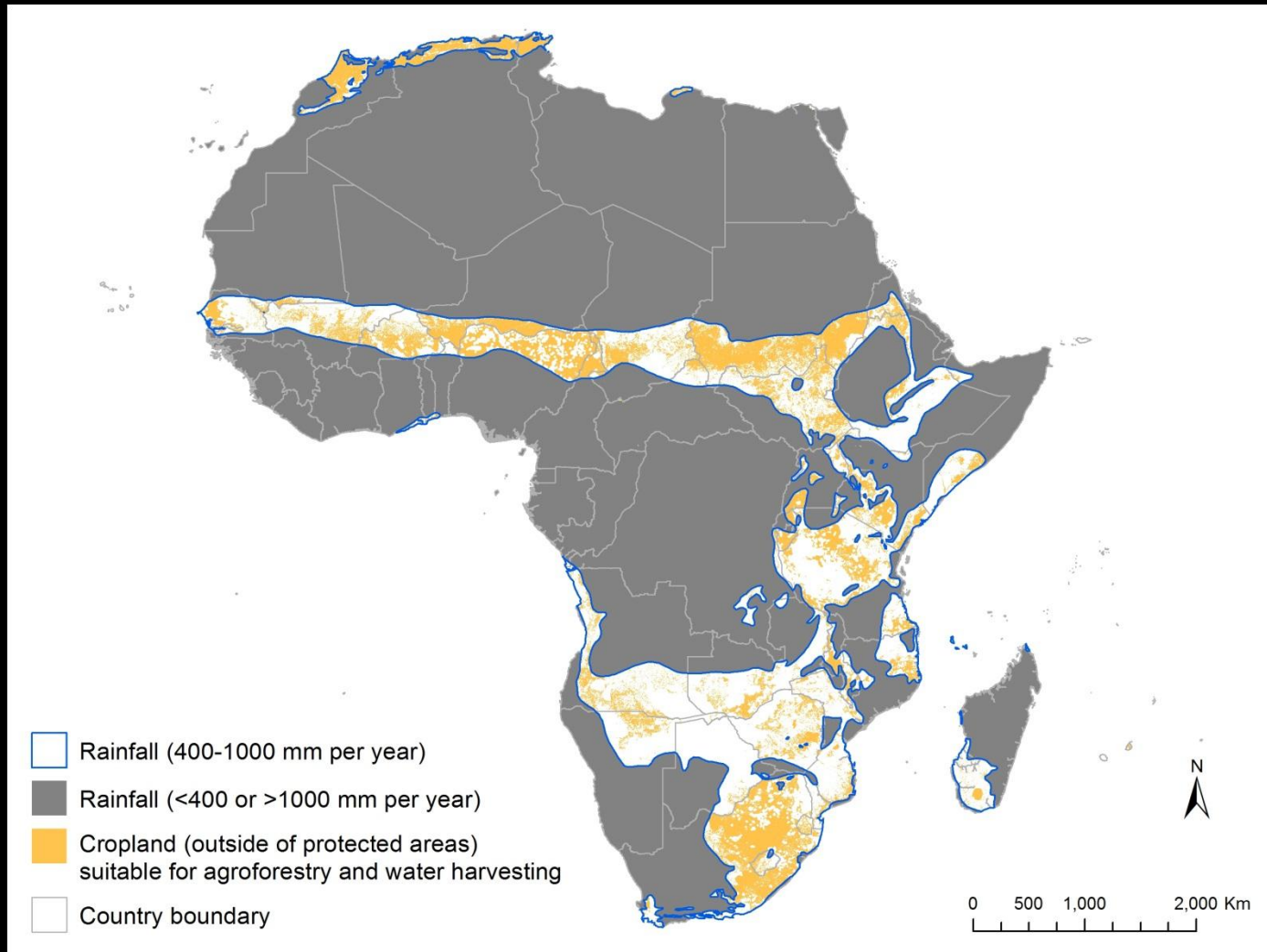
Demi lunes

1990



2004

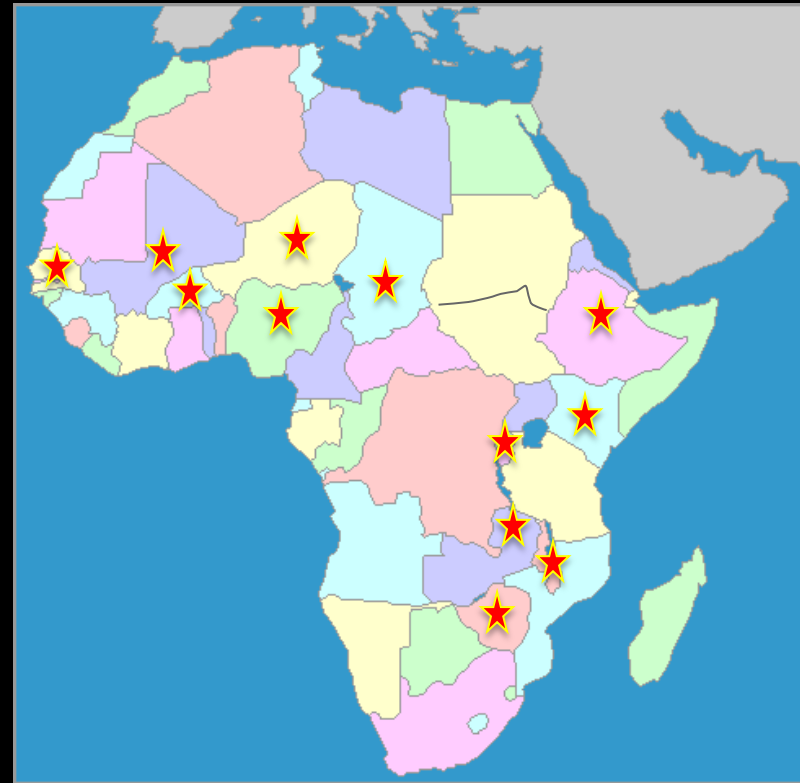
Potential for scaling up

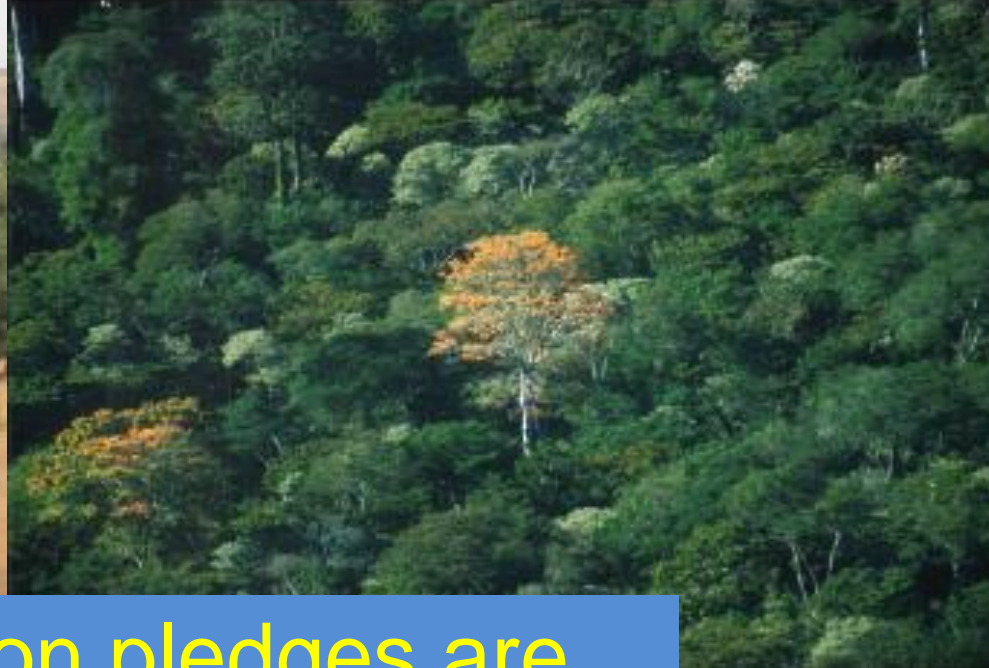


Source: WRI analysis using the following datasets. Population: AfriPop <http://www.afripop.org/>. Precipitation isohyets: UNEP/DEWA/GRID-Geneva. Protected areas: World Database on Protected Areas (UNEP/WCMC). Croplands – IIASA/IFPRI (Cropland for sub-Saharan Africa: A synergistic approach using five land cover data sets. Fritz et al.

WINDOWS OF OPPORTUNITY IN AFRICA

- Ethiopia (re-greening target of 15 mha)
- Kenya (target of 10% tree cover on farms)
- Rwanda (preparing national re-greening plan)
- Niger (preparing national re-greening plan)
- Senegal (aspires to adopt national re-greening plan)
- Malawi (moving to promote trees on all farms)
- Nigeria and Chad (sent delegations to Niger to learn about re-greening)
- Chad, Mali, Burkina Faso (interest in re-greening growing)
- Zambia, Zimbabwe, Malawi (progress with conservation agriculture)





More restoration pledges are needed!

