



Has the Sahel reached a *Tipping Point*?

**1st Drylands Week
Dakar, June 16th, 2011**



World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

www.worldagroforestry.org

Emerging Vision for the Sahel

The fields and farms of millets and sorghum covered by agroforests that increase yields and fodder production, restore land health, and protect crops and people from harmattan damage.

The grazing lands restored to woodland savannas through managed natural regeneration for higher productivity.

The dry forests regenerated for optimum value to communities and the economy.



Five million hectares of millet production in Faidherbia parklands in Niger: A transformed agricultural landscape



Extensive Faidherbia parklands in Khombole, Senegal

Shea agroforests, Burkina Faso

www.worldagroforestry.org



Faidherbia albida parklands in the Rift Valley, Ethiopia

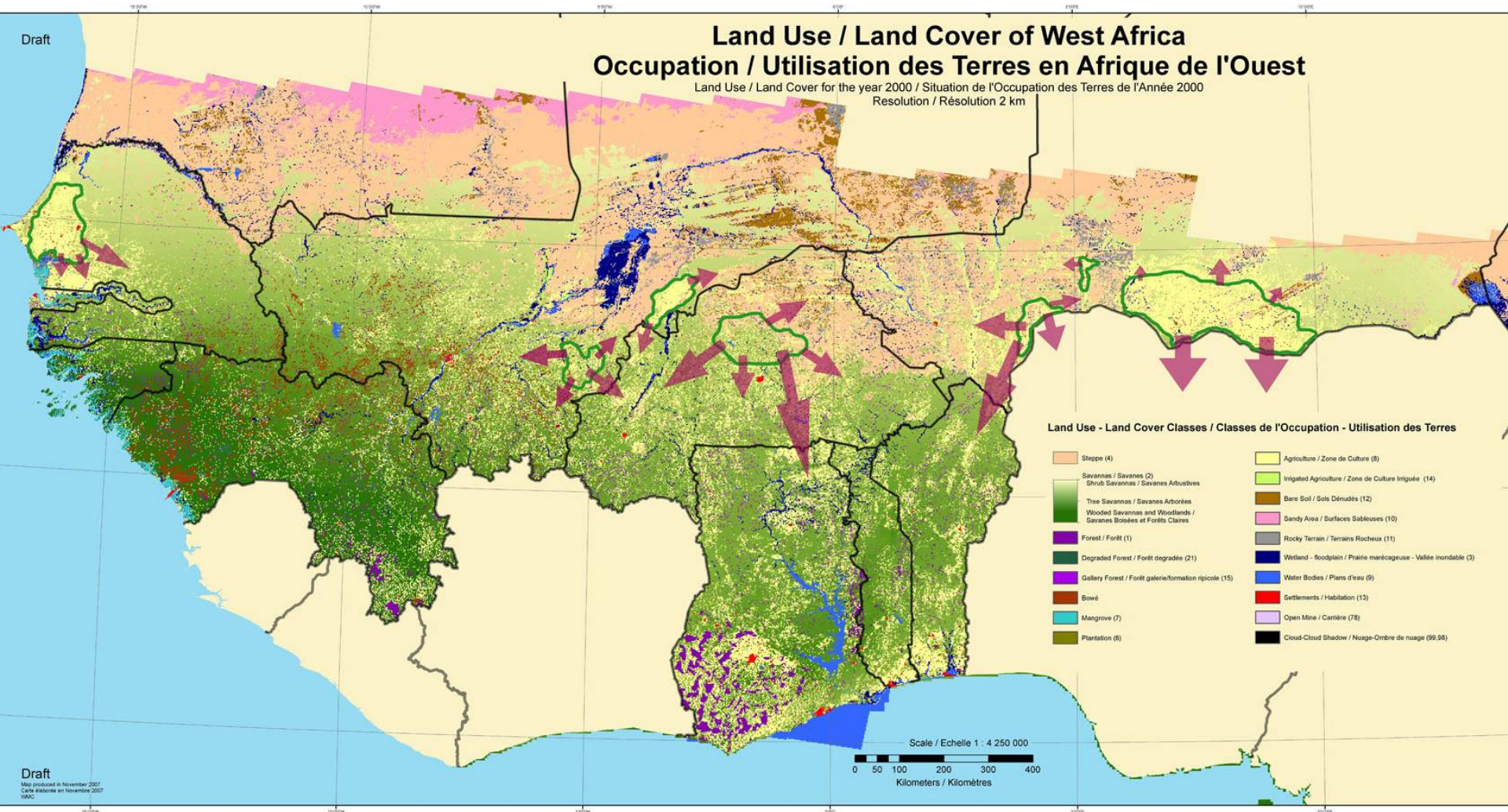


What is Evergreen Agriculture?

A form of more intensive farming that integrates trees with annual crops and grazing systems, maintaining a green cover on the land throughout the year.

Evergreen farming systems are 'double-story' systems that feature both perennial and annual species (food crops and trees).

Major agroforestry regions in West Africa and potential directions of expansion



What are the repercussions of Evergreen Agriculture?

1. **Increased crop production and food security**
2. **Restored land health**
3. **Improved microclimate** and soil water relations conveying greater adaptation to climate change
4. **Dramatically increased carbon accumulation** in food crop systems: 6-10 t CO₂/ha/yr
5. **Enhanced biodiversity** in annual crop systems grown in agroforests
6. **Reduced deforestation** due to enhanced potential in rainfed agriculture

What are some key development imperatives?

1. **Policy support** stimulated at national and international levels
2. **Link evergreen agriculture with** other agricultural investments
3. **Build capacity** within national systems to scale-up R&D on evergreen agriculture
4. **Development partnerships** for scaling-up

Emerging Vision for the Sahel

The fields and farms of millets and sorghum covered by agroforests that increase yields and fodder production, restore land health, and protect crops and people from harmattan damage.

The grazing lands restored to woodland savannas through managed natural regeneration for higher productivity.

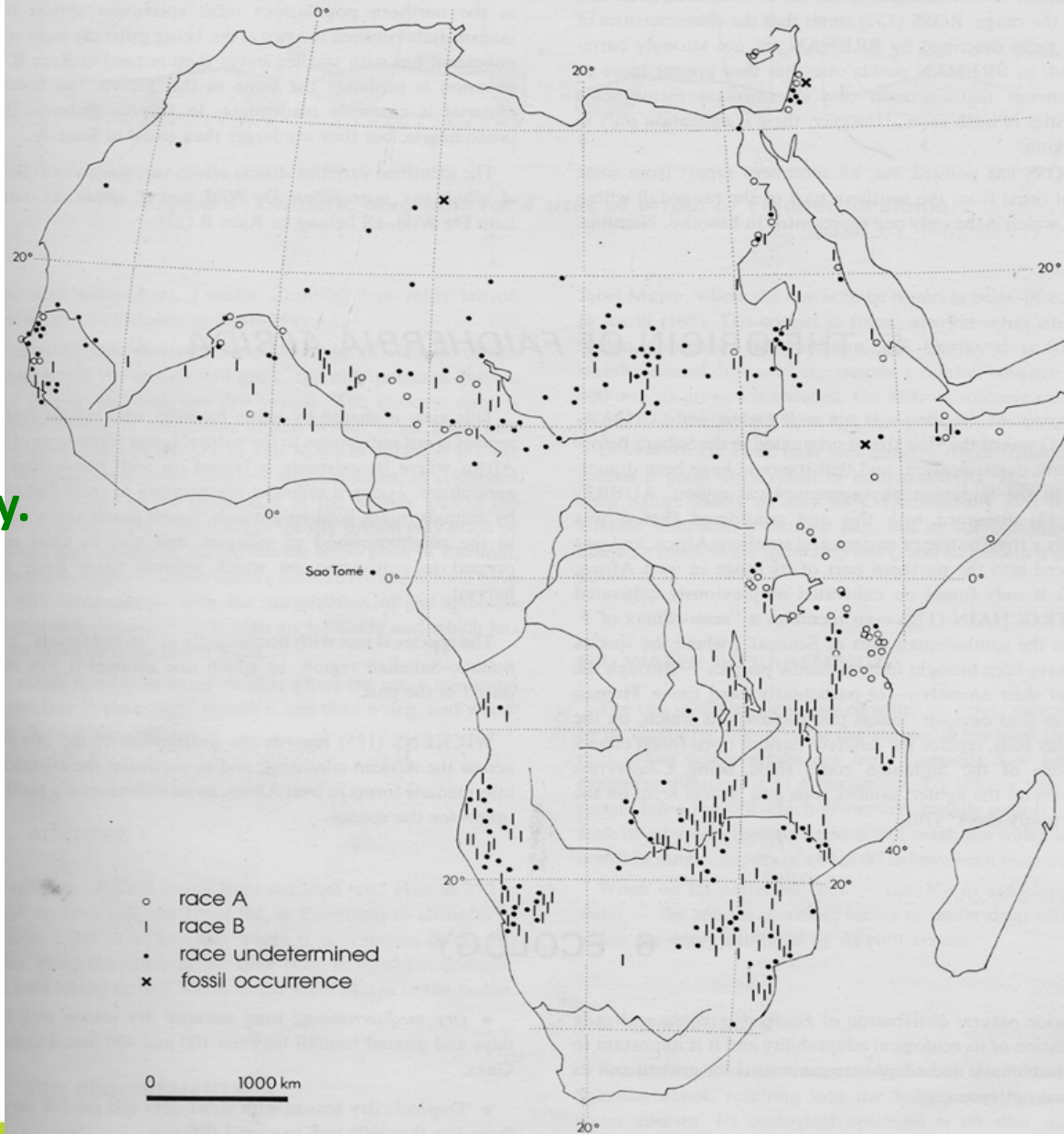
The dry forests regenerated for optimum value to communities and the economy.

Figure 2. DISTRIBUTION MAP OF FAIDHERBIA ALBIDA.

Distribution of *Faidherbia albida*

Widely distributed across a
range of soil types with
high ecological adaptability.

Altitudes from 270m below
sea level up to 2,800 m in
Tigray, Ethiopia.



Greatest advances during the past two decades in R&D

Assessments of yields in association with *Faidherbia* across a range of crops and agroecosystems

Methods to improve germination, seedling growth, and survival in the field.

Development of scaling-up programs

The Breadth of Evergreen Agriculture in Africa

- ***Grevillia robusta*** intercropped in maize for timber, fodder & fuel
- Fodder shrubs for balanced dairy nutrition
- Fruits and nuts intercropped in maize systems
- ***Shade coffee and tea agroforestry***
- ***Cocoa Agroforestry for sustainable production***
- ***Fertilizer trees*** in cereal production systems
- Regenerating trees in dryland grazing systems

Malawi: Scaling up agroforestry across the country

