

The Carbon Market and Biodiversity Conservation a Co-benefit Approach

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Carbon and Communities in Tropical Woodlands

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What is Biodiversity?

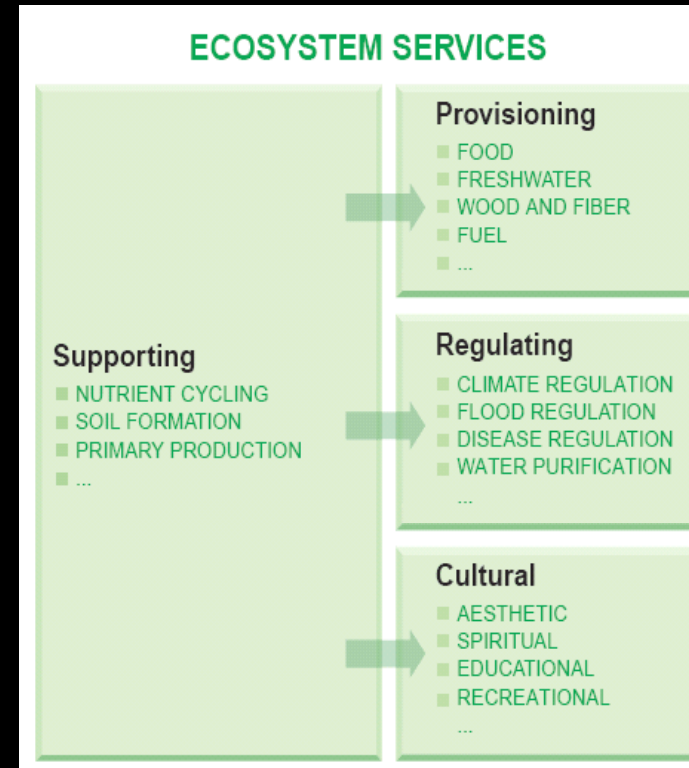


The variability among living organisms and the ecological complexes of which they are part, including diversity within species, between species and of ecosystems



Biodiversity and Human Welfare

- > Provides direct benefits in the form of goods or products such as food, fuel, timber and fiber.
- > Provides less direct benefits such as ecological services upon which humans depend, such as watershed protection, carbon storage, and nutrient recycling
- > Genetic diversity contributes to new crops and pharmaceuticals
- > Provides important cultural, spiritual and aesthetic benefits

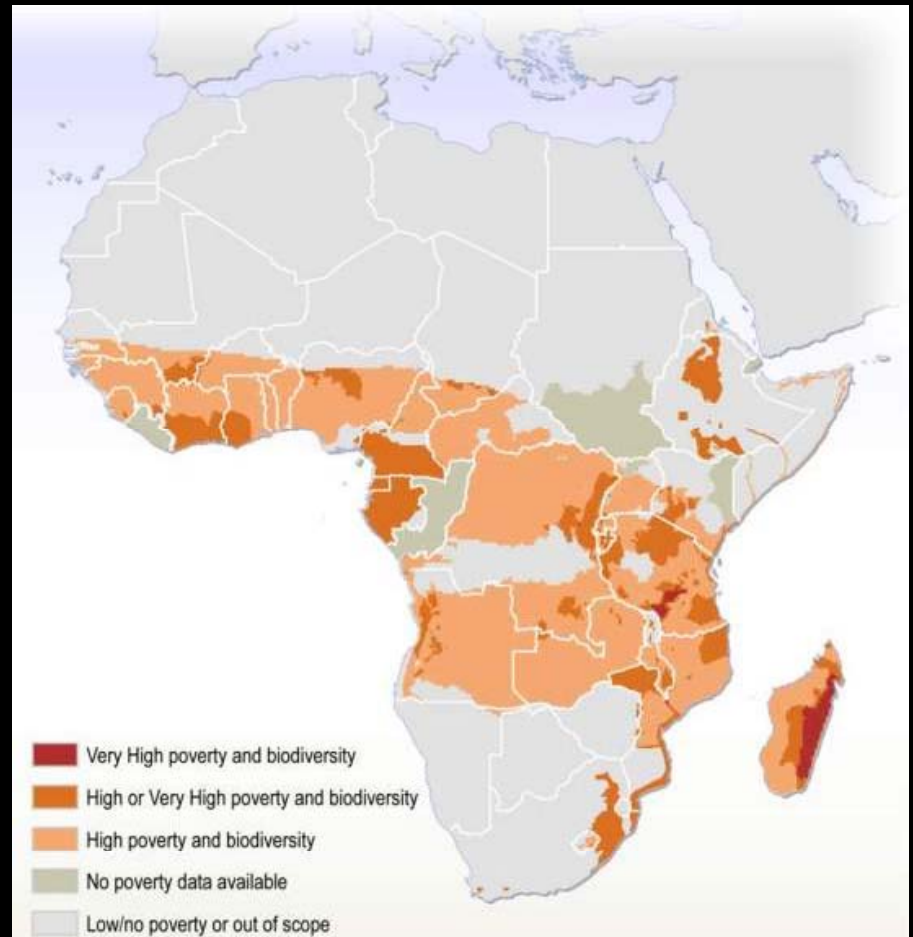


\$33 Trillion

Poverty and Biodiversity

Increasing poverty poses a threat to Africa's biodiversity.

How can we create a market value for biodiversity to compensate people in a way to ensure sustainable use?



Sources: CIESIN 2004, Birdlife International 2002, IUCN 2004

Poverty proxy calculated as areas with very high (40-80%) and high (20-40%) percentage of underweight children, with data collected per administrative unit.

Biodiversity proxy as an index from amphibian species per 0.25 degree grid cell with 0-20 = 1, 20-50 = 2 and 50+ = 3. Index were increased by one at endemic bird areas, up to a maximum of 3 (very high biodiversity).

Forest Carbon and the Voluntary Carbon Market

Forests hold approximately 70% of the world's biodiversity and are responsible for storing half of the world's terrestrial carbon

Deforestation: 18%-25% of global GHG emissions

Reduced Emissions from Deforestation and Degradation



- REDD has many advantages
- Need sub-national activities (Nested Approach)
- REDD at project level needs co-benefits

Triple Benefits

Better ecosystem management and sustainable development:

- Climate change mitigation - Emission Reductions
- Biodiversity/environment (including adaptation/resilience to climate change impacts)
- Improved livelihoods, social goals



Co-benefits support additionality



Demonstrate causality
between direct
payments and
reduced emissions

Difficult to create incentives for forest conservation without them!

Options for Forest Conservation



- Increased enforcement/ protection (through government)
- Direct payments to local people for management/protection
- Creation of local investment opportunities, alternative livelihoods



Making Payments Work

- Direct Financial Mechanisms (e.g. conservation trust fund)
 - Private (with government representation)
 - Steering committee that evaluates progress and determines use of funds
 - Some money for direct payments and investments
- Ensure that funds support forest conservation efforts in areas where the emissions are avoided.

Makira Plateau NE Madagascar



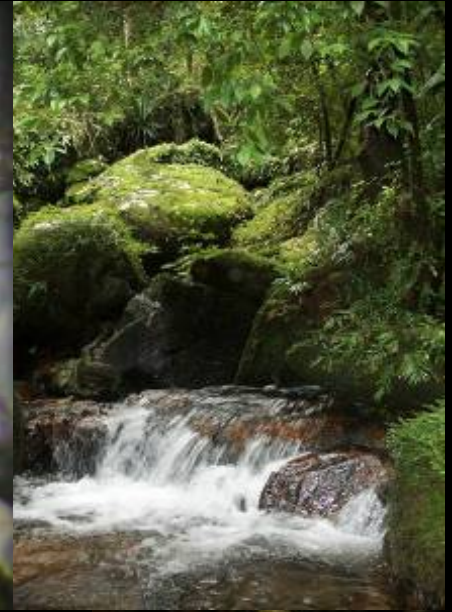
- Largest intact eastern rainforest
- Exceptional biodiversity
- Carbon storage
- Watershed protection
- 300,000+ inhabitants
- Subsistence agriculture



Antongil Bay

Makira's Biological Riches

The Last Stronghold



The Makira Forest Project



- Biodiversity “Hotspot within a Hotspot”
- National conservation priority since 1985
- WCS active since early 1990s



Makira's People

8th poorest country in world

300,000 people in 120 villages

Extensive slash and burn
agriculture, or *tavy* main cause of
forest loss

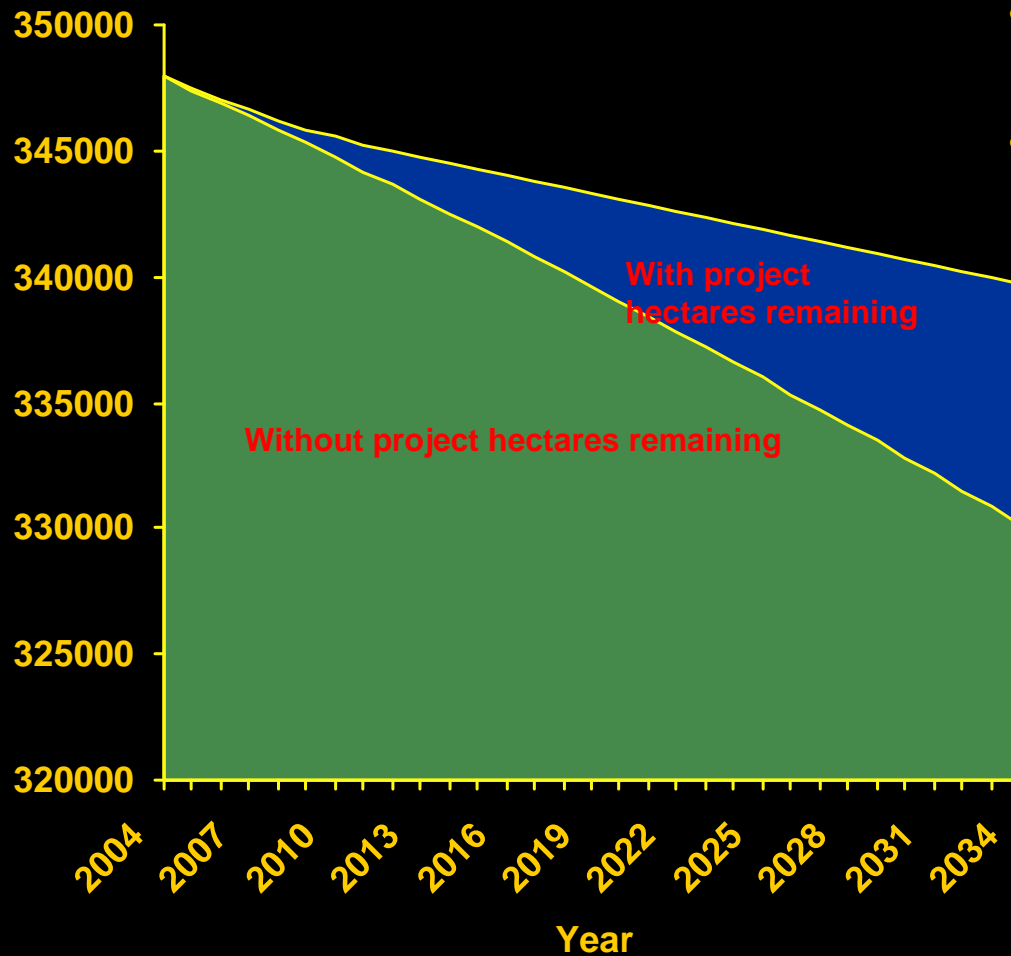


Makira Forest Project

- Integrate communities into management (transfer de gestion)
- Conserve biodiversity and ecosystem services
- Alternative livelihoods
- Sustainable financing



Project Emission Reductions vs. Business as Usual



- 350,000 ha overall with average 273 tC/ha
- 'without project' annual deforestation rate of 0.2% at 30 yrs = 18,283 ha lost
- 'with project' deforestation rate reduced to 0.07% within 10 yrs and maintained = 8,797 ha lost

Marketable emissions reductions



Revenue distribution from Makira emissions reductions

- 50% to local communities
- 25% PA management
- 15% support to Ministry for carbon finance unit
- 5% monitoring, verification and overheads
- 5% marketing

Makira – Climate Benefits

Project will lead to sequestration of an additional 9.5 million metric tons of CO₂ equivalent as a contribution to Madagascar's GHG emission reductions (over 90% of which are due to land-use change.)



Makira – Community Benefits

- Ensure integrity of ecosystem services (esp. watershed protection, fisheries) vital to local and regional economies.
- Improved agricultural practices
- Capacity building for sustainable natural resource management
- Ecotourism revenue



Biodiversity Benefits



- Maintain connectivity among protected areas of northeastern Madagascar
- Improved management to ensure survival of globally threatened species (including 20 spp. lemur, serpent eagle and 100+ bird spp, fossa).

Multiple Benefit Forest Carbon

- Reduces risks of impermanence by creating additional stakeholders and other reasons to protect forest
- Addresses many equity issues
- Prevents “empty forest” syndrome



Multiple Benefit Forest Carbon

- Improves project performance
- Demonstrates causality between investment and reduced emissions (strengthens additionality test)
- Enhanced marketing opportunities: “the story”





“Global warming has given the world the opportunity to build a more comprehensive and inclusive economic model.”

— NATURE
13 March 2008