

The Noel Kempff Climate Action Project: Lessons learnt for compensated reduction

GOFC-Gold Symposium
Jena 21, March 6 2006



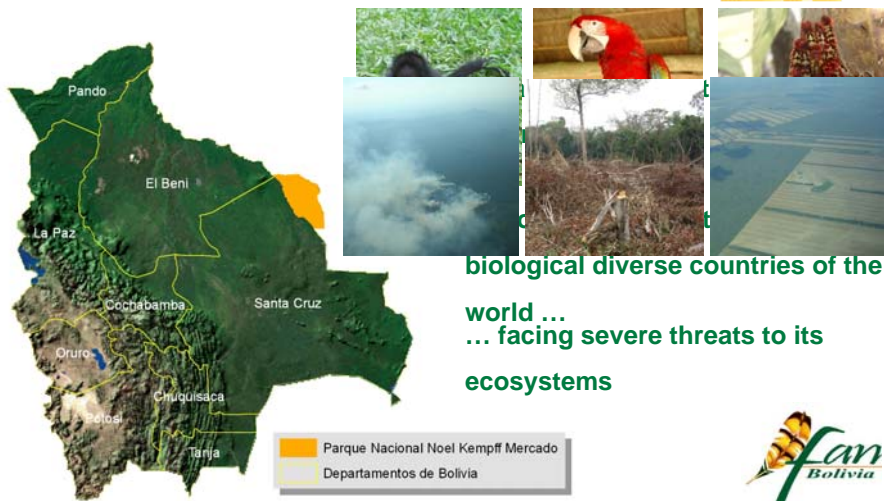
Presentation Outline

1. Project Design
2. Generating Emission Reductions
3. Conclusions



1. Project Design

The Context

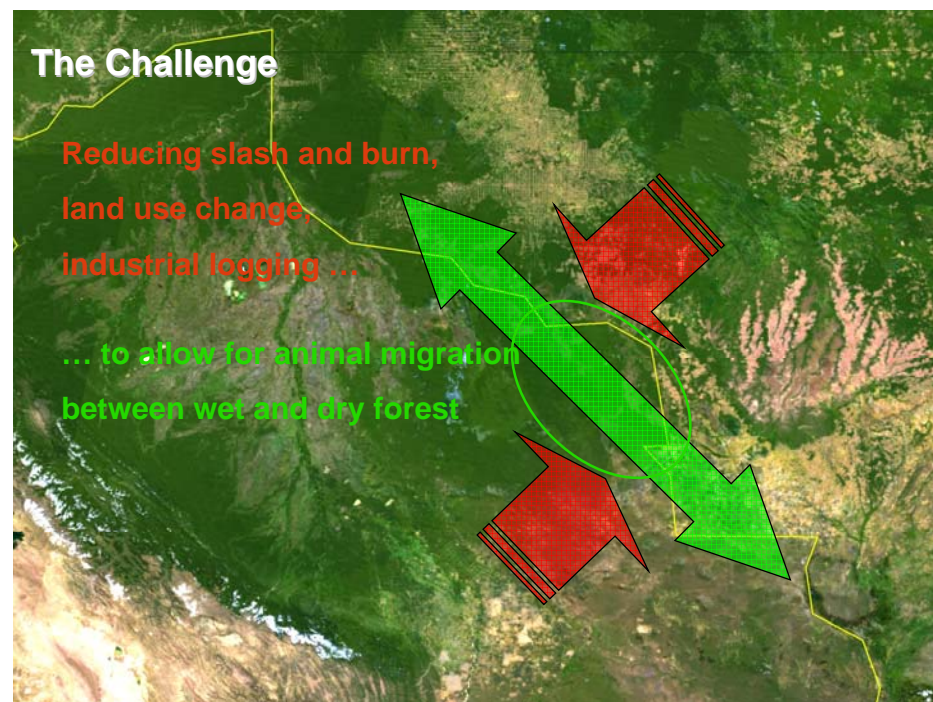


biological diverse countries of the world ...
... facing severe threats to its ecosystems

The Challenge

Reducing slash and burn,
land use change,
industrial logging ...

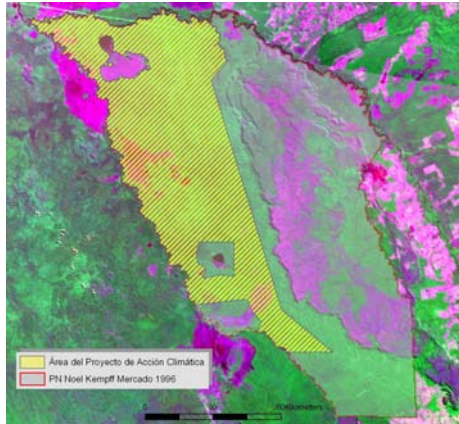
... to allow for animal migration
between wet and dry forests





1. Project Design

The Project Idea



- Indemnify existing timber concessions
- Expand the park
- Implement Noel Kempff Climate Action Project (642,458 ha)



1. Project Design

Project characteristics

Project Type

Activity Implemented Jointly (AIJ)

Project Duration

1997 - 2026

Major Project Activities

- Forest Protection Program
- Community Development
- Carbon Monitoring and Verification
- Long-Term Conservation Finance



1. Project Design

Project Actors

Project Developers / Managers

The Nature Conservancy, Fundación Amigos de la Naturaleza (FAN Bolivia)

Project Investors

AEP, PacifiCorp, BP America, Government of Bolivia

Lead Carbon Measurement Partner

Winrock International Institute for Agricultural Development

Certification

Société Générale de Surveillance (SGS)



2. Generating Emission Reductions

2 Components Generating Offsets

Comp A: Stop Industrial Timber Harvesting

Avoiding further timber extraction and damage to vegetation in an area of 524,000 ha

Certified offsets: 791,444 tCO₂ (1997-2005)



Comp B: Avoiding Slash and Burn Agriculture

Through community development programs: 756 ha

Certified offsets: 371,650 tCO₂ (1997-2005)



Schedule of Achieved Voluntary Emission Reductions (SAVER 1997-2005): 989,622 tCO₂



Comp A: Stop Industrial Timber Harvesting

Tasks

1. How much timber would have been extracted in former concessions without project (= baseline)?
2. Impacts on other carbon stocks (dead wood, long-term wood products, vegetation)?

How?

1. Economic simulation of baseline harvests driven by supply and demand
2. Biomass measurements of stocks, damage, regrowth (permanent plots)

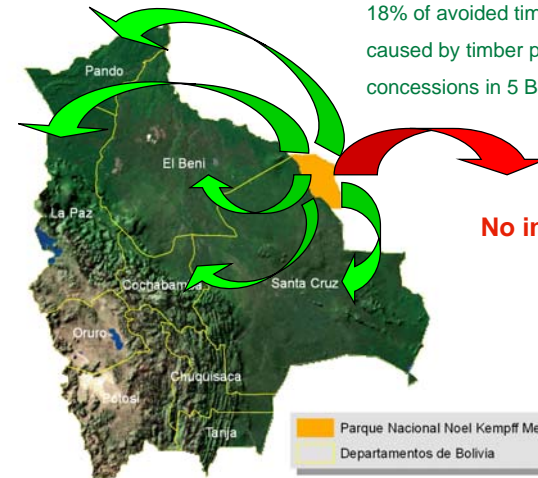
Annual offsets = extracted timber – Δ dead wood – wood products + regrowth

Characteristics

- Driven by international timber markets (Bolivia = small open economy)
- Geographical extent: 9 regions (4 concessions, 5 departments)



Comp A: Leakage



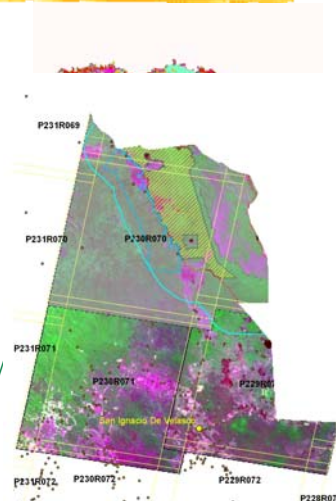
Comp B: Avoiding Slash and Burn

Tasks

1. How much forest clearing would have occurred without project (= baseline)?
2. Where would clearing have occurred?
3. Impacts on carbon stocks?

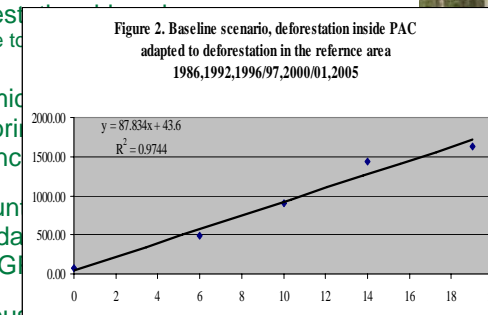
How?

1. Detecting historical land use change patterns
2. Simulation of deforestation with GEOMOD
3. Calculate corresponding biomass (609 plots): mixed liana 142 tC/ha – high inundated forest 216 tC/ha



Comp B: Technical Aspects

- Linear regional deforestation rate 15 km around
- Deforestation distance to
- Dynamic monitoring reference
- Discounted secondary IPCC-G
- Rigorous calibration (Gardner, O'Connell & Moore, 2007). Calibration based on '92 LU data, validation based on '96 LU data K-location 13.2%





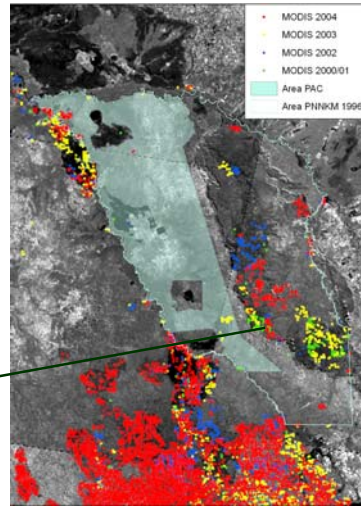
2. Generating Emission Reductions

Factoring Out Anthropogenic Fires

Detectable by MODIS

- 2002-2004: 71 of 112 fires in savannah areas
- 2004: 14 of 57 fires with 0 confidence

Challenge: impact of understory fires



3. Conclusions

Lessons Learnt for National Baselines

Noel Kempff Climate Action Project demonstrates:

- large scale avoided deforestation projects can produce real and measurable carbon offsets
- it generates substantial benefits to the climate, community, and biodiversity
- leakage can be estimated accurately on a national scale
- this project meets rigorous certification criteria



3. Conclusions

Lessons Learnt for National Baselines

- Comprehensive monitoring of selected parameters necessary: Earth observation plus Econometrics!
- Spatiotemporal modelling of LULUC at medium resolution (~30m, annually) remains a bottleneck.
- Dynamic baselines needed!
New roads, changes in land use patterns and forest policy
Dynamics of timber markets: new species, new products
- Challenge: Spatiotemporal integration of different baselines (clearing, logging, fires, secondary land use)



Thank you for your attention!



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