The Cameroon Pilot Project

COP Side Event,

Cancun 2nd December 2010

REDD

Reducing Emissions from Deforestation and Degradation

Carbon Emission Accounting: Achievements of South-South Cooperation

Joerg Seifert-Granzin, Natalia Calderón, Jaime Quispe, Graciela Tejada, Sandro Añez (FAN-Bolivia)

Consortium led by: GAFAG

Project supported by: esa, gtz Partner for the Future. Worldwide., kfw Entwicklungsbank

Project Part of gmes Services

Pre-cursor for Carbon Accounting

- Sub-national approach implemented in Bolivia was model for Cameroon case.
- Method compliant with IPCC 2006 for managed forest areas.
- Noel Kempff Climate Action Project:

  1,034,107 tCO2 of avoided emissions from DD during 1997 – 2005; certified using CDM criteria;

  Methodologies comprehensively documented:
  http://www.fan-bo.org:9090/unidades/es/serviciosambientales/inicio/proyectos/redd/pilares

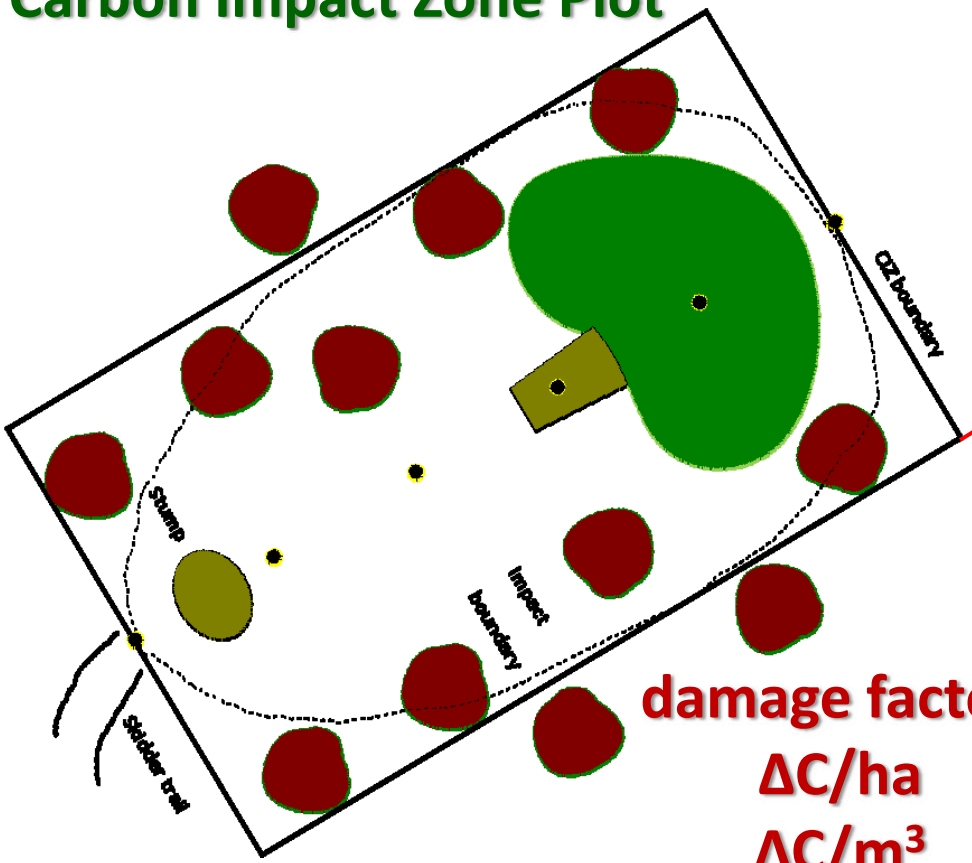
Estimating Emission Factors / Damage Factors

- **All biomass pools measured:**
  - Aboveground
  - Litter
  - Deadwood
  - Below ground
  - Soil
- **Damage Factor estimation**
  - Comparison of collateral damages in two different forest management systems: certified & uncertified FMUs

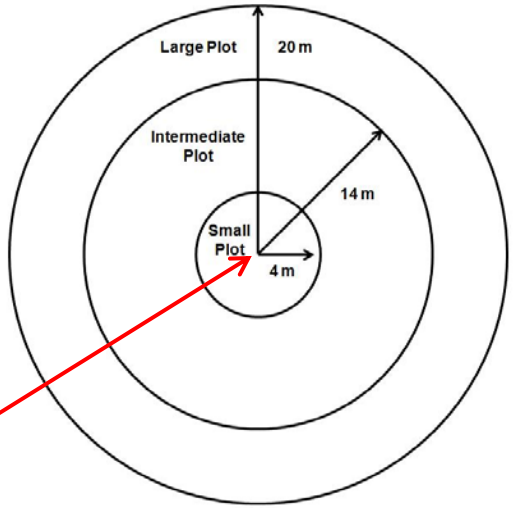
Permanent Plot Design

Developed by Winrock International, modified by FAN

Carbon Impact Zone Plot



Paired Plot



50 m

intact carbon stock (5 pools)

damage factor:
ΔC/ha
ΔC/m³

=> Carbon stock in HWPs

CIZ Plot - Parameters Measured

- **CIZ Plot**
  - Biomass of Extracted Timber
  - Damaged biomass
    - **All damaged trees > 10 cm dbh (standing or lying)**
    - **Note: no pre-existing dead trees – only trees recently felled**
    - **3 damage classes**
      - **1 = bent or leaning**
      - **2 = snapped stems and without crown of the tree**
      - **3 = uprooted**

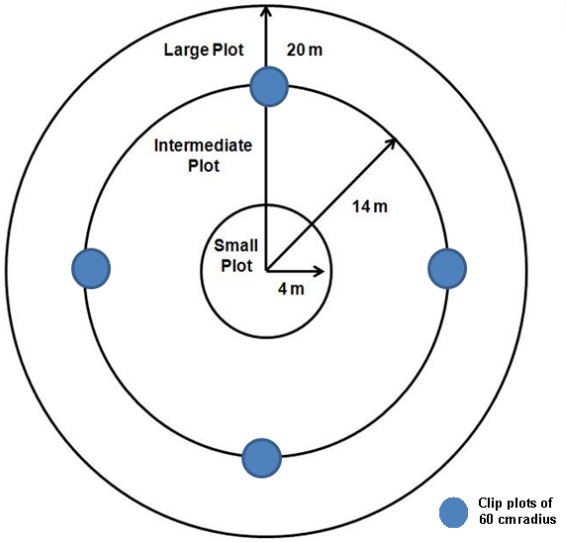
Carbon Impact Zone Plot

Measuring the direction of felled tree

Installing a CIZ Plot

Circular Plot - Parameters Measured

- **Circular Plot**
  - DBH Live trees and dead trees (Standing & lying)
    - **Small plot: 5-19.9cm**
    - **Intermediate plot: 20 – 49.9cm**
    - **Large plot: >50cm**
  - Forest understorey litter
  - Soil
  - Lianas



Circular Plot

Litter, soil & herbaceous vegetation sampling on clip plot

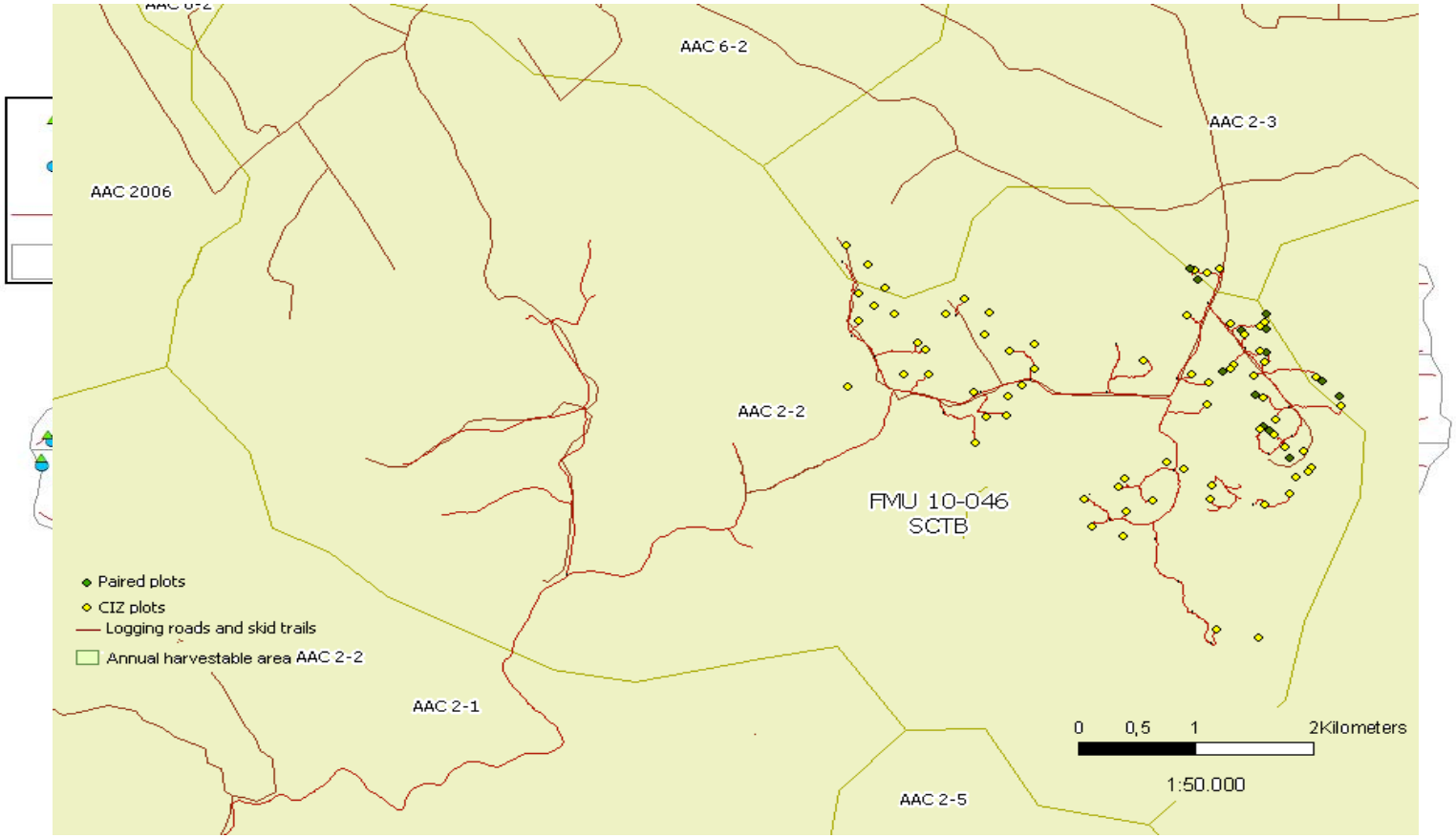
Measuring deadwood

Impact of logging roads & skid trails

Results

67 CIZ Plots (Pallisco – Certified concession)

78 CIZ Plots (SCTB – Un-certified concession)



Results

Estimated Carbon Stocks (intact forests)

	[ha]		Mean biomass in tons of carbon per hectare (tC/ha)							
Stratum	**Area in Pallisco**	**Number plots**	**Wood**	**lying dead wood**	**Standing dead wood**	**Below Ground**	**Vegetation**	**Litter**	**Soil**	**Total biomass with soil**
Closed evergreen lowland forest	4700	67	211.42	17.97	12.51	42.28	2.64	2.55	41.04	**326.12**

Logging Impacts

Parameter	Mean in Pallisco	95 % CI in Pallisco	Mean in SCTB	95 % CI in SCTB
Mean t C damaged /m3 extracted	**1.34**		**1.99**	
DBH (cm)	112.08	±6.5	105.45	±6.21
Commercial log length (m)	19.08	±1.27	19.81	±1.30
Volume/tree (m^3)	16.06	±2.42	14.88	±1.96
Extracted biomass carbon (tC)	11.97	±1.58	10.48	±1.99
Damaged biomass carbon (tC)	15.19	±2.71	17.82	±3.68
Extracted timber as % of total tree biomass	67.43	±3.46	72.67	±5.67

Capacity Building

- Specific capacity building activities ensure that project results, methodologies and lessons learned are transferred to local counterparts
- South-south co-operation facilitates this process

Technology Transfer and Capacity Building

- **Target groups**
  - MINEP & MINFOF Technical staffs
  - Academic institutions/ NGOs
- **Technology Transfer between:**
  - Bolivia and Cameroon, South-South Co-operation: Emmission accounting
  - European Partners and Cameroon: EO for deforestation mapping
- **Capacity Building via Workshops and on-the-job-training**
  - Biomass accounting workshop
  - Biomass inventory field training
  - Remote Sensing workshop
  - GIS training workshop
  - Field surveys