Mitsubishi UFJ Securities

International Seminar on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

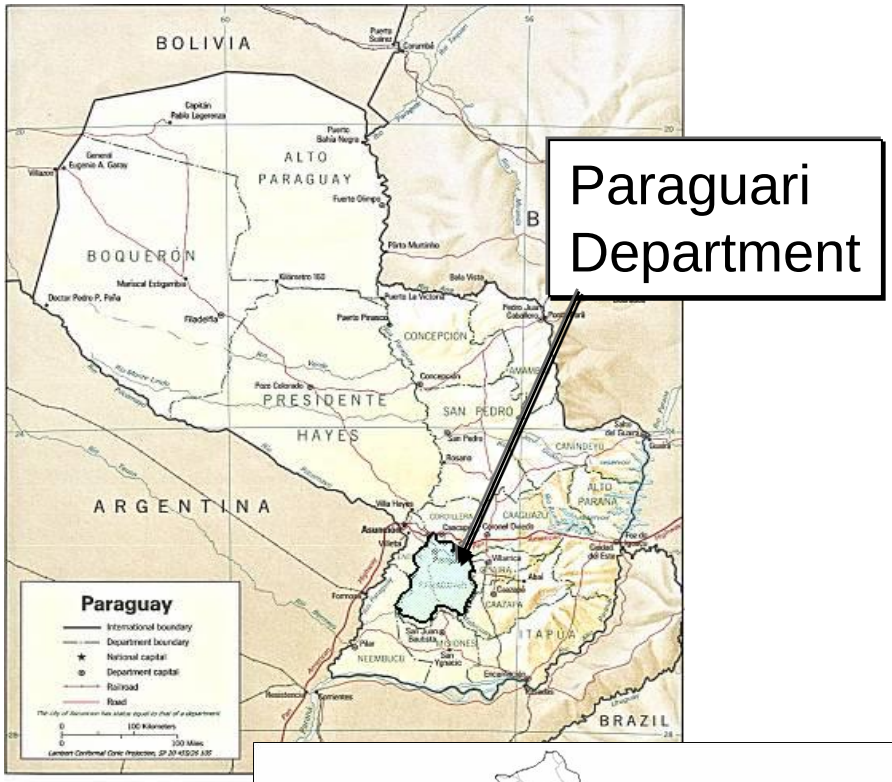
# Lessons learned from CDM projects including AR-CDM and views on REDD from the private sector view point

March 10, 2010

**Clean Energy Finance Committee**
**Mitsubishi UFJ Securities Co., Ltd**

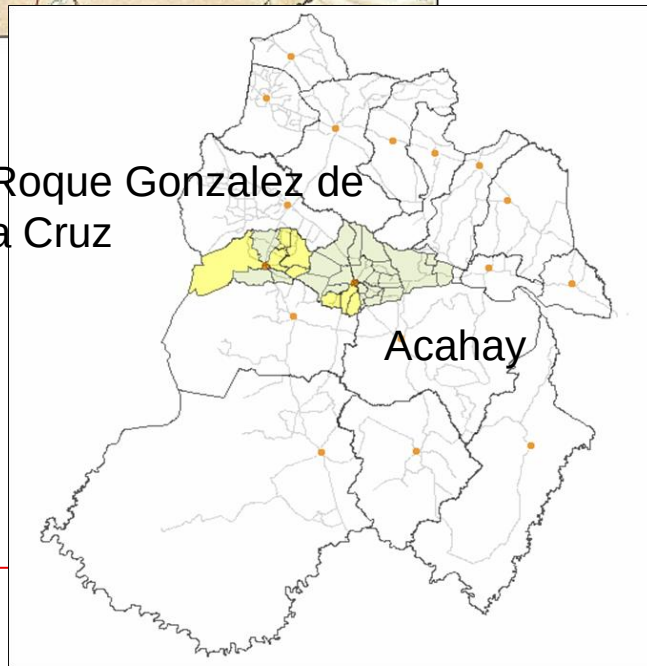
# Summary of the Project

- **Background**
  - Low income and small-scale farmers have limited knowledge on more appropriate soil management practices
  - No financial capability to implement new and less impacting practices




- **Location**: *San Roque Gonzalez de Santa Cruz* and *Acahay* districts,

  Paraguari Department, Paraguay



# Summary of the Project -2

- **Proposed project:** Reforestation of lands that are currently croplands and grassland under poor soil conditions
- **Project participants:**
  - Japan International Research Center for Agricultural Sciences (JIRCAS)
  - Instituto Forestal Nacional (INFONA: Public entity of Paraguay)
- **Other project participants not on the PDD:** About 200 farmers

# Summary of the Project-3

- **Project area:** 215.2 ha
- **A/R type:** Small-scale, Reforestation
- **Methodology:** AR-AMS0001 ver.04.1 (grassland and cropland)
- **Project Status:**
  - Public Comments (Feb 15, 2008)
  - Registered (Sep 09, 2009)
- **Crediting period: 20 years**
- **Type of credits:** tCERs

# Contribution to Sustainable Development

## Environmental Benefits

- Reduce the amount of greenhouse gases
- Prevention of soil erosion
- Protect farms and homes from strong wind

## Socioeconomic Benefits

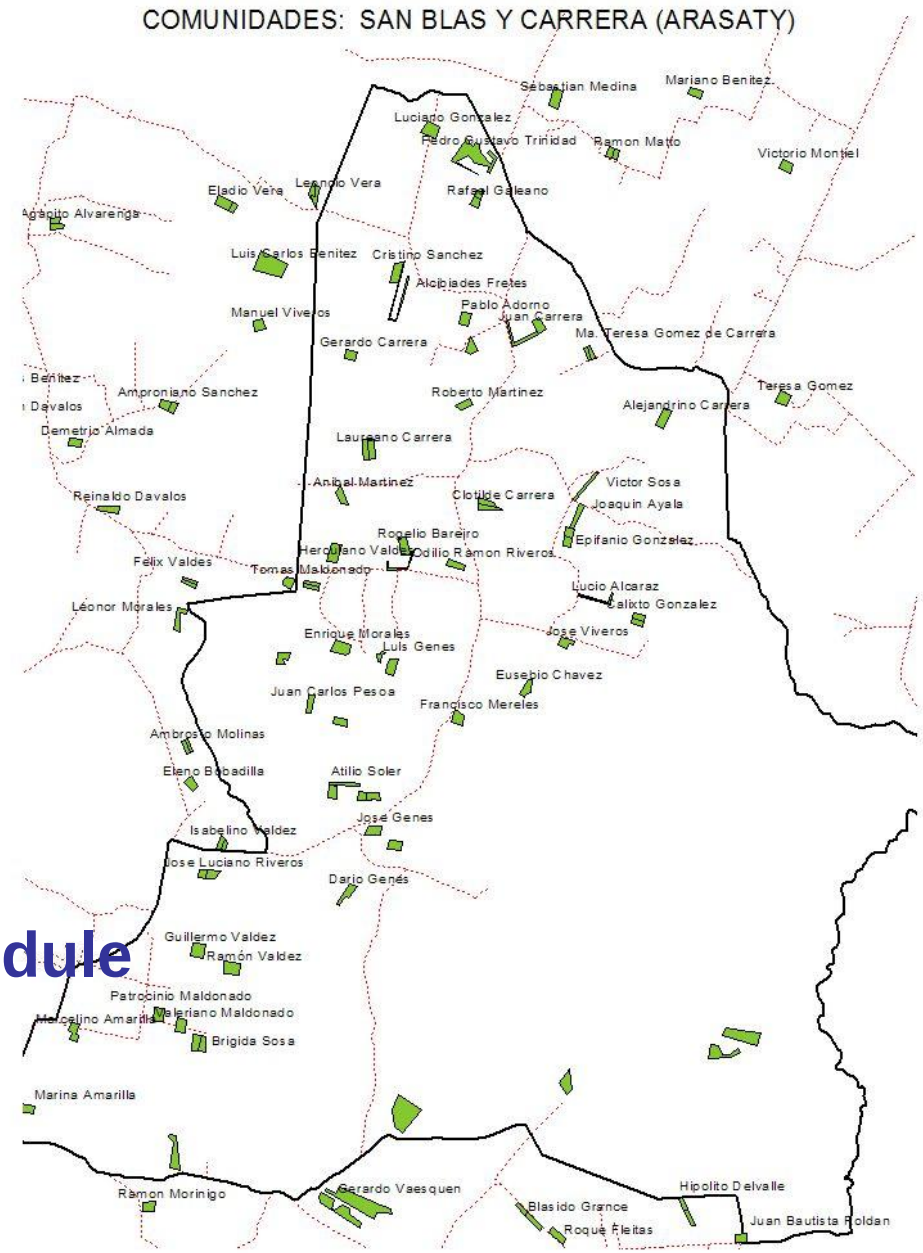
- Gain advanced know-how of reforestation, forestry management and agro-forestry
- Enhance educational program of  forestry activities
- Income from timber products
- Income through CERs

# A/R CDM Project Preparation

- **Project boundaries**

  - All 240 parcels of lands were determined using GPS

  - Mark each parcel




- **Define forestry management schedule**

  Harvesting schedule
  Thinning schedule

# A/R CDM Project Preparation-2

- **Stratification**

  Plant species:

  – 2 eucalyptus species (Eucalyptus grandis, Eucalyptus camaldulensis)

  – 1 silver oak specie (Grevillea robusta)

  Planting schedule: 2007 and 2008

| Stratum | Tree specie | Spacing (m) | Year of planting | Total Area (ha) | |
|---|---|---|---|---|---|
| | | | | Croplands | Grasslands |
| S1 | Eucalyptus grandis | 3.0 × 2.5 | 2007 | 25.2 | 4.8 |
| S2 | Eucalyptus grandis | 3.0 × 2.5 | 2008 | 16.9 | 14.3 |
| S3 | Eucalyptus camal dulensis | 3.0 × 2.5 | 2007 | 6.6 | 9.8 |
| S4 | Eucalyptus camal dulensis | 3.0 × 2.5 | 2008 | 3.6 | 60.9 |
| S5 | Gravillea robusta | 3.0 × 2.5 | 2007 | 5.0 | 0.6 |
| S6 | Gravillea robusta | 3.0 × 2.5 | 2008 | 12.5 | 2.6 |
| S7 | Gravillea robusta | 5.0 × 4.0 | 2007 | 10.6 | 3.5 |
| S8 | Gravillea robusta | 5.0 × 4.0 | 2008 | 23.8 | 14.5 |
| Total | | | | 104.2 | 111.0 |

# A/R CDM Project Preparation-3

- **Baseline**

  Grassland: 111ha (52%) with grazing activity

  Cropland: 104ha (48%) with some trees and palms

Grassland

Cropland

- **Monitoring**

  - Location and size of the area
  - Measure tree height and diameter (DBH) of trees
  - Land ownership

# Estimated GHG removals by sinks

| Years | Annual estimation of net anthropogenic GHG removals by sinks in tonnes of $CO_2$ e |
|---|---|
| Year 1 | -8,737 |
| Year 2 | 5,784 |
| Year 3 | 14,082 |
| Year 4 | 2,970 |
| Year 5 | -30 |
| Year 6 | 9,469 |
| Year 7 | 8,941 |
| Year 8 | 3,850 |
| Year 9 | 1,768 |
| Year 10 | 15,128 |
| Year 11 | 4,082 |
| Year 12 | -19,028 |
| Year 13 | -45,811 |
| Year 14 | 6,913 |
| Year 15 | 14,033 |
| Year 16 | 3,710 |
| Year 17 | 934 |
| Year 18 | 7,662 |
| Year 19 | 8,242 |
| Year 20 | -3,494 |
| Total estimated net anthropogenic GHG removals by sinks (tonnes of $CO_2$ e) | 30,468 |
| Total number of crediting years | 20 |
| Annual average over the crediting period of estimated net anthropogenic GHG removals by sinks (tonnes of $CO_2$e) | 1,523 |

# Difficulties in Developing A/R CDM Project

## Lack of forestry definition and low income communities

- Paraguayan government created the forestry definition for the project. (A minimum area, minimum tree crown cover, A minimum tree height)
- Difficult to obtain definition for low income communities determined by DNA

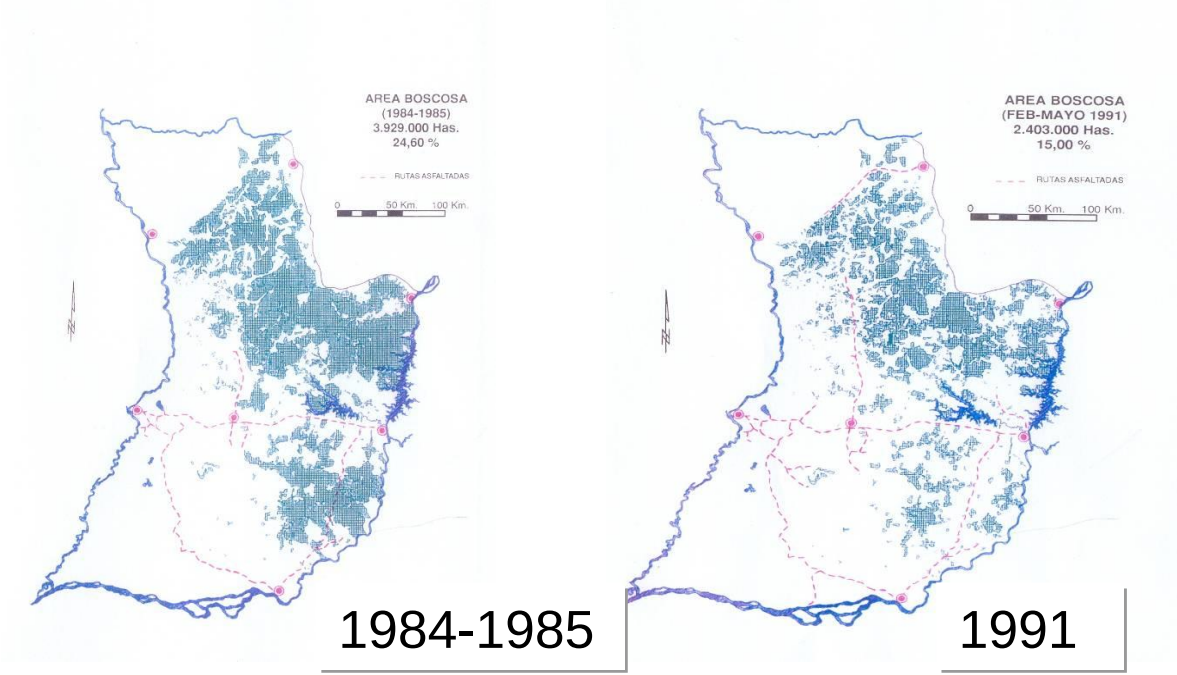
## Land ownership

- Roughly half of the farmers were with title to their lands.
- Evidence of land ownership status from all farmers participating in the project.

# Difficulties in Developing A/R CDM Project-2

## Proof of land eligibility for afforestation and reforestation

- For afforestation, a project proponent is required to provide a sufficient proof that the land did not have woody vegetation above the national threshold for at least 4 single representative years within 50 years.
- The land should not have been forested since January 1st, 1990.




1984-1985 1991

# Difficulties in Developing A/R CDM Projects-3

## Baseline calculation

- number of trees and heights been counted
- Below-ground biomass for grasslands

## Stratification

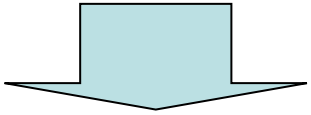
- The number of strata increased by the revised methodology and dividing the planting years into two

## Plant selection process

- One of the initially planned tree species could not be used due to the presence of plant disease

# Financing in Developing A/R CDM Projects

- Need Seed money
- Small incentives from CER sales
- Need cash flow until delivery of CERs



- Japanese ODA for capacity building for agro forestry (Total costs of 20 years:USD1MM, Initial costs: ODA:USD0.3MM +@) Farmers costs in O&M:USD50000)
- Japanese buyers for CSR purpose:USD20000)
- Income from agriculture products

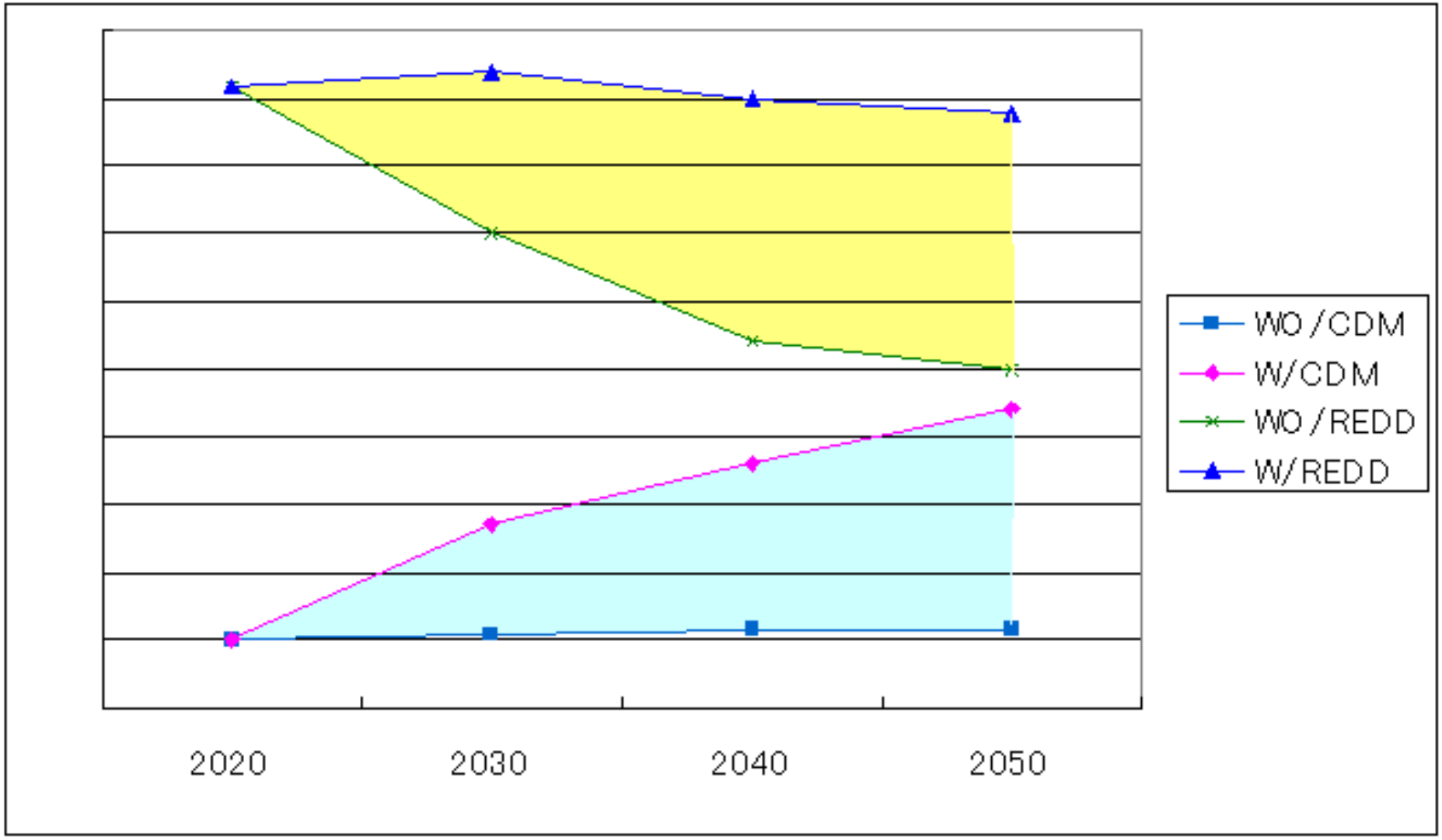
# What we learned from CDM?

- A/R CDM requires a lot of local, technical and historical data → Difficult to collect available local data
- A/R CDM requires special management practice on top of regular forestry management
- Uncertainty with A/R CDM project implementation and longer monitoring period (every 5 years after the first monitoring)
- Buyers find “non-permanence” and replacement of tCERs and lCERs less attractive than CERs from mitigation projects.

# Progress of A/R in CDM EB 2009

- Pre-project **grazing** activities in A/R CDM project activity is insignificant
- Pre-project **crop cultivation** activities in A/R CDM project activity is insignificant
- Estimation of the increase in GHG emissions attributable to displacement of **pre-project agricultural** activities
- Removal of existing vegetation due to **site preparation** are insignificant
- Estimation of GHG emissions due to **clearing, burning and decay of existing vegetation**
- Conservative choice and application of **default data** in estimation of the net anthropogenic GHG removals by sinks
- Terms of reference to assess the implications of the possible inclusion of lands with **forests in exhaustion** as A/R CDM project activities, taking into account technical, methodological and legal issues
- Change in carbon stocks in **existing live woody vegetation** are insignificant
- Conservative choice of **default data** for estimation of biomass stocks and change in woody vegetation
- Estimation of changes in the carbon stocks of **existing trees and shrubs** within the boundary of an A/R CDM project activity
- Calculation of the **number of sample plots for measurements** within A/R CDM project activities
- **New methodologies approved**: 15, **Forest projects registered:** 13

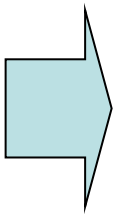
# Differences bet A/R CDM and REDD?



# REDD from the private sector view point

Projects risks vs REDD risks

- Volume
- Indigenous People and minority group
- Land titles
- Loggers, deforesters
- Ownership/Boundary
- Political risk
- Baseline/monitoring



Compliance buyer vs CSR buyer

- Large vs Price
- Reputation risks
- Standard for checking
- Reference case setting

  →Verification by third body
- NEED transparent additional value
- Project based REDD+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