Lam Dong REDD+ Action Plan
Pham Thanh Nam, USAID LEAF • Bangkok, 7 July 2015
News

New disaster in Lam Dong Province: Frost

Lang Biang: New Man and Biosphere Reserve recognized by UNESCO

Decision 247 on PRAP approval
1. Lam Dong Province, Viet Nam
   - Land Area: 977,354 ha
   - Forest Land: 598,192 ha
2. Crediting Year:
   - 2010 to 2020
3. ER target: 27%  
   = 800,000 tCO2e/year
1. Net Emissions: **57.16 million tCO2e**
2. Deforestation + Degradation: **67.28 million tCO2e**
3. Forest Enhancement (plantation development + forest regrowth): **10.12 million tCO2e**
PRAP objectives

**Environmental**
1. Reduce forest sector provincial emissions by 27%
2. Maintain 61% forest cover by 2015
3. Take proactive action to cope with climate change
4. Maintain or improve ecological integrity

**Economic**
1. Increase annual GDP growth rate from 12 to 15%
2. Increase GDP per capita to 2300 USD by 2015
3. No poor households by 2020

**Social**
1. Reduce population growth to 1.3% (2015) and 1.2% (2020)
2. 85% of rural populations will have access to fresh water by 2015 and 100% by 2020
3. Number of malnutrition under 5 years of age reduced to less than 5% by 2020.
The PRAP process

The Process

Define Working Context
- Define and engage stakeholders
- Develop goals and objectives

Survey and Analyze
- Forest cover change assessment
- Ground truthing
- Analysis of drivers of deforestation and forest degradation

Develop Polices and Plans
- PRAP – Provincial REDD+ Action Plan
- Scenario Analysis
- Emissions reference levels

Implement Activities
- Sustainable forest management
- Improved agricultural practices
- Livelihoods support and training

International requirements

Local context

Participation

Monitor and Evaluate
- Reductions in CO2
- Increased forest cover
- Gender Inclusive

REDD+ Fund

M&E

CO2
Area or Activity:

Forest to non-forest: 1000 ha

Carbon or Emission:

Net Emissions: 495 tCO2/ha

Net Emissions: 495,000 tCO2

MODIS 2010 VS 2000

LANDSAT 8 June 2013
Forest Cover Change Assessment

Engage in consultation with key stakeholders at every step.

Aerial imagery used to identify significant areas of change.

Compare forest cover at five year intervals:
- 1990: 71.6%
- 2000: 63.8%
- 2010: 57.8%

Conduct forest inventory and biomass assessment.

Based on information gathered, make an estimate of GHG emissions.

Document Forest Cover Change and historical GHG emissions.

Forest cover change assessment.

USAID - From the American People - LEAF - Fighting Emissions in Asia’s Forests.
Forest cover change assessment 1995

Legend:
- LC_1995
- Agricultural land and other land
- Bamboo forest
- Bareland
- Coniferous forest - Medium
- Coniferous forest - Poor
- Coniferous forest - Regrowth
- Coniferous forest - Rich
- Deciduous forest
- Evergreen - Broadleaf forest - Medium
- Evergreen - Broadleaf forest - Poor
- Evergreen - Broadleaf forest - Regrowth
- Evergreen - Broadleaf forest - Rich
- Mixed Broadleaf and Coniferous forest
- Mixed Wood and Bamboo forest
- Plantation forest
- Residential area
- Water bodies

Scale: 1:1,000,000
Forest cover change assessment 2010

LC_2010

- Agricultural land and other land
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Main Drivers of Deforestation and Forest Degradation

1. Conversion to commercial agriculture crops (coffee)
2. Conversion to plantations
3. Infrastructure and hydropower development
4. Logging and timber extraction
5. Forest Fire and non-timber product extraction
Emission Factors:
Emissions/removals of greenhouse gases per unit of activity data
Example:
- Forest – 500 tCO₂/ha
- Cassava – 5 tCO₂/ha
- Emission Factor = 495 tCO₂/ha

Measured in tCO₂e/ha
\[ V = 0.748 \times DBH^2 \times H_{mt}^{0.764 \times 10^{-4}} \] (2)

\[ AGB = 0.1277 \times DBH^{2.3943} \] (8)

\[ C_i = B_i \times CF \] (15)
Scenario Analysis

- Establish a Target
  - Maintain forest area
  - Reduce emissions by 27%

- Identify potential area for REDD+ based on key criteria, including biodiversity, poverty and other drivers of deforestation

- Develop a series of scenarios

- Compare historical reference level or “baseline” to alternative scenarios

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### Scenario Analysis

- **Scenario 1**
  - Forest cover
  - GHS
  - Cost

- **Scenario 2**
  - Forest cover
  - GHS
  - Cost

- **Scenario 3**
  - Forest cover
  - GHS
  - Cost

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- **Emissions CO2 (MtCO2)**
  - 1990: 1,000,000
  - 2000: 1,500,000
  - 2010: 2,000,000
  - 2020: 2,500,000

- **Legend**
  - Green: Scenario 1
  - Orange: Scenario 2
  - Red: Scenario 3
  - Blue: Historic
  - Gray: Reference level
  - Black: Target
Scenario Development Process
Lam Dong - Scenario Development Process

Legend
S5_CO2e
-1837.558000 - 3662.781000
3662.781001 - 15855.505000
15855.505001 - 35646.208000
35646.208001 - 70052.566000
70052.566001 - 137950.140000
Priority Index (P, BD)

Poverty Index (H, M, L)
Biodiversity Index (H, M, L)

2020 GHG emission
POTENTIAL REDD+ INTERVENTION MAP IN LAM DONG PROVINCE
Policies and Measures (PaMs)

Sustainable Forest Management

Actively promote forest protection and development activities

Support agroforestry methods that increase production while protecting forest areas

Work with state forest companies to reach international standards in forest management.
Policies and Measures (PaMs)

Improve Livelihoods
- Support livelihoods that reduce pressures on forests
- Mobilize funding
- Village development
- Support loans to promote traditional livelihoods

Improve Agriculture Practices
- Provide technical trainings and support
- Encourage use of high yield crop varieties
- Support loans for livestock development

Strengthen Fire Prevention
- Fire watch towers
- Fire risk indicators
- Fire prevention training
- Focus on fire prevention as a strategy to maintain forest resources
Thank you! namdalat83@gmail.com

The PRAP allows

LAM DONG

to promote continued economic growth while managing its forest resources