Selling Carbon offsets* from Forestry Projects
(and other environmental services)

Jan Fehse, EcoSecurities Ltd.
World Parks Congress, Durban
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Forest environmental services

- depending on how they are managed, forests can generate a variety of environmental services

- forest products
- carbon storage
- biodiversity
- links with convention
- watershed protection
- scenic beauty
- socio-economic benefits

The global carbon market is estimated in BB $$

How can the forestry sector (both commercial and conservation) benefit?

Forestry facts: CO₂

In terms of GHG emissions,

- land use change currently ≈ 25% global emissions
- but … could absorb up to 15% of global emissions
Shortage of forestry investment

UNDP:

- Annual investment in forestry sector in developing countries = US$ 20 B
- Estimated to require an additional US$ 36 B
- Development funding: US$ 1.5 billion
- Additional funding is welcome !!!

Leveraging investment

“Carbon capital” could leverage a much larger amount of investment in the real assets

Forestry practices for carbon accumulation (sink creation)

- Tree planting:
  - reforestation
  - rehabilitation
  - agroforestry
- silvicultural treatments
- soil amelioration
Forestry practices for reducing carbon emissions (pool conservation)

- Forest conservation (avoided deforestation)
- Reduced Impact Logging
- Fire prevention and control
- Fuel switching - biomass
- Erosion control

What are requirements for carbon trading from (CDM) forestry projects?

CDM limitations

- Limited to about 20% of a county’s emission reduction target
- Types of activities: afforestation and reforestation in areas deforested before 1990

Eligibility Criteria for CDM projects

- Acceptability:
  - Host country acceptance
  - International regulations
- Additionality:
  - emissions additionality: difference between baseline and project
  - investment additionality
  - financial additionality (no ODA funding)
- Externalities:
  - leakage
  - social, environmental and developmental effects
Project design and documentation

The project needs to put together a Project Design Document (PDD), containing:

- Project description and purpose
- Quantification of net GHG benefits
- Crediting period and project life-time
- Other environmental impacts
- Stakeholder comments
- Monitoring plan

External quality control

Validation:
the project design is analysed. Projects can only continue to the implementation phase after official approval of the validation report by the CDM Executive Board

Verification:
'carbon credits' can only be issued after monitoring results have been externally verified

Costs and timing

Transaction costs: approx. 100k – 150k US$

Internal costs (admin, legal, monitoring, etc.): depending on project size and complexity, but could also be 100’s of k US$

Time required for CDM project development: approx. 1.5 years

So not easy & not cheap, but...

- Carbon revenue could be MM$$!
- Projects may make sustainable land use practices financially viable in parks and buffer zones and take pressure off existing forests
A case study of a CDM forestry project

‘Alternative financing model for the sustainable management of the forests of San Nicolas, Colombia’

Project aims

• Promote Sustainable Forest Management

• Explore alternative financing for SFM
  • incl. sale of ‘Environmental Services’

• Umbrella project for 10,000 poor farmers to increase their level of income

• Strengthen institutions, communities and cooperation between public, private and ‘rural’ sectors through joint membership in the project

Project region:
Watershed for city of Medellin and 2 hidroelectric dams

30,000 ha declared for conservation
42,000 ha as „forestry land“

More than 10,000 families
90% Privately owned, mostly small farmers

Project activities

Table 4. Planting schedule of the CDM-eligible activities.

<table>
<thead>
<tr>
<th>Project years</th>
<th>0</th>
<th>1</th>
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<th>3</th>
<th>4</th>
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Total | 1750 | 1930 | 1350 | 1350 | 1150 | 650 | 450 | 450 | 200 | 200 | 9480 |
### Project activities

#### Table 7. Planting schedule of the non-CDM activities.

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### Carbon quantification

#### Modelling of net carbon flows per ha.

- **ECO2Forestry™ Model**
- **Project life-time:** 40 years (two 20 yr rotations)
- **Per ha baseline:** maintenance of pastures

### Financial Instruments for the Commercialization of Forest Environmental Services

- **Certified Emission Reductions (CER)**
  - CDM market ($5.5 – 8.5 per tCO2e)
- **Verified Emission Reductions (VER)**
  - Voluntary market ($2 per tCO2e)
- **Environmental shares (ES – environmental and socio-economic spin-offs of carbon offset activities)**
  - ($1.5 per tCO2e)

**Products:** CER+ES and VER+ES
### Application of C revenues

- Carbon revenues are used to finance the planting of the activities – part of C sales must be upfront
- Farmers do not receive $$, but have ownership of the plantation and its products

### Similar projects

- **Cuyabeno Reserve – Ecuador**
  - Reforestation of Amazon forest
- **Bamenda Highlands - Cameroon**
  - Rehabilitation of degraded lands and buffer zone management