

Forest Carbon Possibilities and Impossibilities

Paramaribo, 7 May 2009

Adriaan Korthuis

Outline



CLIMATE FOCUS

- Background
- Issues
 - Permanence
 - Measuring
 - Additionality
 - Leakage
- Project Types
 - Afforestation and Reforestation (A/R)
 - Reducing Emissions from Deforestation and Degradation (REDD)
 - Improved Forest Management (IFM)
 - Peatland Management (Peat)
- Status of the Market
 - Compliance Market
 - EU ETS and forestry
 - Future Compliance Market
 - Voluntary Market

Introduction



CLIMATE FOCUS

- Forest assets traditionally undervalued
 - Value given to value of land for alternative uses or value of timber only
- Existence of carbon market allows carbon sequestration or emission reduction potential of forests to be valued
 - Limited to recognized/eligible project types
 - Carbon market focused on “carbon” value only
- Carbon finance forestry projects can deliver additional benefits e.g.
 - Community development (jobs, income)
 - Biodiversity conservation (restoration/protection)
 - Watershed protection
 - Soil stabilization

LULUCF and the regulatory environment



CLIMATE FOCUS

- For the last decade, LULUCF has been at the margin of the negotiation of the major climate change related regulatory frameworks.
- There is a recognition of the LULUCF sector
 - As large source of GHG emissions (mainly through deforestation)
 - As mitigation opportunity through the uptake of CO₂ from the atmosphere (sinks)
- *However* the focus of the Kyoto Protocol as well as the EU ETS is on the reduction of fossil fuel based and industrial emissions, LULUCF is mainly seen as
 - Increasing the flexibility to meet negotiated or assigned targets (pro-sinks)
 - Diverting the attention from the main goals of the regulatory instruments (anti-sinks)

Post-Kyoto negotiations



CLIMATE FOCUS

There is a **need** for comprehensive system that rewards

- Decreasing deforestation
- Sustainable forest management
- Restoring forests
- Sustainable production and use of biomass
- Soil carbon management in agriculture

Tools: Reform of the LULUCF CDM. Design of new approaches and mechanisms to include emissions from deforestation and land degradation. Full accounting for land-use emissions.

Differences compared to 1997 when the KP was negotiated:

- Scientific basis more robust
- Political will incl from developing countries to address the problem of GHG emissions from deforestation
- Acknowledgement of the opportunity provided by the carbon market
- Active discussion on various proposals

Issues

Measuring and Monitoring



CLIMATE FOCUS

Uncertainties

- There was no agreed methodological basis for measuring and monitoring emission reduction relating to land use projects

Recent Developments

- IPCC's GPG-LULUCF
- 2006 IPCC Guidelines for National Greenhouse Gas Inventories
- Data and analytical methods for monitoring change in land cover using remote sensing and field based techniques (GOFC-Gold report series, FAO, Winrock International)
- Third party validation and verification of measurement and monitoring required in all mandatory schemes

Additionality



CLIMATE FOCUS

Uncertainties

- The reforestation activity and hence carbon benefits would have occurred anyway in the 'business-as-usual' scenario

Recent Developments

- Large areas of degraded and deforested lands continue to exist in the tropics and sub-tropics which are not viable to reforest without carbon financing
- UNFCCC Tool on Additionality in A/R CDM Projects:
 - projects require carbon finance for the viability of the project *or*
 - projects required to identify other barriers which would prevent the project activity from taking place



Uncertainties

- The implementation of project will lead to an increase in GHG emissions in another area outside the project boundary

Recent Developments

- Sources of leakage can be identified using a conservative approach that ensures they are not underestimated
- Leakage can be minimized. When it does occur it can be quantified and deducted from a projects carbon balance sheet
- Specific baseline methodologies approved under the CDM to deal with displacement of specific activities e.g cattle grazing, agriculture etc



Uncertainties

- Biological sinks could be reversed and their longevity could not be ensured

Recent Developments

- Loss of carbon benefits are monitored and deducted on carbon balance sheet
- On the ground experience of strategies to reduce and address the risk of loss of permanence e.g. fire breaks, pest control, community initiatives
- The risk of loss from a natural event in a managed forest is small – averaging 0.04% of loss per year (Hancock)
- Non permanence has been addressed for CDM A/R projects by means of temporary crediting
- Insurance (eg AIG) and reserve buffers (eg CCX) can be established to cope with unforeseen loss in carbon stocks

Project Types

CDM Afforestation/Reforestation (A/R) Projects



CLIMATE FOCUS

- In practice no real difference between Afforestation and Reforestation
- HC definition of “forest” must be met
- Project start after 2000
- Land deforested on 31 Dec 1989
- Crediting Period: 20 years renewable twice (total 60 years), or 30 years (not renewable), retroactive crediting allowed
- “Permanence risk” (i.e. loss of forest): Dealt with by creating “tCERs” and “ICERs” that need to be constantly re-issued or re-verified



A/R under Voluntary Carbon Standard



CLIMATE FOCUS

- No need to meet definition of “forest”
- There is no 1989 date similar to CDM
 - Need to demonstrate that forest not cleared to get VCS credits and that previous forest cleared at least 10 years prior to project start date
- Additionality test is more flexible than the CDM
- Crediting period is 20 – 100 years
- Permanence risk addressed using “buffer approach”



VCS buffer approach



CLIMATE FOCUS

- Applicable to all VCS forest projects
- Permanence risk is assessed by two validators using a number of “risk factors”
- Based on project’s risks a % of credits are set aside in a buffer account
- Future verification is optional, but demonstrating permanence over time will “release” some of the credits that have been set aside
- Results in permanent, fully fungible Voluntary Carbon Units being issued for the project

Reducing Emissions from Deforestation and Degradation (REDD)



CLIMATE FOCUS

Environmental Problem

- Forests store about 638 gigatonnes (Gt) of carbon
- 50% more carbon than in the atmosphere
- Gross deforestation averages 13m ha/year (net loss 7.3 million ha/year)
- Responsible for 20% - 25% of global CO₂ emissions



Challenges to a Solution

- Scary scale
- Uncertainty: methodological issues, leakage, permanence etc
- Sovereignty issues and country specific circumstances
- Environmental, social and socio-economic effects



REDD projects



CLIMATE FOCUS

- Design elements
 - Forest
 - Deforestation (conversion of forest to non-forest)
 - Activity that reduces deforestation
 - Management of permanence and leakage
- Host country endorsement preferable to mitigate political risk
- VCS eligible methodologies currently under development



REDD: complex krachtenveld

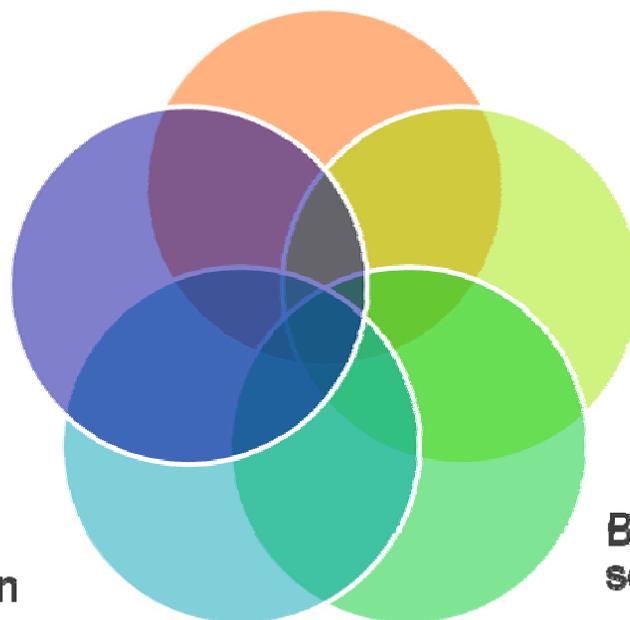


CLIMATE FOCUS

Financiering van bosbehoud;

- emissiehandel of fondsen
- project- of landniveau
- samenhang met ontwikkelingshulp
- rol van multilaterale organisaties

Soevereiniteit
tropische
boslanden: baas in
eigen bos?



Emissiedoelstellingen
industrielanden

- hoeveel reductie
- hoeveel compensatie door REDD

Emissiehandel:
REDD-credits een
vloek of een
zegen?

Betrokkenheid van private
sector

- uitvoering van projecten
- toegang tot REDD-credits

Improved Forest Management (IFM) project types



CLIMATE FOCUS

- Improved forest management activities are carried out on forests that remain as forests.
- Project categories:
 - Conversion from conventional logging to reduced impact logging
 - Conversion of logged forests to protected forests:
 - protecting currently logged or degraded forests from further logging; and
 - protecting unlogged forests that would be logged in the absence of carbon finance.
 - Extending the rotation age of evenly aged managed forests

IFM project types



CLIMATE FOCUS

- Project categories continued:
 - Conversion of low-productive forests to productive forests (improving the stocking of poorly stocked forests)
 - introduction of better tree species and/or silvicultural techniques;
 - improved fire management;
 - improved grazing management;
 - improved fuel wood management
- Similar issues of permanence, leakage, additionality of other projects

Example of IFM project



CLIMATE FOCUS

Before



Few years later



Status of the Market

Current Compliance Market for Forestry Projects



CLIMATE FOCUS

- Only 3 CDM forestry projects registered to date
- tCERs and ICERs valued at a fraction of regular CERs
- No demand from EU private sector because not allowed in EU ETS
 - Canada also indicated will not allow international forest credits (but will allow domestic)
- Currently no compliance market for REDD, IFM, Peat lands

Future Compliance Markets?



CLIMATE FOCUS

Future domestic trading schemes

- US State
 - RGGI: allows local forestry offsets and does not exclude international (but international credits not defined yet)
 - California: expected to allow local forestry offsets
- US Federal
 - Will dwarf EU market
 - Not expected to pass until 2009 or 2010 at the earliest, coming into affect ~2012 or later
 - Expected to allow domestic and international forestry
 - L-W allowed 10% int. forestry offsets and 5% for all other categories
- US potential
 - Significant potential for IFM, limited A/R and REDD because of land prices

Future Compliance Markets?



CLIMATE FOCUS

Future domestic trading schemes cont.

- Australia
 - Federal ETS under development, but NSW trading scheme already has domestic forestry
- New Zealand
 - Federal under development, domestic forestry will be recognized, but int. forestry?
- EU
 - Efforts underway for a number of years to lift ban

Future Compliance Markets?



CLIMATEFOCUS

Post-2012 agreement

- REDD may be included in future trading regime
 - Most countries push for inclusion
 - Unclear how it may be included and treated
- Possible revision of CDM A/R?
 - Possible expansion to IFM and other land use related project types
 - Some calls for reform of A/R rules
 - Unclear if these reforms will occur (not much traction yet?)

Status of the Voluntary Market



CLIMATE FOCUS

Voluntary Market

- Most forestry projects developed for voluntary market
- Some criticism for bad projects/permanence risks

Transaction Volumes and Values, 2006 and 2007¹

Markets	Volume (MtCO ₂ e)		Value (US\$million)	
	2006	2007	2006	2007
Voluntary OTC Market	14.3	42.1	58.5	258.4
CCX	10.3	22.9	38.3	72.4
Total Voluntary Markets	24.6	65.0	96.7	330.8

Source: Ecosystem Marketplace, New Carbon Finance

- Market still small compared to compliance market - risk of market flooding if large volumes of new supply enters the market
- CCX prices and volumes increased significantly in 2008

Risks and Hurdles



CLIMATE FOCUS

- Lack of project finance
 - Over-estimating revenue
 - Under-estimating costs
- Project too small
- Not conducting legal due diligence
- Lack of technical expertise
- Lack of host country support

Summarising



CLIMATE FOCUS

- Market for forestry carbon still very small, and mostly voluntary
- Post-Kyoto agreement: will give a greater role to forestry, but still unclear how
- Individual project developers: there is more to a forestry project than only having a forest

Contacts

For more information:

:

Charlotte Streck

Director

Climate Focus

Ph: +31 64 64 2 64 81

E-mail:

c.streck@climatefocus.com

Adriaan Korthuis

Director

Climate Focus

Ph: +31 64 64 2 64 82

E-mail:

a.korthuis@climatefocus.com