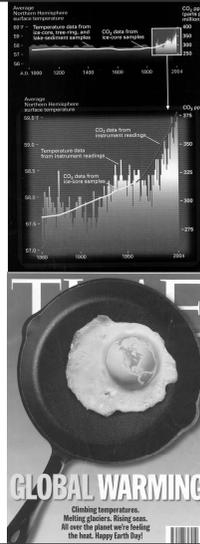


# CERTIFICATION OF C-OFFSET FORESTRY PROJECTS

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## Outline

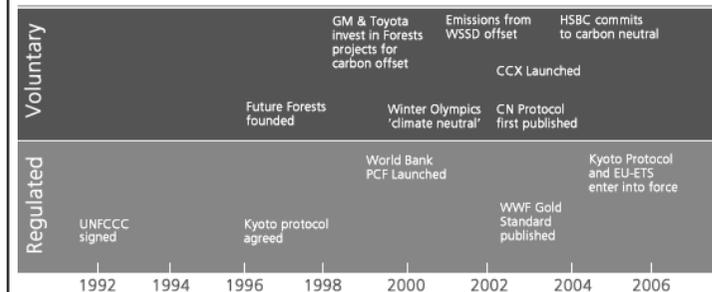
*Repetita iuvant*

- **The two markets:**
  - “regulated”
  - voluntary
- **Implementation problems:** connected with
  - the forest projects’ inner characteristics
  - the procedures
- **The need for standardization and certification**
- **Conclusions**

## The two markets

- “Regulated” (institutional) ← Kyoto Protocol
- voluntary

## C-offset investments: the two markets



## Mitigation options in the forest sector

"Regulated" market

- Increasing the forest area establishing new forest stands (AF and RF)
- Increasing Carbon stock through forest management (FM)
- Maintaining the forest area through Reducing Deforestation and Forest Degradation (REDD)
- Increasing off-site carbon stocks in wood products
- Fossil fuel substitution (Bioenergy / biofuels)

The "regulated" market = CDM , JI is the reference market for many aspects of the methodological approach to be used

## The regulated market

## A special instrument for C offsetting: the Kyoto Protocol "mechanisms"

- Clean Development Mechanism (CDM)
- Joint Implementation (JI)
- Emission Trading (ET) → in EU = ETS (ET Scheme)

CDM: defined in Article 12 UNFCCC provides for Annex I Parties to implement project activities that reduce emissions in non-Annex I Parties, in return for Certified Emission Reductions (CERs).

The CERs generated by such project activities can be used by Annex I Parties to help meet their emissions targets under the Kyoto Protocol.

## CDM

- Definitions and modalities have been developed for including afforestation and reforestation activities (often referred to as "sinks") in the CDM for the first commitment period.
- However, Annex I Parties are limited in how much they may use CERs from such activities towards their targets (up to 1% of the Party's emissions in its base year, for each of the five years of the commitment period).

CDM and JI implementation in the forestry sector

Home | CDM | JI | CC | RW | TT | CHM

Your location: CDM Home > Panels / Working Groups / Teams

13:10:26 Nov 07

**Panels / Working Groups / Teams**

The Executive Board may establish committees, panels or working groups to assist in the performance of its functions. The Executive Board shall draw on the expertise necessary to perform its functions according to the UNFCCC roster of experts. In this context, it shall take fully into account the consideration of regional balance. (Rule 32 of the rules of procedure of the Executive Board) [Decision SC/CP.4 \(175 KB\)](#)

The Executive Board on 22 March 2002, approved the [General guidelines for panels \(version 2\) \(39 KB\)](#), in accordance with [para29 of its draft rules of procedure](#).

**Panels / Working Groups / Teams**

- Accreditation Panel:** The Accreditation Panel (AP) was established to prepare the decision making of the Executive Board in accordance with the procedure for accrediting operational entities. [more >>](#)
- Meth Panel:** The Methodologies Panel (Meth Panel) was established to develop recommendations to the Executive Board on guidelines for methodologies for baselines and monitoring plans and prepare recommendations on submitted proposals for new baseline and monitoring methodologies. [more >>](#)
- Attestation and reforestation working group:** The working group on attestation and reforestation for CDM project activities (AR WG) was established to prepare recommendations on submitted proposals for new baseline and monitoring methodologies for CDM A/R project activities. The working group is expected to work in cooperation with the Meth Panel. [more >>](#)
- Small scale working group:** The small scale working group (SSC WG) was established to prepare recommendations on submitted proposals for new baseline and monitoring methodologies for CDM small scale project activities. [more >>](#)
- Small scale Panel (SSC Panel):** The small scale Panel (SSC Panel) was operational from April 2002 to August 2002 and recommended draft simplified methodologies and procedures for small-scale CDM project activities to the Executive Board. [more >>](#)
- CDM Registration and Issuance Team:** The CDM Registration and Issuance Team (RIT) assists the CDM Executive Board by appraising requests for registration of project activities and requests for issuance of CERs. The team is chaired by a member of the Board on a rotating basis. [more >>](#)

<http://cdm.unfccc.int/Panels/index.html>

Your location: CDM Home > Designated Operational Entities (DOE) > List of DOEs

13:41:02 Nov 07

**List of DOEs**

**Designated Operational Entities**

The Executive Board, in accordance with [paragraph 20 of the CDM modalities and procedures](#), shall maintain a publicly available list of designated operational entities. The table below provides the list of accredited and provisionally designated operational entities for validation functions. These entities are accredited for the sectoral scopes shown below in the table and qualify to submit requests for project registration in these sectoral scopes.

[List of sectoral scopes \(active version\) \(15 KB\)](#)

Ref. Number	Entity Name (short name)	Sectoral scopes for validation	Sectoral scopes for verification and certification
E-0001	Japan Quality Assurance Organization (JQA)	1 2 3 4 5 6 7 10 11 12 13	
E-0002	JACO CDM LTD (JACO)	1 2 3	1 2 3
E-0003	Det Norske Veritas Certification AS (DNV Certification AS)	1 2 3 4 5 6 7 8 9 10 11 12 13 15	1 2 3 4 5 6 7 8 9 10 11 12 13 15
E-0005	TUV SUD Industrie Service GmbH (TUV-SUD)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 15
E-0006	Tohmatu Evaluation and Certification Organization Co., Ltd. (TECO)	1 2	
E-0007	Japan Consulting Institute (JCI)	1 2	
E-0009	Bureau Veritas Certification Holding S.A. (BVC Holding S.A.)	1 2 3 4 5 6 7 10 11 12	1 2 3
E-0010	SGS United Kingdom Ltd. (SGS)	1 2 3 4 5 6 7 10 11 12 13 15	1 2 3 4 5 6 7 10 11 12 13 15
E-0011	The Korea Energy Management Corporation (KEMCO)	1	
E-0013	TÜV Rheinland Japan Ltd. (TÜV Rheinland)	1 2 3 13	
E-0014	KPMG Sustainability B.V. (KPMG)	1 2 3 13	
E-0016	British Standards Institution (BSI)	1 2 3	
E-0021	Spanish Association for Standardisation and Certification (AENOR)	1 2 3	1 2 3
E-0022	TÜV NORD CERT GmbH (TUVN)	1 2 3 4 5 6 7 10 11 12 13	1 2 3
E-0023	Lloyd's Register Quality Assurance Ltd (LRQA)	1 2 3 4 5 6 7 10 11 12 13	
E-0024	Colombian Institute for Technical Standards and Certification (ICONTEC)		1 2 3
E-0025	Korean Foundation for Quality (KFD)	1 2 3	
E-0029	PriceWaterhouseCoopers - South Africa (PWC)	1 2 3	

(\* Whenever there is an update to this list, a message will be sent to the [CDM News Portal](mailto:CDM@unfccc.int).)

Home | CDM | JI | CC | RW | TT | CHM

Your location: Project 0547 : Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin

**Project 0547 : Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin**

**Project title**  
Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin  
[Project design document \(1729 KB\)](#)  
[Registration request form \(4160 KB\)](#)

**Host Parties**  
China [Approval \(102 KB\)](#) [Authorization \(102 KB\)](#)  
Authorized Participants: Xinghuan Forestry Development Company Ltd

**Other Parties Involved**  
n/a

**Bilateral and Multilateral Funds**  
Italy, involved directly [Approval \(118 KB\)](#) [Authorization \(118 KB\)](#)  
Spain, involved directly [Approval \(204 KB\)](#) [Authorization \(204 KB\)](#)

**Activity Category(ies)**  
14

**Activity Scale**  
LARGE

**Methodologies Used**  
[MR-M0001 ver. 2 - Reforestation of degraded land](#)

**Amount of Reductions**  
25,795 metric tonnes CO2 equivalent per annum

**Fee level**  
USD 3659

**Validation Report**  
[Explanation of taking due account of comments \(14 KB\)](#)  
[List of documents \(22 KB\)](#)  
[List of interviewed persons \(19 KB\)](#)  
[Modalities of communication \(68 KB\)](#)  
Other documents (descriptions provided by the DOE)  
[PDP as in CSP \(1781 KB\)](#)  
[Validation report incl. annexes \(421 KB\)](#)

**Public availability information**  
at time of opening the registration process at [http://www.netinform.de/KE/wegweiser/Guide2.aspx?ID=1471&Ebene1\\_ID=26&Ebene2\\_ID=391&mode=1](http://www.netinform.de/KE/wegweiser/Guide2.aspx?ID=1471&Ebene1_ID=26&Ebene2_ID=391&mode=1)  
[Compilation of all comments received \(14 KB\)](#)

**Registration Date**  
10 Nov 05

**Crediting Period**  
01 Apr 06 - 31 Mar 38 (Fixed)

## JI

- under JI, an Annex I Party may implement an emission-reducing project or a project that enhances removals by sinks in the territory of another Annex I Party and count the resulting emission reduction units (ERUs) towards meeting its own Kyoto target.
- Any JI project shall have the approval of the Parties involved and provide a reduction in emissions by sources, or an enhancement of removals by sinks, that is additional to any that would otherwise occur.
- Projects starting as of the year 2000 may be eligible as JI projects if they meet the relevant requirements, but ERUs may only be issued for a crediting period starting after the beginning of the year 2008.

## ET → ETS

Agriculture and Forestry: not included in the EU *Emission Trading Scheme* (EU ETS) – Dir. 87/2003

*“They (i.e. the forest projects) do not bring technology transfer, they are inherently temporary and reversible, and uncertainty remains about the effects of emission removal by carbon sink”* (CE, 2003)

## Role of the formal “Commitments”

- *Policy commitments*: “Cities for Climate Protection” 150 cities with commitments on emission reduction from 5 to 10%
- *Corporate Commitments*: AES, BP Amoco, MAZDA, AVIS, Dupont, Shell International, Interface, Duch Electricity Generating Board (FACE Foundation), The Climate Group, ...

reduction policies with different targets (5-20 till 100%).

“Carbon neutral”,  
“Zero emission”,  
“Go Zero”,  
“Zero carbon footprint”

## The voluntary market

The screenshot shows a website with a header image of a landscape with trees and a globe. The main content area has a title "Vatican to Become World's First Carbon Neutral Sovereign State" and a sub-headline "Planktos/Klimaf's New Vatican Climate Forest Initiative to Fully Green the Holy See". The text below describes the Vatican's commitment to carbon neutrality and the creation of a climate forest. A sidebar on the left contains a "Main Menu" with links like "Home", "За нас", "Климатический Форум", "Проекты", "Климатический Форум", "Новости", "News", "За Инвестирование", "Карьера", "Ресурсы", "Телефон", and "Designed by: Joomla! Templates". A small text box on the right side of the main content area says "Short video of the Vatican acceptance ceremony high resolution copies are available to the media upon request".

Some examples qq1

**FIA Foundation**  
for the Automobile and Society

Home News Campaigns & Media Centre Bookstore About

You are here: FIAFoundation.com Home / News / Environment

### Foundation goes green in Mexico

Carbon sequestration through forestry projects is recognised as playing a role in helping to reduce the threat of climate change. The FIA Foundation is now supporting a carbon sequestration project in Mexico, which offsets all the carbon dioxide emissions from racing cars in the Formula 1 and World Rally Championships series. The Scolol Te project in Chiapas is funded by the United States Initiative for Environmental Purpose also provides direct support for local people in the form of a grant for the scheme was formally announced at a ceremony in Mexico City attended by Max Mosley, FIA President and FIA Foundation trustee.



Max Mosley, Chairman of the FIA Foundation Programmes Committee, presents a cheque for the Scolol Te Chiapas Project, in Mexico City

**Road Safety**  
**Environment**  
News and Activities  
Policy Monitor  
**Mobility**  
Motor Sport Safety

The Day After Tomorrow - Microsoft Internet Explorer

GLOBAL WEATHER ALERTS TOKYO, JAPAN... E FOUND HAL POUND CITY... SAN FRANCISCO, CA... BAY FREEZES - NO THRU IN THE

**MULTIMEDIA**  
GALLERIES  
MONTAGES  
DOWNLOADS  
VIDEO  
GLOBAL WATCH  
CITY FREEZE  
RECIPE FOR DISASTER

### FUTURE FORESTS & CARBON NEUTRAL

At some point during the filming we looked around at all the lights, generators and trucks and we realized: the very process of making this picture is contributing to the problem of global warming! We couldn't avoid putting CO2 into the atmosphere during the shoot but we discovered that we could do something to make up for it: we could make the film CarbonNeutral.

Through a mix of energy conservation and tree planting, Future Forests is helping us offset the greenhouse gases released during the making of The Day After Tomorrow. Many of the cast and crew have become CarbonNeutral as well. It's only a small part of the solution to a very big problem, but it's a start. The movie is fiction, we'd like to keep it that way.

— Roland Emmerich, Mark Gordon & Jeffrey Nachmanoff

**ROLAND EMMERICH DIRECTOR**  
"The threat of global climate change is the only problem big enough to force all the countries of the world to stop fighting and work together to save the planet."

Future Forests is a company dedicated to making it quick and easy for people and companies to find out how much carbon dioxide they produce, to provide them with straightforward ways of reducing those emissions, and interesting options for "neutralizing" what can't be reduced. Visit Future Forests at [www.futureforests.com/dayafter](http://www.futureforests.com/dayafter) to find out what you can do to become CarbonNeutral.

Find out what you can do to help. **futureforests**

WHAT CONSIDER YOU MOST ABOUT CLIMATE WARMING?  
A. MASSIVE FLOODING FROM MELTING GLACIERS  
B. EXTREME WEATHER EVENTS LIKE HEAT WAVES AND DROUGHTS  
C. ENTIRE CONTINENTS COVERED IN ICE

ABOUT THE DVD  
REGISTER  
VIEW THE TRAILER  
SYNOPSIS  
PARTNERS

THE DAY AFTER TOMORROW  
EXPERIENCE A REVOLUTION IN HOME ENTERTAINMENT

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futureforests™ explain more our shop forests & projects

our shop Dedicate a tree: Leonardo DiCaprio

plant a tree gift ideas special occasions CarbonNeutral flights CarbonNeutral driving CarbonNeutral homes CarbonNeutral cars Carbon calculator

Your basket is empty my basket >>

Leonardo DiCaprio CarbonNeutral with Future Forests

An outpost of Future Forests has been set up in Costa Rica. Future Forests has carbon dioxide projects in details.

CarbonNeutral We calculate greenhouse travel, per person produced.

Leonardo DiCaprio by having it added to alternative in Biomass.

Future Forests four locations and Europe forests, by Choose tree.

As acknowledge special recycled photo album.

**IMPATTO ZERO**  
LIFE GATE

**Elisa Negrini**  
ha contribuito alla salvaguardia dell'ambiente. Aderendo al progetto Impatto Zero® ha partecipato alla creazione di 1.187 mq di foresta in crescita in Costa Rica compensando 920 kg di CO2 prodotti per la realizzazione della lesa: "Bilancio del gas effetto serra delle Facoltà di Agraria e Medicina Veterinaria - polo di Agripolis, Legnano (PO)"

Parco Lombardo della Valle del Ticino

CERTIFICATO n° 488.00975 VALIDITÀ un anno a partire da 30 ottobre 2006

**LIFE GATE**  
www.lifegate.it

02/048... 02/048... 02/048... 02/048... 02/048...

## How the voluntary carbon market is working?

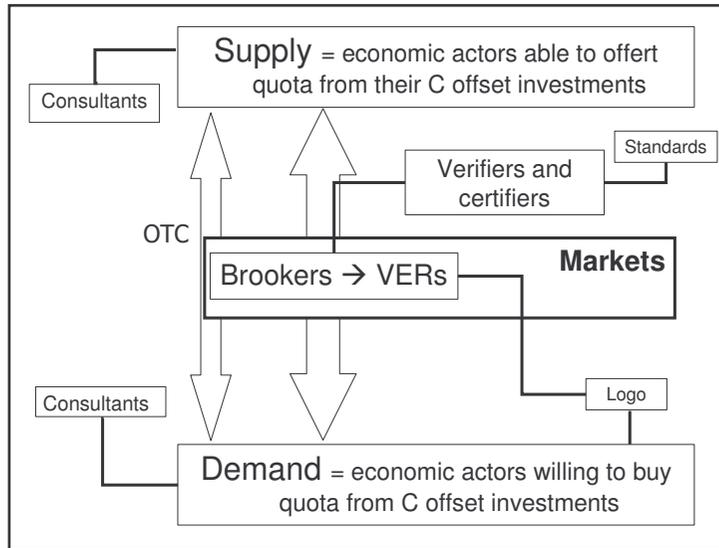
Chicago Climate Exchange (CCX) and other schemes

Over-the-counter (OTC) market

**CCX is a structured and closely monitored cap-and-trade system that organizations join voluntarily.**

**Outside of CCX, one finds a wide range of voluntary transactions that are not driven by an emissions cap, and do not, for the most part, trade on a formal exchange. This mass of transactions is referred as the over-the-counter (OTC) market.**

**Because this OTC market transacts on a highly fragmented deal-by-deal basis, it is extremely difficult for stakeholders to both track and navigate.**



## VERs

- **VERs (Verified Emission Reductions).**  
1 t CO<sub>2</sub> = 1 VER.

Largest VERs market: **Chicago Climate Exchange (CCX).**  
1 VER = 5 \$ (3.2 €)  
(1 ETS = 35 \$; 22.1 €)



**Chicago Climate Exchange**

Market Info / CCX CF1 2005: \$7.30 / CCX CF1 2004: \$7.30 / CCX CF1 2005: \$7.30 / CCX CF1 2006: \$7.30

**Forestry Carbon Emission Offsets**

CCX has been a leader and innovator in developing simple, standardized rules for issuing Carbon Financial Instruments® (CFI™) contracts for forest carbon sequestration. Eligible projects on CCX may exist under all four of the mitigation measures outlined by the Intergovernmental Panel on Climate Change (IPCC):

- Maintaining or increasing forest area: reducing deforestation and degradation
- Maintaining or increasing forest area: afforestation/ reforestation
- Forest management to increase stand- and landscape-level carbon density
- Increasing off-site carbon stocks in wood products and enhancing product and fuel substitution

All managed forest offset projects and afforestation projects that do not utilize the carbon accumulation tables must obtain project approval of the CCX Forestry Committee. Templates for project proposals and cover sheet to be submitted to the Forestry Committee can be found under the "Resource" link below.

**CCX Forest Carbon Offset Project Categories**

- Afforestation: the planting of new forests on lands, which historically, have not contained forests.
- Long-Lived Woods: harvested wood that has existed for long period of time, in which it has served as a carbon sink.
- Managed Forest Projects: projects that sustainably manage forests such that their growth in carbon stocks exceeds their harvest.

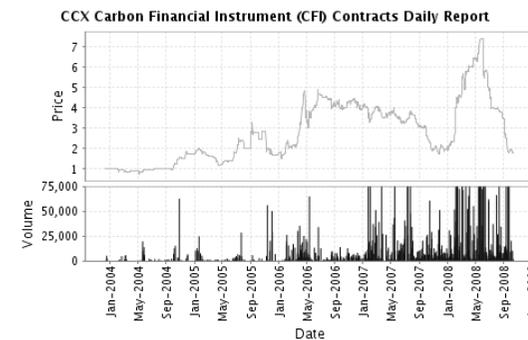
In addition, CCX has developed rules for offset issuance for widely-scattered tree plant and forest conservation that is combined with afforestation. Please refer to the Chapter 9 of the CCX rulebook for further information.

**Related Documents**

CCX Forest Offsets Case Study: Precious Woods

<http://www.chicagoclimatex.com/>

## Prices and volumes (US\$) of VERs in the Chicago Climate Exchange



<http://www.chicagoclimatex.com/market/data/summary.jsf>

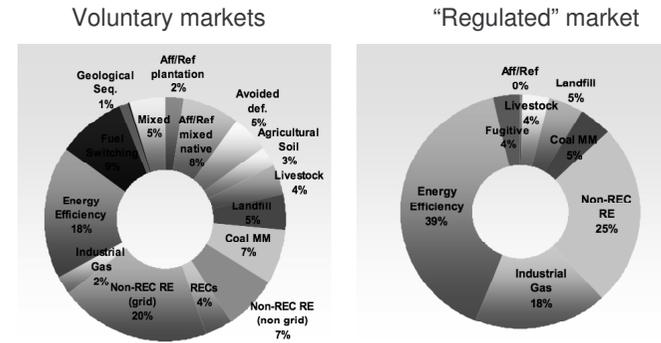


Autobonfund.org USA	\$4,30-5,50
e-BlueHorizons USA	\$5,00
Greenfleet Australia	\$7,00-7,50
DrivingGreen Ireland	\$8,00
Terrapass USA	\$8,80-11,00
Solar Electric Light Fund USA	\$10,00
Autobon Clear United Kingdom	\$17,00
Autobon Neutral Company United Kingdom	\$13,00-27,00
Native Energy USA	\$13,20
Climate Friendly Australia	\$16,00-19,00
SUSAtainable travel International USA, Switzerland	\$18,00
Trees for Life United Kingdom	\$20,00 approx.
Grow a Forest United Kingdom	\$22,00 & Up
Bonneville Environmental Foundation USA	\$29,00
Myclimate Switzerland	\$30,00

### Organisations offering C offset projects

<http://www.ecobusinesslinks.com>

## Quotas sold in 2007



Source: Hamilton et al., 2008

## Implementation problems

Problems connected with:

- the inner characteristics of the forest projects
- the procedure to define, control and allocate quotas

## 1st problem

Ferrero company investing in a new, large hazel nut (*Corylus Avellana*) plantation in Georgia; they are going to increase C sequestration in the project.

Is it acceptable as a C-offset project to be offered in the market?

“Natural forest expansion”: is there additionality?

“Afforestation is the **direct human-induced conversion** of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources”

## Additionality

A term developed by KP's Clean Development Mechanism

A project that has proven additionality is a beyond-business-as-usual project. (a Carbon dioxide reduction project would not have occurred had it not been for concern for the mitigation of climate change)

## 2nd problem

- EU Rural Development Policies has been supporting fast-growing plantations (poplar, pines, ...) on former agricultural land
- A poplar grower is thinking to sell some C credit from a plantation to be made on his farmland
- Is this investment acceptable as a C-offset project to be offered in the market?

## Non-permanence

'Permanence': the length of time carbon will remain stored after having been fixed in growing biomass.

As forest ecosystems are inherently dynamic systems, the C storage is vulnerable to be re-emitted into the atmosphere during the lifetime of the project given the possibility of harvest, pests, fire and other natural and anthropogenic causes.

In contrast, because energy projects *avoid* probable emissions rather than *sequester and store* carbon, such emissions are permanently prevented from reaching the atmosphere; as a consequence, non-permanence risks are unique to LULUCF projects.

## 3rd problem

- A REDD project with put under protection a State-owned forest area used by a local community for grazing and fuelwood collection
- Is this investment acceptable as a C-offset project to be offered in the market?

## Carbon leakage

The benefits from C sequestration which arise from forestry projects can be lost, not only at a later time (i.e. non-permanence) but also by an offsetting increase in emissions in another place outside the project boundaries: leakage.

Leakage occurs when there is an increase in C emissions in one area as a result of an emissions reduction by a C reduction project.

## Implementation problems

Problems connected with:

- the inner characteristics of the forest projects
- the procedure to define, control and allocate quotas

## Baseline definition

The baseline is the scenario that reasonably represents the level of sequestration that would occur in the absence of the proposed project activity.

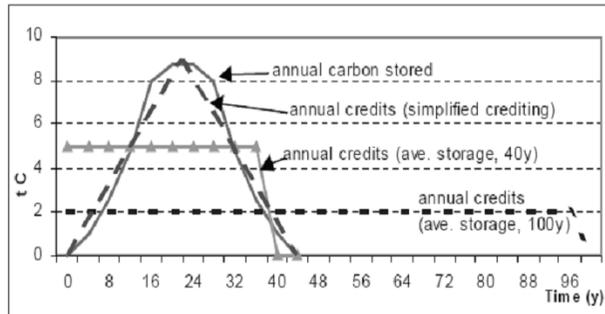
The Marrakesh Accords state that the baseline must "take into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector".

With/without approach = identifying the most probable economic activity which would have occurred given the social, economic and institutional conditions of the area; determining the biomass related processes associated with that activity, and estimating the annual net tonnage of CO<sub>2</sub>e that would have been sequestered in the base case.

## Monitoring systems

- Actual stock change: actual C storage as assessed year by year → different no. of credits year by year
- Simplified crediting: reference is made to the linear trend
- Average stock change: after defining the project life, an average annual C storage is assessed

## Cost-Effective Monitoring Systems



## Discounting and payments to the forest project managers

- Based on the results of the monitoring system

- Discounted at the beginning of the investment period

- Verification intervals: 2-5 yrs

With 10-30% reduction for allowing the inclusion of risk and uncertainty

## Last but not least ...

- All these complex issues can be considered easier in very large projects (like that one approved as a CDM): huge consultancy work and a lot of middle-men involved.

2 consequences:

- Small-scale investments risk to be marginalized
- A serious concern about benefit distribution: how much the forest owners are getting from the carbon quotas' sales?

## The need for standardization and certification two markets

4 types of standards:

- A. Generic standard for all the C reduction project (CDM and JI methodology as a reference)
- B. Standards for certification of well-managed forests: FSC and PEFC
- C. Specific standards for accounting C sequestration by forest investments
- D. Standards defined by companies

	Objective & development	Scope	Assessment process	How sustainable development is assessed
Gold VER Standard for voluntary projects	Sustainable development & environmental integrity. Multi-stakeholder led by and involving mainly international NGOs. Field tested.	Voluntary market renewable energy & low energy efficiency improvement	Projects scored according to sustainable development. High scores earn a premium. 3rd party verification required & CDM accredited verifiers are recommended. Targeted random sampling and annual independent auditing of sample of projects.	Through indicators of local/regional GHG sustainability, social sustainability & development, environmental impact assessment. Stakeholder consultations required.
CSB Standard	Minimize climate change, support sustainable development & conserve biodiversity. Multi-stakeholder process involving mainly NGOs and research institutions. Field tested.	CDM, land-use, land-use change & forestry projects (LULUCF). Also used as a benchmark for voluntary market projects.	Project documentation assessed against essential & optional indicators. Those rated as 'approved', 'silver' or 'gold' 3rd party verification required & CDM accredited verifiers are recommended.	Focuses on local/regional sustainability. Each indicator requires detailed assessment through suggested methodologies & documentation.
Voluntary Carbon Standard (VCS)	Emission reductions. Multi-stakeholder process led by international organizations working with the private sector. Has had a edition & consultations.	Voluntary market, energy efficiency projects. Does not include LULUCF yet but under consideration.	Test threshold criteria to be met. GHG Protocol & ISO Standards used for auditing, verification & certification. Also sets out a 5 step process for credit registration & registry for tracking credits. 3rd party verification required. Recommends same accredited verifiers as CDM.	Verification entity verifies that project is in compliance with all relevant local & national regulations, highlights negative impacts & verifies that the project itself is not increasing emissions.
GHG Protocol	Emission reduction. Multi-stakeholder partnership involving business, NGOs, governments & academia. Field tested.	Mandatory emission targets, voluntary programs, company targets. All projects including LULUCF.	Framework of guidance & standards for reporting & accounting for emissions. Discussion of an inventory verification of information reporting. Some guidance for 3rd party verification.	Standardized approach & principles for accounting, quantification and the preparation of an inventory of GHG emissions. Does not cover sustainable development.
CDM Projects	Emission reduction & contributing to sustainable development in developing countries. Developed through negotiations over the Kyoto Protocol.	CDM projects: renewable energy, energy efficiency & afforestation/reforestation projects.	Not a standard in itself, but the 3 stage project cycle sets out identified components for any project which are approved by the CDM Executive Board. Features a 3rd party verifier to validate & certify projects. For small-scale projects the same entity can be used for both steps.	Contribution to sustainable development assessed according to the host country indicators. The process may involve check lists, multi-criteria frameworks, & weighting & points scoring systems. A description of environmental impacts & documentation on stakeholder comments is required.

### A. Generic standard for all the C reduction project

A comparison of the main elements of five independent carbon offset standards.

Peskett L., C.Luttrell, M.Iwata. 2007. Can standards for voluntary carbon offsets ensure development benefits? Overseas Development Institute, Forestry Briefing 13

### B. Standards for certification of well-managed forests

FSC: non clear indicators on C sequestration; requested by CDM projects;

South Africa GA: a motion approved to develop a document that will integrate the P&C document (FSC US as a reference point)

PEFC: in P1 there is a clear reference to C sequestration

recently approved by CCX for forest projects

- Additionality and leakage are not clearly addressed by the two standards
- Non permanence is indirectly considered
- No attention to the procedural and monitoring problems specifically connected with the assessment and benefit transfer

### C. Specific standards for accounting C sequestration by forest investments

- *Climate, Community and Biodiversity Project Design Standards* ("CCB Standards") developed by *Climate, Community & Biodiversity Alliance* (CCBA - [www.climate-standards.org](http://www.climate-standards.org))
- *CarbonFix Standard* by a German NGO ([www.carbonfix.info](http://www.carbonfix.info))
- Plan Vivo System and Standards (FONAFIFO - Costa Rica)
- AFOLU Programme

Summary forestry carbon standards 2008

Standard	CCB Standards	Carbonfix Standard	Plan Vivo System and Standards	Voluntary Carbon Standard (AFOU)
<b>Background</b>	Not positive climate, community and biodiversity benefits	High quality carbon credits from sustainably managed forests	Supply of carbon credits from rural communities in developing countries promoting sustainable development	Creation of credible ex-post carbon credits
<b>Project Types</b>	All land based projects	Projects converting non-forest to forest	Agro-forestry, JMI, REDD	All, Reforest, Reforeg, ALM, BM, REDD
<b>Types of carbon credits</b>	N/A	Ex ante	Ex ante & Ex post	Ex post
<b>Eligibility</b>	No restrictions	Internationally	Internationally	Internationally
<b>Project Start Date</b>	11 December 1997	No restrictions	No restrictions	No restrictions
<b>Project Location</b>	Internationally	Internationally	Internationally	Internationally
<b>Methodologies to determine and quantify CO<sub>2</sub>e</b>	A/R CDM / CBA approved methodologies	A/R CDM / Financial analysis	Barrier analysis / Common practice / A/R CDM	A/R CDM / Approved VCS methodologies
<b>Baseline, Leakage, CO<sub>2</sub>-Fixation, Monitoring</b>	A/R CDM / CBA approved methodologies	CP methodology	Project specific methodologies / A/R CDM	A/R CDM / Approved VCS methodologies
<b>Permanence</b>	...	30%	Minimum 30%	10-60%
<b>Risk buffer</b>	...	...	...	...
<b>Socio-economic and environmental co-benefits</b>	***	**	***	*
<b>Environmental benefits</b>	***	**	**	*
<b>Certification</b>	...	...	...	...
<b>Verification intervals</b>	5 years	2-3 yearly	Recommended 3-5 yearly	5 yearly financial incentive
<b>Accredited 3<sup>rd</sup> parties</b>	✓	✓	✓ after issuance of carbon credits	✓
<b>Certification time period</b>	2-6 months	3-6 months	1-18 months	2-4 months
<b>Cost &amp; Fees</b>				
<b>Validation</b>	5 000 - 40 000 US\$	1 000 € (2 000 US\$)	5 000 - 11 200 US\$	15 000 - 30 000 US\$
<b>Verification</b>	5 000 - 40 000 US\$	8 000 - 15 000 € (10 500 - 20 500 US\$)	15 000 - 30 000 US\$	15 000 - 30 000 US\$
<b>CO<sub>2</sub> certificates fees</b>	...	0.04 € (0.10 US\$) per valid VER	0.30 US\$ per valid VER	0.04 US\$ per valid VER
<b>Supply of climate forestation projects 2009</b>	5	1	3	...
<b>Registered projects</b>	8	5	2	...
<b>Projects in the pipeline</b>	...	...	...	...
<b>Carbon registry</b>	...	Online registry	Online registry	APX, Caisse des Dépôts, FTI, BVMF
<b>Transparency</b>	**	***	**	*
<b>Publicly available project information</b>	**	***	**	*
<b>CO<sub>2</sub> certificates prices</b>	...	19-20 (14-21 US\$)	8-10 US\$	17-18 US\$

\* The stars are set in relation to the requirements of each standard. The more stars, the higher the transparency and co-benefits level of a standard. © 2008, Edward Merger

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## D. Standards defined by companies

- CBs: SGS, DNV, AENOR (Spain), ICONTEC (Columbia), KFQ (Korea), JQA (Japan), RINA (Italy), SIRIM (Malaysia), CQC (China), SQS (Switzerland)
- = standards based on the company's experience for CDM-JI (accreditation process by IPCC)
- Brokers: the most variable conditions (serious risk of "C cheating")

## Conclusions

- C sequestration projects: an emerging issue, but too many expectations and few on-going projects (exp. under the “regular” market)
- Many problems for implementing a sound, transparent C reduction forest project
- Increasing risks of C cheating investments
  - need for defining clear and largely agreed rules in the voluntary market (see *Defra's Code of Best Practice for (UK) Consumers & Voluntary Code of Best Practice on Carbon Offsetting*)