

Payments For Environmental Services (PES)

In Mediterranean Ecosystems

CIHEAM-IAMZ, Zaragoza, 19.2.2014

CASE STUDY CARBON RELATED PES: RULES AND ACTORS IN THE INSTITUTIONAL AND VOLUNTARY MARKETS

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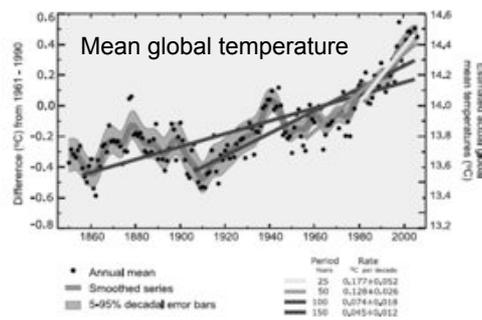
Outline

1. Introduction: voluntary and institutional markets
2. The voluntary market
3. Key-issues in implementing C-PES
4. Risks and standards
5. Conclusions

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Climate change ...

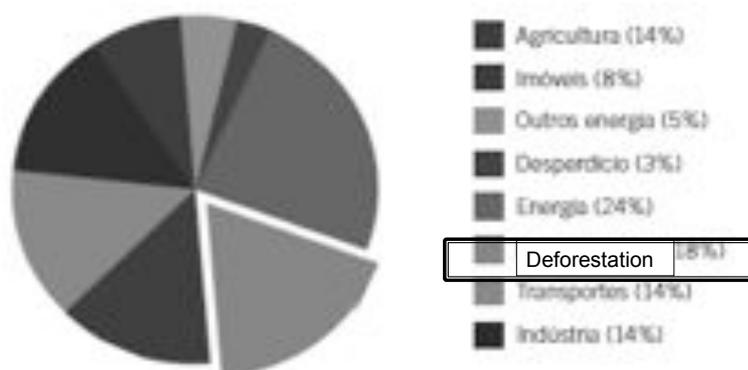


Source: IPCC, 2007

... and forests: both the problem and one of the solutions

Which sector produces GHGs?

GHGs emissions by percentage



Mitigation options in the forests sector

- Afforestation / Reforestation (A/R) → additional sequestration
- Improved Forest Management (IFM) → additional sequestration and/or avoided emissions (harvesting level and silvicultural treatments)
- Reducing Emissions from Deforestation and Forest Degradation (REDD+) → avoidance of a business-as-usual scenario that would have produced higher emissions
- Increasing CO₂ stock in off-site wood products (CHWP) → additional sequestration and avoid emissions from fossil fuels
- Fossil fuel substitution and energy efficiency → avoided emissions

PES for Carbon offseting

PES instruments to reduce GHG emissions:
 paying for investments to reduce emissions/
 increasing carbon stock
 (carbon credit = 1 ton of CO₂e
 which can be sold in the markets).

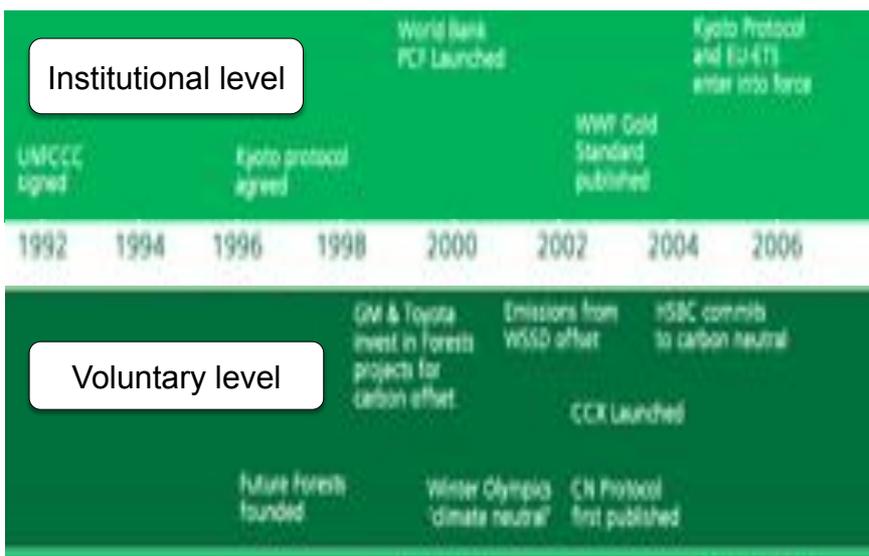
Institutional Market

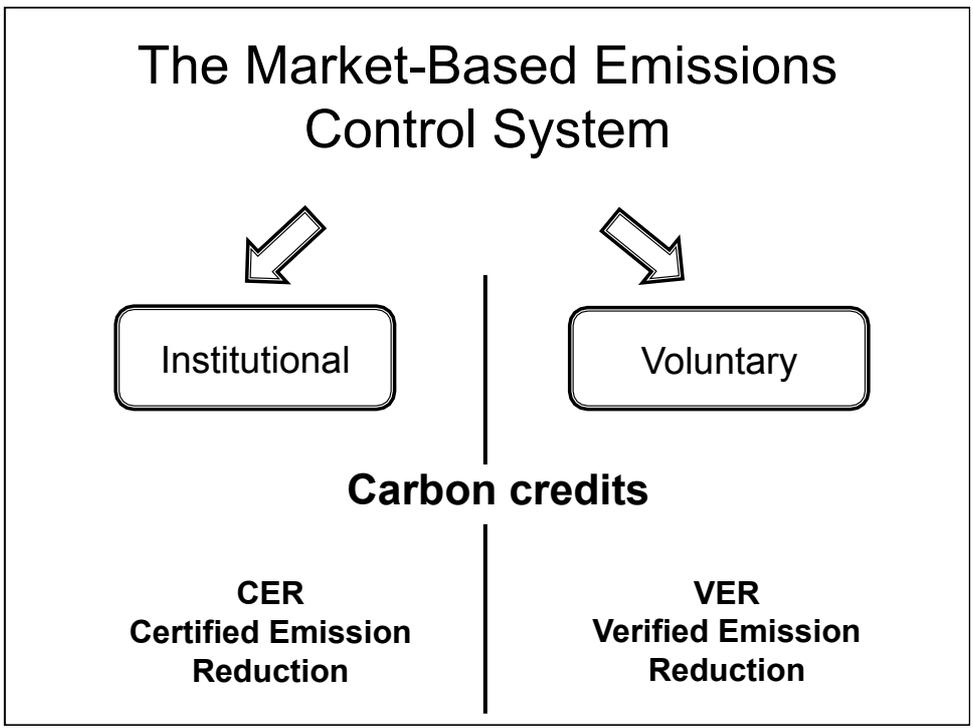
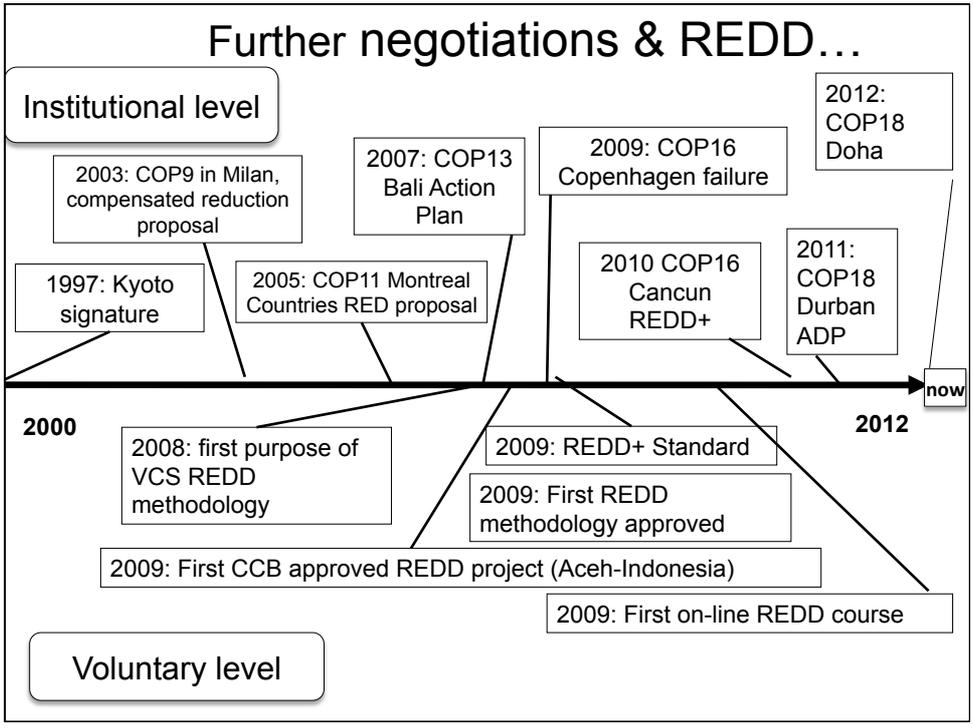


Voluntary Market



Simultaneous answers to climate change at two levels





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Voluntary carbon market (OTC-Over The Counter)

Market in which enterprises, governs, organizations, individuals etc. may voluntary do an offset and buying carbon credits

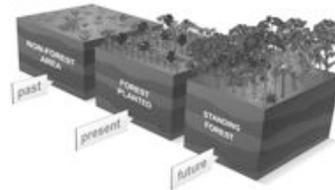
Carbon offset

an instrument representing the reduction, avoidance, or sequestration of one tonne of CO₂ or GHG equivalent.

Which activities in forestry are allowed? All!

AFFORESTATION

Planting trees in areas that have never been forested. Using mixed native species on degraded lands, while not converting healthy non-forest ecosystems such as grasslands, can maximize environmental benefits.



REFORESTATION

Forests are restored in areas where they were previously cleared or burned for agriculture or other uses. Planting mixed native species in order to restore the natural ecosystem can maximize environmental benefits.



REDD+

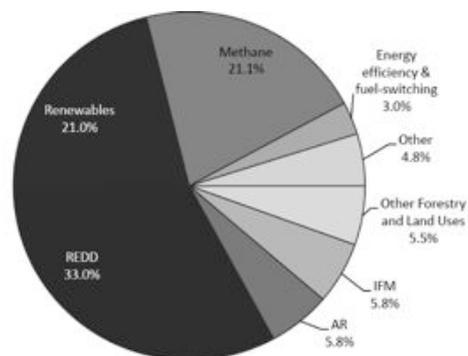
REDD+ seeks to mitigate climate change through forests, and provides social and environmental benefits. It includes these essential components: creating incentives for not clearing standing forests, maintaining and expanding forest cover, sustainably managing forest and recovering degraded lands.



Some numbers

Small but dynamic

- Forest sector accounts for more than 50% of the total voluntary market
- 2011: 172 billion US\$
- It is increasing
- It is subjected to fluctuations

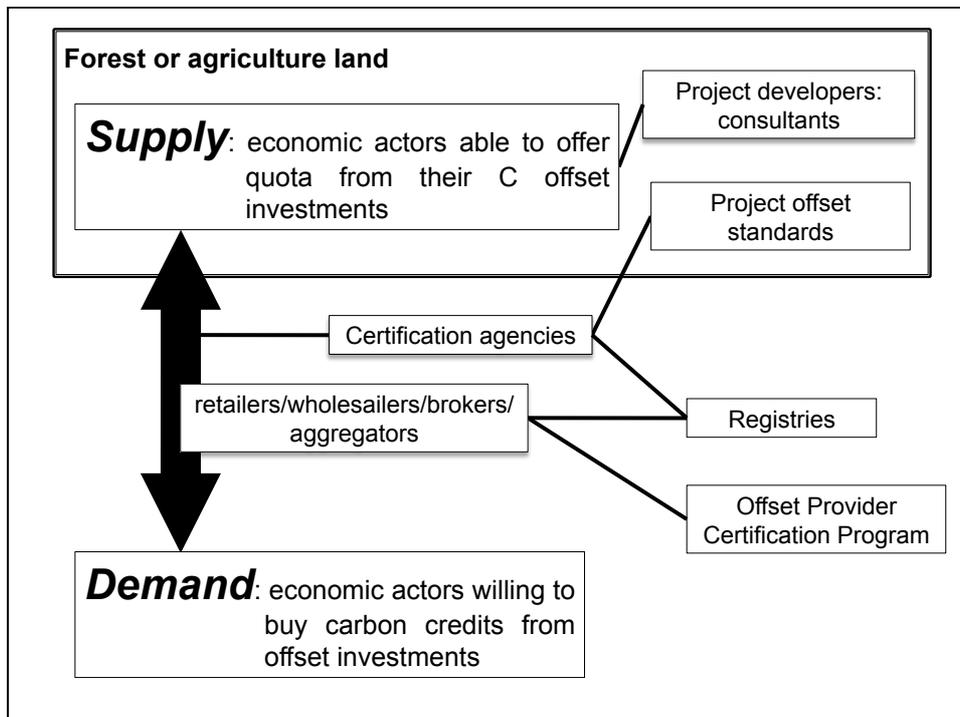


(Diaz et al., 2011)



Forest Trends' Ecosystem Marketplace yearly publish the State of the Forest Carbon Market

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



Brokers, re-sellers and aggregators

Brokers are important for the contacts

They add a cost, sometimes high

Autobonfund.org USA	\$4.30-5.50
e-BlueHorizons USA	\$5.00
Greenleaf 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
SUSA Sustainable 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

www.brokercarbon.com

Registries

Avoid double counting:

- inside voluntary market
- between voluntary and compliance

Outline

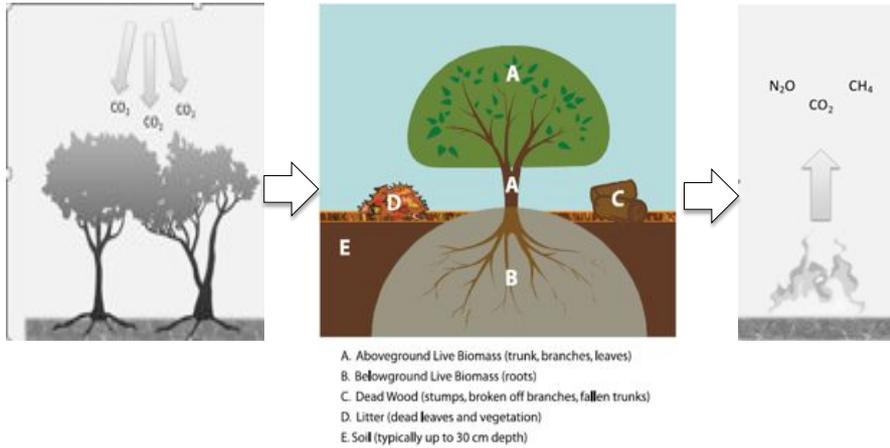
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Key issues

- Project boundaries
- C rights
- Baseline scenario definition
- Additionality
- Leakage
- Permanence
- Environmental impacts
- Socio-economic impacts

Project Boundaries

Shall include all anthropogenic GHG emissions that are significant and reasonably attributable to the project



Phisically, they are related to project activities, location, scale



Instruments:

- GPS
- Maps
- Remote sensing, sat. images
- Participatory Rural Appraisal



Carbon rights

- How dealing with uncertain land ownership?
- No clear legislation on carbon ownership





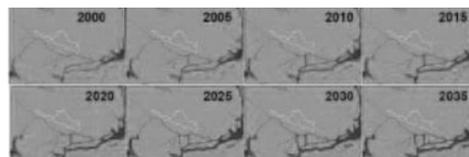
- <http://www.katoombagroup.org>
- <http://www.forest-trends.org>

Baseline scenario

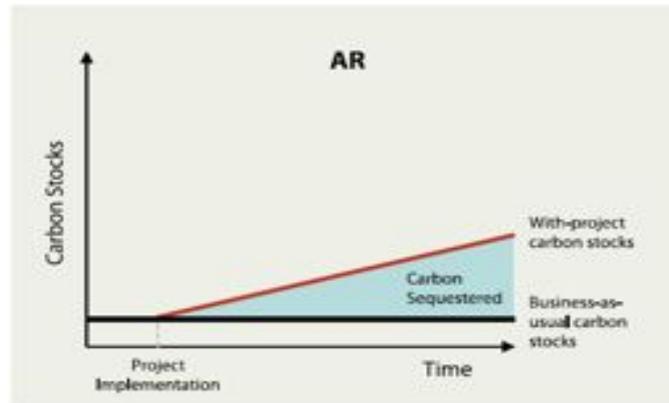
the scenario that reasonably represents the anthropogenic emissions that would occur in the absence of the proposed project activity

How to define it?

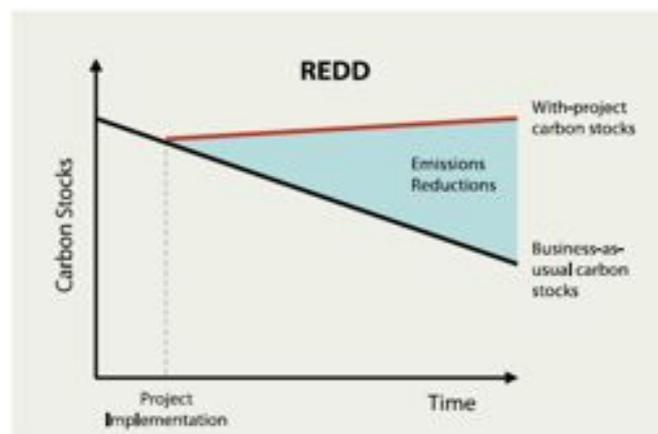
- Historical data
- Deforestation and forest degradation drivers analysis



Afforestation/reforestation



REDD



Baseline: best practices

- 5-10 years historical information
- Re-calculate baseline every 5 years
- Choose a conservative scenario

Additionality

A project activity is additional if emission are reduced below those that would have occurred in the absence of the project activity



Additionality: best practices

Use of additionality tests:

- Legal test (the project is request by law?)
- Common practice test (project activities are typical?)
- Financial test (would have the project been done without carbon payments?)

Leakage

Leakage are emissions that occur due to a shift of activities of a project area to the outside of a project area

The agent of deforestation moves to an area outside of the project boundary and continues their deforesting activities elsewhere.

E.g.: stop grazing in an area simply will move the problem in another



Leakage: best practices

- Equilibrate portfolio of activities (e.g.: A/R, Agroforestry etc.)
- Develop alternative way of subsistence (E.g.: fruit orchards, improved stoves, agroforestry)

Permanence

The project can be destroyed or damaged: fire, anthropic actions, pathologies, insects etc.

Best practices:

- Guarantee factors: legal, financial, ownership, management
- Buffer: carbon stock reserve (20–30%)

Environmental impacts

Mostly based on Environmental Impact Assessment

Soil



Photo: Frans J.P.M. Kwaad

Water



Biodiversity



Blanus mettetalii.

Photo: Daniel Heuclin

Socio-economic impacts

Understanding socioeconomic impacts due to the project activities and how to mitigate potential negative impacts



Berber children. Photo: Liz Barry



Processing Argan seeds



Social Risks

- Conflicts due to new arranges of land ownership
- Risk of unequal access to resources and unequal distribution of benefits
- Not fair or abusive contracts
- Reduct land access= increase of food/commodities prices

Equitable sharing of costs and benefits



How is finance shared?



Example price:
\$6.50 /tCO₂

- Varies depending on mix of activities and institutions, and payment mechanism
- Producers must receive an equitable share – assessed through annual reporting

Certification \$0.35
Verification, marketing \$0.40
Admin' monitoring, etc \$1.85
Staged payment to communities/producers \$3.90

Stakeholder involvement process

Local stakeholder
process



Global stakeholder
process



www.v-c-s.org

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High transaction costs

PROFIT **IMPATTO ZERO® | Persone**

Pronti da compensare

Calcola il tuo impatto | Calcolatore Veloce | Pronti da compensare

3.029 kg di CO₂

Scegli dove compensare

- 4.521 mq di Costa Rica 3, € 117
- 2.255 mq di Madagascar, € 117

L'IMPATTO DEL TUO PROFILO

RICALCOLA COMPENSA

38 euro t CO₂ www.lifegate.it

Greenwashing: incoherence

LAND ROVER Range Rover | Best in model range | Best in vehicle class

LAND ROVER Range Rover 5.0 V8 Super Charged [2011]
SUV, Automatic 6-speed, 4999cc (5.0 litre), Petrol

0

This model in the LAND ROVER... fuel economy of 19 MPG

LAND ROVER

HOME NEW VEHICLES APPROVED USED VEHICLES

CO₂ OFFSETTING

CO₂ OFFSETTING

Working with carbon offset experts Climate Care, we invest in projects that avoid or reduce CO₂ emissions. Such projects offset the CO₂ emitted during the manufacturing assembly of our vehicles, as well as those emitted during the first 45,000 miles / 72,000km of their use.

OFFSETTING CO₂ FROM VEHICLES AND MANUFACTURING

OUR INVESTMENT PROGRAMME EXPLAINED

We focus our efforts on three main areas: switching from fossil fuels to renewable energy, promoting renewable technology, and improving energy efficiency within communities and industry alike.

Projects include two huge hydroelectricity generators in Tajikistan, ground breaking wind-farms in Turkey & China, a combined heat and power plant in Russia, efficient stove distribution in Uganda, and fuel switch power generation in China. These ventures have the added benefits of reducing pollution and providing employment for local communities.

Find out more about CO₂ Offsetting here

Greenwashing: misleading declarations

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L'attenzione per gli altri | Ferrarelle con Impatto Zero® | La natura, l'ambiente

il progetto | lo studio LCA | la compensazione CO2 | archivio

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Nel 2011 Ferrarelle ha reso ad Impatto Zero® per due mesi i formati famiglia (1,5L pet e 1,25L pet), confermando così il proprio impegno verso la sostenibilità attraverso la compensazione delle emissioni di anidride carbonica generate dall'intero ciclo di vita delle confezioni con grafica a Impatto Zero®.

Formati	Valore di CO2 equivalente emessa (kg/litro d'acqua)
Ferrarelle 1,50 Litri Pet	0,103
Ferrarelle 1,25 Litri Pet	0,125

Fonte: Studio LCA, condotto da V&AM per Ferrarelle Spa, 3 Marzo 2011.

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COMPENSA LA CO2 EMESSA CON LA CREAZIONE DI NUOVE FORESTE

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www.agcm.it/bollettino---settimanale/5900---bollettino---62012.html

Carbon cowboys

Carbon cowboys

July 23, 2011

Read later

Amazonian tribes are facing new challenges as carbon credit dealers move into their forests, write Patrick Bodenham and Ben Cubby.

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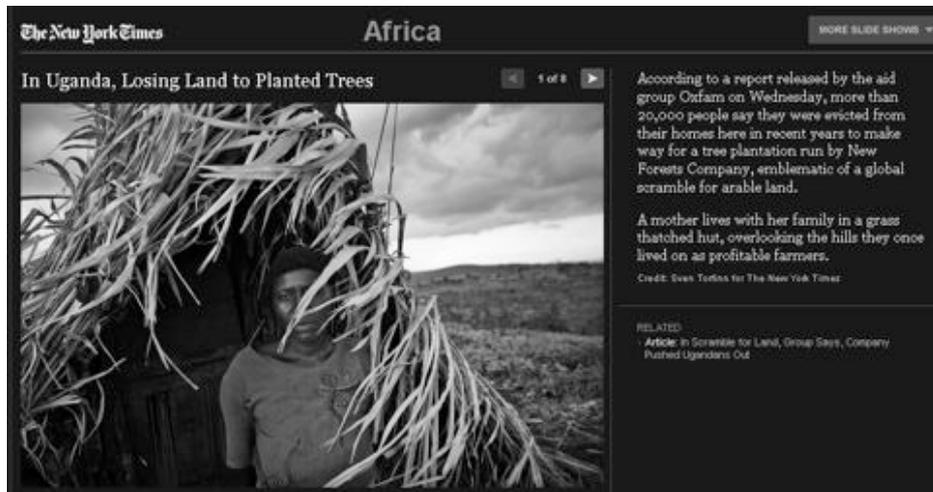


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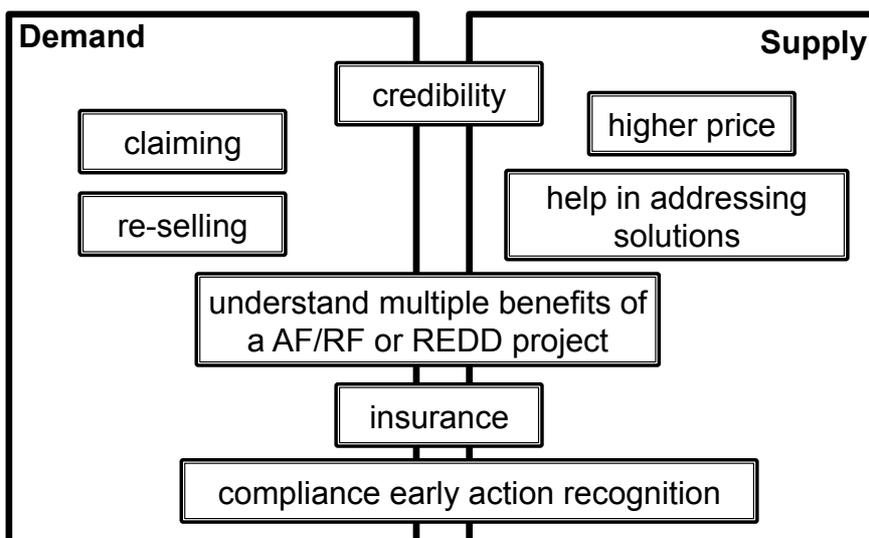
Español

Friends of the Amazon
Stop Carbon Cowboys from
Logging the Amazon Rainforest!

Land grabbing



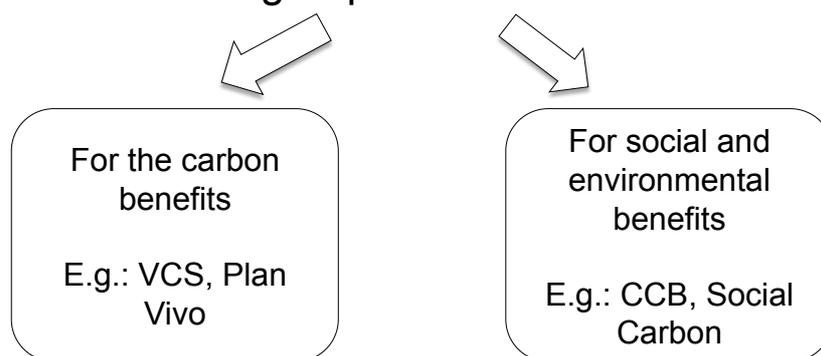
Why offset standards?



What is an Offset Standards?

- Set of rules, methodologies, etc....
- ... that a project developer decide to comply with...
- ... in order to ensure quality in the design and management of a GHGs removals/reductions project.

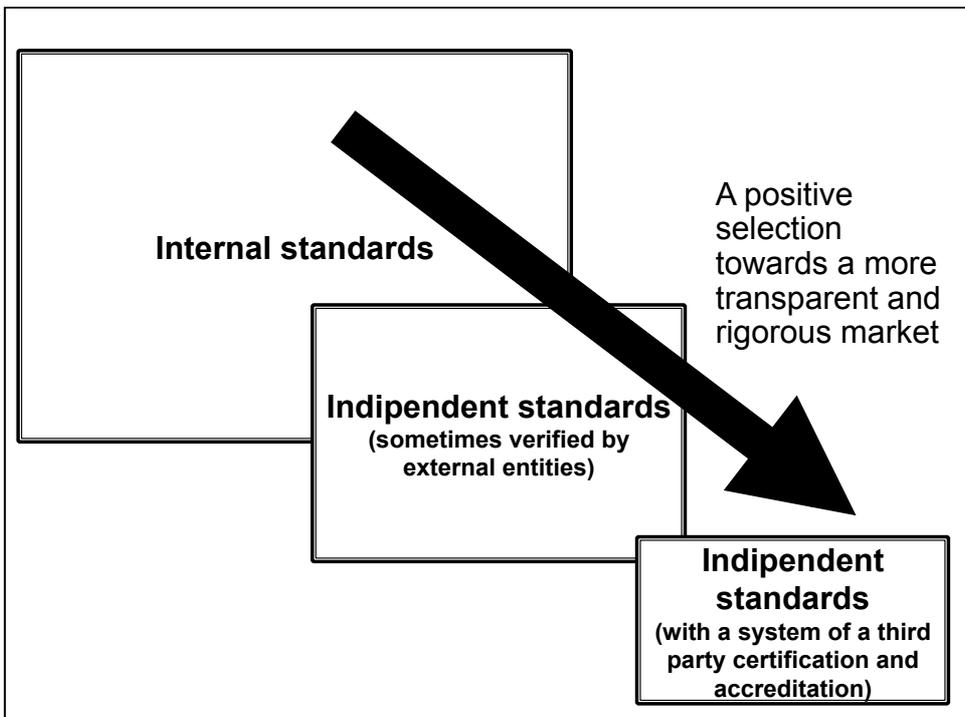
2 groups of standars



Could be combined: es. VCS+CCB

Main forest carbon standards

Standard	Sito internet	Logo
VCS	www.v-c-s.org	
CCB	www.climate-standard.org	
Plan Vivo	www.planvivo.org	
Carbon Fix	www.carbonfix.org	
Social Carbon	www.socialcarbon.org	
American carbon Registry	www.americancarbonregistry.org	
Climate action reserve	www.climateactionreserve.org	



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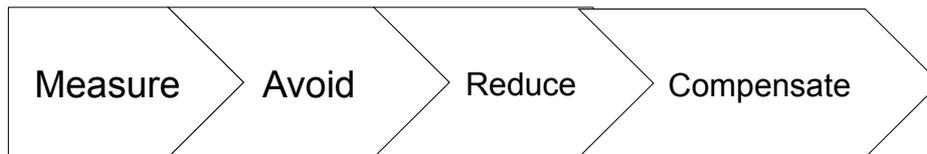
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C-PES: a key arena for developing the PES tool:

- very **complex**, with trade-off among functions, potential social conflicts and free-riders
- **young market**, very dynamic, still growing non only in term of market size, but also of rules (e.g. standards)
- a real **global** market
- **two segments**: useful competitions, interconnections, mutual feeding

With this complexity, let's no forget the simple rules...

The good path: MARC



Offset should never be the first choice option!