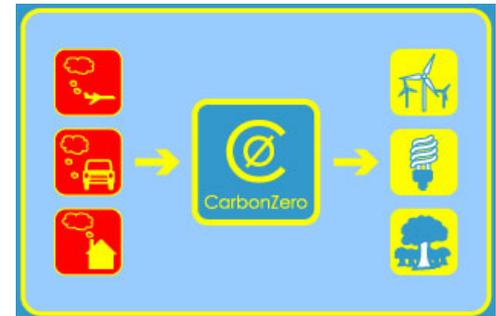


Offsets in the carbon economy

“We can all take simple steps to reduce the amount of CO2 we produce...we can also offset the rest. Offsetting means paying someone to reduce CO2 in the atmosphere on your behalf. In that way we can pay for the damage we are causing and the money helps to fund an important transition to a low carbon future for many developing countries”

www.climatecare.com



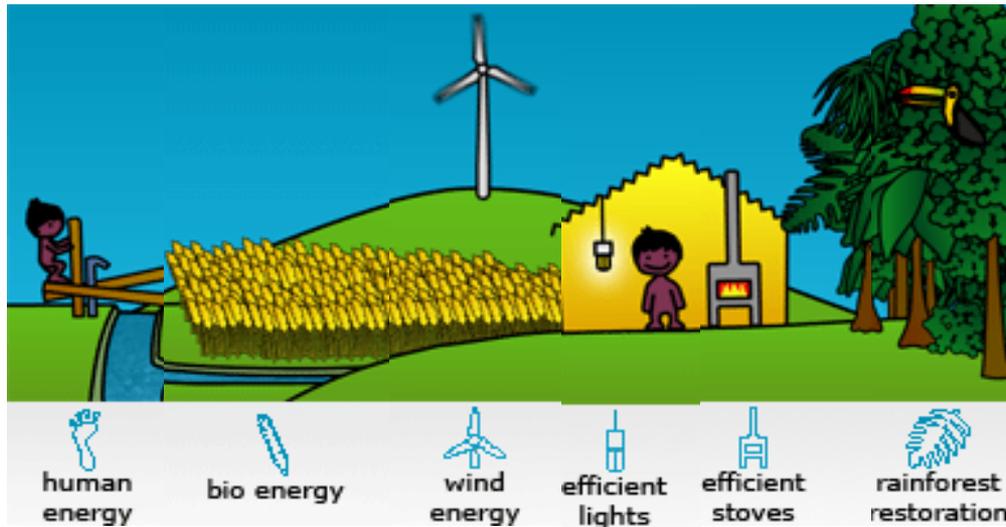
“Carbon offsets are the modern day indulgences, sold to an increasingly carbon conscious public to absolve their climate sins” Kevin Smith 2007 *The Carbon Neutral Myth*

Acknowledgements include Adam Bumpus, Heather Lovell, Emily Boyd, Harriet Bulkeley, Tyndall Centre



What is a carbon offset?

- Carbon offsetting involves purchasing 'credits' from emission reduction projects that have prevented or removed the emission of an equivalent amount of greenhouse gas elsewhere
- Carbon reduction projects include energy efficiency, renewable energy, forestry, industrial gas and methane capture



methane



HFC

Making and governing the offset economy

Constructing demand

1. International binding commitments to emission reductions (Kyoto, ETS) and flexible mechanisms to include trading – compliance market for CERs
2. Creating offset consumers – voluntary market for VERs

Producing the supply - capital, labour and nature in the development of offset projects

Regulation and accumulation

1. State and self regulation of offsets
2. Value in the offset supply chain

Theorising offsets - I

- Political ecology
 - Nature – the material carbon and its biophysical geography
 - Structure/Political Economy – markets (regulation, commodity chains), institutions, role of the state
 - Agency/Behaviour – brokers, household livelihoods, social movements
- Discourses and governmentalities – construction of consumers and producers, knowledges and technologies

Okereke, Bulkeley and Schroeder 2008

Theorising offsets : II

“Offsets can be seen as a “spatial fix” in organizing costly emission reductions through a geographic expansion of markets that provides cheaper alternatives in the developing world as well as creative opportunities for some investors....Carbon offsets raise many interesting questions for an environmental economic geography in illustrating the creation of a new commodity and market linking the North and South and the negotiation of a new set of institutions and regulations to govern the production and exchange of emissions reductions”.

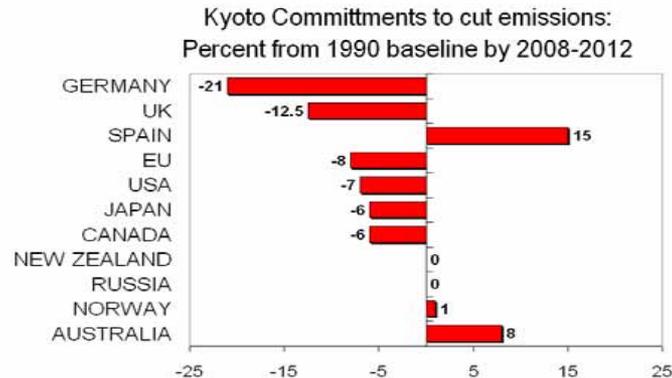
Bumpus and Liverman 2008 Accumulation by Decarbonisation

Constructing demand: Kyoto's flexible mechanisms

Kyoto agreement to reduce greenhouse gas emissions set binding targets for industrial countries for a 5.2% cut from 1990 to 2012

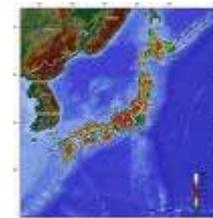
Decision to allow cheaper and easier compliance through carbon trading of emission reduction credits through three 'flexible' mechanisms

- *International emissions trading: selling and buying emission reductions*
- *Joint Implementation (JI): credit for activities implemented with economies in transition*
- *Clean Development Mechanism (CDM): developing countries reduce emissions via joint activities with developed countries who can then use credits to meet obligations*



Justification of the CDM (and offsets in general):

- Some people, countries and sectors find full domestic reductions too difficult
- Developing countries should gain some benefits from Kyoto (Brazil proposal for clean development fund)
- Atmosphere uniformly mixed so greenhouse gas reductions can occur anywhere
- Emission reductions are cheaper/easier in developing world
- Projects can have side benefits for sustainable development, biodiversity etc.



Links to ETS and the importance of the cap

- European Trading Scheme (ETS) is a linked market where EU countries agree targets and allocate emission quotas to firms who can buy and sell excess reductions (or purchase offsets)
- Both Kyoto and ETS allocated emission allowances and cuts based on generous baselines and at no cost (providing windfall profits to some countries and firms)
- The overall cap (i.e. emissions reduction) creates the demand for offsets – although no cap set internationally beyond 2012, EU has committed to 20-30% cut and UK to 60%

The demand for voluntary offsets

Voluntary offset market (150+ companies) developed as a result of:

- Corporate demand – CSR, consumers, shareholders, anticipation of regulation etc.
- Bureaucracy, costs and gaps in Kyoto and ETS programme e.g. woodstoves, aviation, US non-signatory
- Public concern about climate change

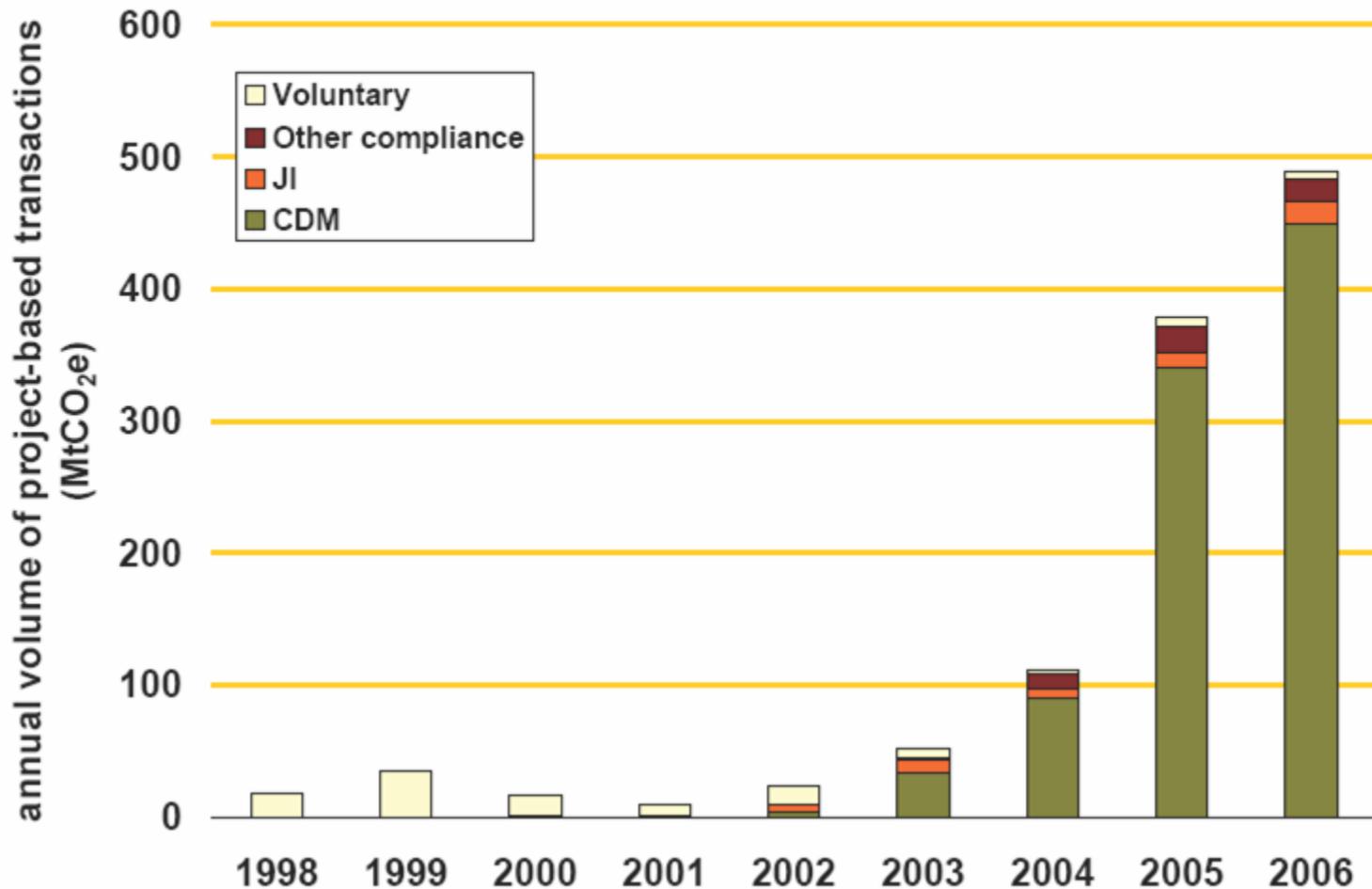
Voluntary market is actively constructing consumer subjectivities

- Voluntary offset companies use variety of messages, images, and techniques to appeal to consumers who want a quick fix, a link to developing world, and or the last step to carbon neutrality (*Lovell, Bulkeley and Liverman RGS*)

Growth of the offset project markets

(source: World Bank, State of the Carbon Market 2007)

Figure 2: Annual Volumes (MtCO₂e) of Project-based Emission Reductions Transactions (vintages up to 2012)

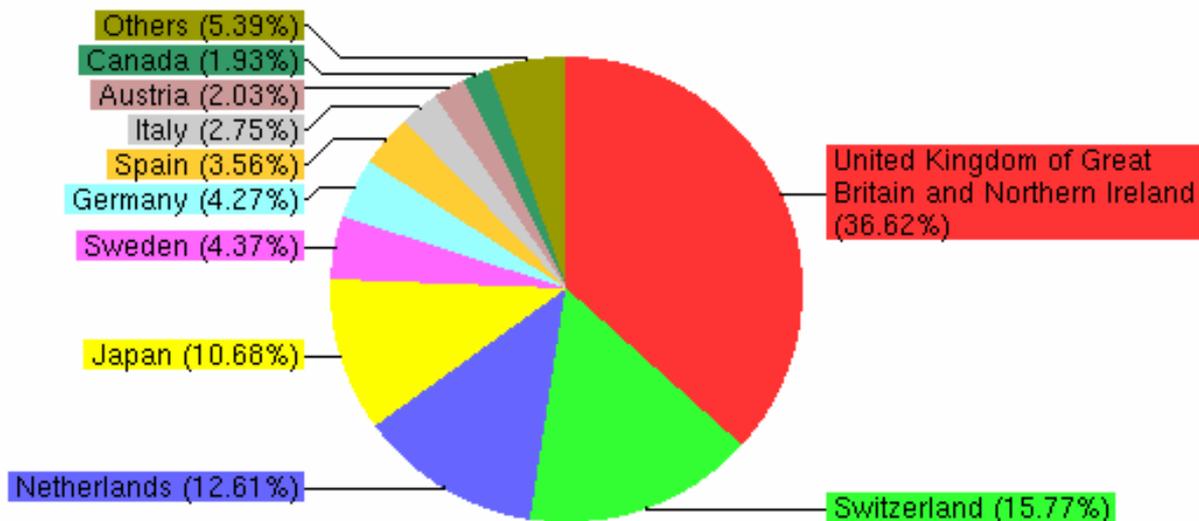


Producing offsets

- Mostly outsourced to private sector carbon project developers but with active participation of World Bank, NGOs, some governments and communities
- Identification of 'additional' greenhouse gas reductions requires establishment of baseline, boundaries, business as usual projection in a project development document (PDD)
- Project developers must find capital, technologies and labour (construction workers, tree planters, stove makers) to produce the material reductions

Who are the investors in the CDM?

Registered projects by AI and NAI investor parties



<http://cdm.unfccc.int> (c) 12.04.2008 18:53

Governing and regulating offsets

CDM is heavily regulated

- Approved methodologies and technologies
- Must be approved for sustainable development benefit by national authorities (DNA)
- Certification and registration

Voluntary markets less regulated but increasing use of

- Auditors and advisory boards
- Sector is setting voluntary standards
- UK government has set guidelines

Value in the offset supply chain

- Transaction costs for a project can reach \$200,000
- Market value of CDM credits lower than EU credits because of supposed high risk
- 2% tax on proceeds for adaptation
- Wide variations in price of voluntary offsets

Uphill guide to the COMPLICATED DEVELOPMENT MECHANISM

It begins with the Executive Board (EB). It is a CoP-appointed body. It comprises of 10 members: 4 from industrialised countries, 3 from developing countries. Only 1 from small island states. This board defines rules for baselines and monitoring plans and for small scale projects. It accredits 'operational entities' (OE).

Now go and apply.

- 1. Fill in a project design document (PDD). To OE, for validation. Pay US \$30,000 to US \$50,000.**
 - to include PDD requirements:
 - environmental assessment
 - proof that the project is additional, and not business as usual
 - define 'baseline'. Could be project specific (this project will reduce GHG emissions by...), or standardised (EB says the project must reduce emissions by...)
 - including baseline is expensive (due up all GHG emissions, look for savings, high emissions). Small scale projects will work with standardised baselines.
 - OE designs a plan to monitor the project. PDD available for comment. Only for 30 days.
- 2. Take PDD and go to (host country) government.**
 - The host government.
- 3. Wait. Projects goes to broker.**
 - Brokers profit heavily. Choose projects based on criteria such as project cost, sustainability and social impact. P&G find look for investors, and vice versa. (They choose the 'leading bidder' of the project to include investment 10 years).
- 4. Wait. PDD submitted to EB for registration. As host, pay US \$5,000 to US \$30,000.**
 - Countries involved in the project can ask for project review within eight weeks of registration.
- 5. Hold on. Project being completed. OE to verify. As host, pay US \$10,000 to US \$20,000.**
 - Verification based on monitoring report submitted by project participants. Both monitoring and verification reports made publicly available. OE interviews stakeholders.
- 6. Be patient. OE to certify that project reduces emission.**
 - The cost of this certification is to be made public. (But in what form?)
- 7. Pray. A country involved in project might request review.**
 - If that doesn't happen, project issued Certified Emission Reductions (CERs).
- 8. Over at last. Now pay for the last time.**
 - All forms of the host country's proceeds goes towards administrative expenses of the Executive Board: 2 per cent to adaptation fund.
 - Issuing CERs give developing countries 10 years to offset.

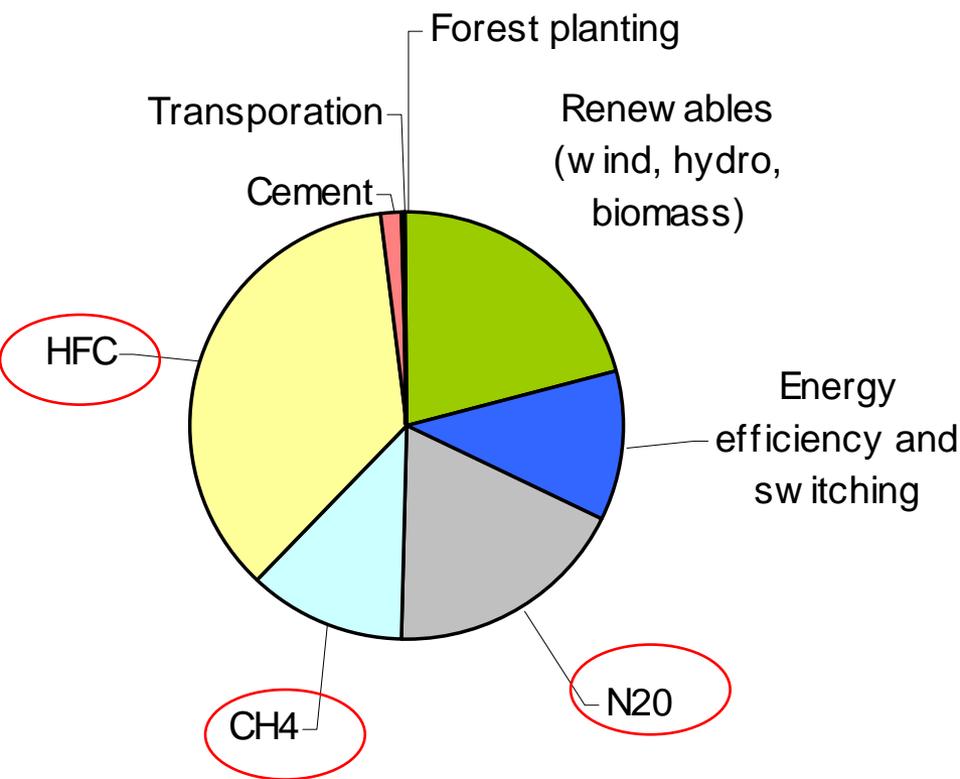
SHAVE THE PLANET. (GPO... HAHAH!)

• Source: CSE

Unequal geographies and other criticisms of offsets

- CDM bias to large scale industrial projects in few countries
- Establishes a north-south relationship based on unequal exchange (neocolonial, limits technology innovation in north, extracts low hanging fruit, lack of real sustainable development benefits, surveillance)
- Does not provide additional benefits to atmosphere

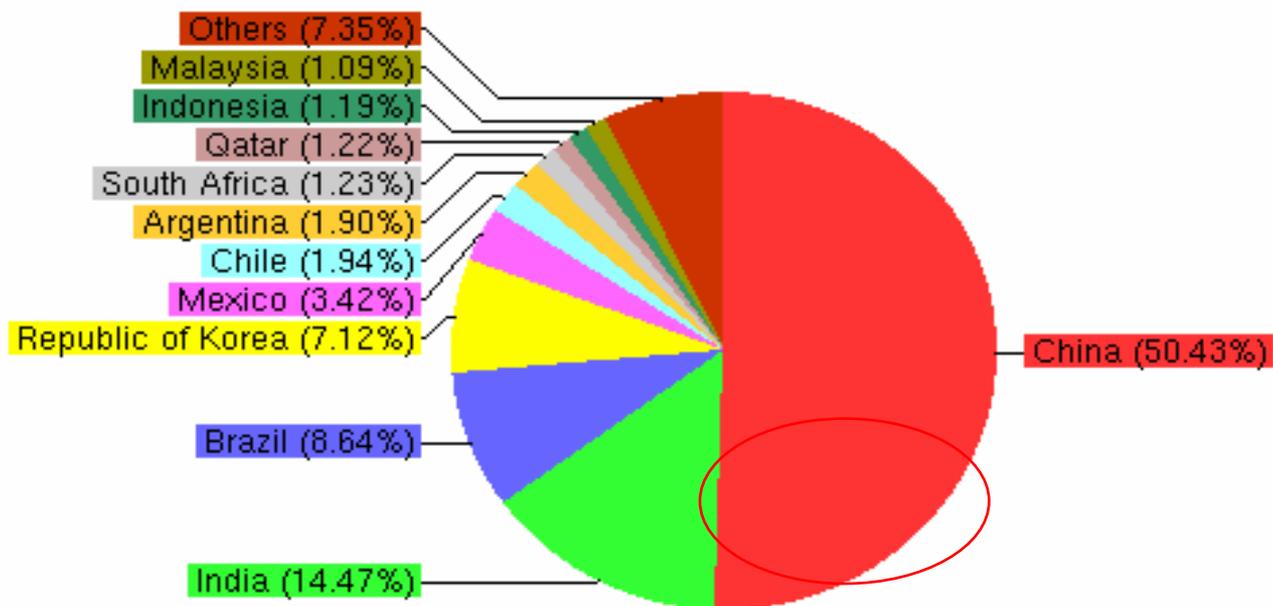
CDM carbon credits by type of project (~1.1 GT)



Biomass	186
Hydro Power	176
Biogas	164
Wind Power	134
Methane Recovery	81
Waste Gas/Heat Utilisation	68
Energy Efficiency	52
Fuel Switch	24
N ₂ O Reduction	26
Cement	22
HFC Reduction	16
Other Renewable Energy	13
Methane Avoidance	13
Transportation	2
Afforestation & Reforestation	1

The geography of the CDM (April 2008)

Expected average annual CERs from registered projects by host party. Total: 205,098,828



<http://cdm.unfccc.int> (c) 12.04.2008 18:53

Questionable benefits to atmosphere

- Many projects are not environmentally additional (e.g. carbon finance subsidises projects that would happen anyway)
- Timescales between emissions and the delivery of offsets are incommensurable (e.g. fly now, offset later)
- Emission reductions may not be permanent or may leak elsewhere (e.g. forest carbon) without a global cap
- Greenhouse gas reductions are extremely difficult to measure (e.g. woodstoves, forests)

Lack of sustainable development benefits

- National authority screening for CDM is biased
- Poor public participation
- Unequal distribution of benefits to communities
- Displacement of local people by projects

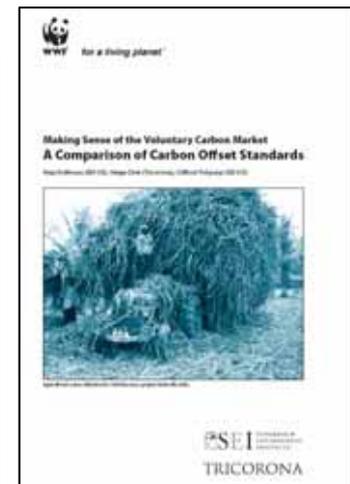
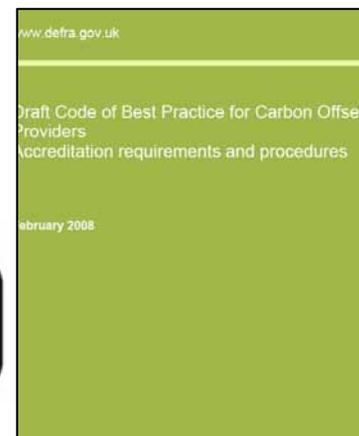


Reforming the CDM

- Expanding approved methods and technologies (e.g. woodstoves)
- Streamlining the process
- Promoting sectoral and policy CDM (e.g. cement sector or energy policy)
- Incentives or additional credits for small scale projects (e.g. in Africa)

Regulating offsets in response to criticism

- Gold Standard – higher additionality, sustainable development, no forest or HFC
- Voluntary Carbon Standard – basic carbon
- UK DEFRA guidelines – recommends CDM standard



The latest round of commodification: Forests and REDD (Reduced Emissions from Deforestation and Degradation)

- Bali decision to consider carbon credits for forest protection where countries would receive credit for reducing forest loss
- Challenges include:
 - Creating demand for the credits through stricter targets that allow offsets
 - Measuring the forest and converting to carbon credit
 - Ensuring funds reach local residents
 - Fairness to countries with intact forests
 - Can the value of standing carbon surpass value of cleared forest (biofuels, soy, timber etc)?



