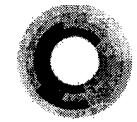


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Carbon Finance Opportunities for Africa

Maputo, 11 June 2009
Dr Charlotte Streck



Content

- **Climate change and carbon markets**
- **Opportunities for Africa:**
 - **The Clean Development Mechanism**
 - **Program of Activities**
 - **Voluntary Carbon Market**
 - **Outlook on Copenhagen and Beyond**



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Part I

CLIMATE CHANGE AND CARBON MARKETS



Facing the dangers from climate change...

...there are three choices on how to react:

- **Mitigation** taking measures to reduce the pace & magnitude of the changes in global climate being caused by human activities.
- **Adaptation** taking measures to reduce the adverse impacts on human well-being resulting from the changes in climate that do occur.
- **Suffering** the adverse impacts that are not avoided by either mitigation or adaptation.

We will have to accept all three, but can influence the mix...



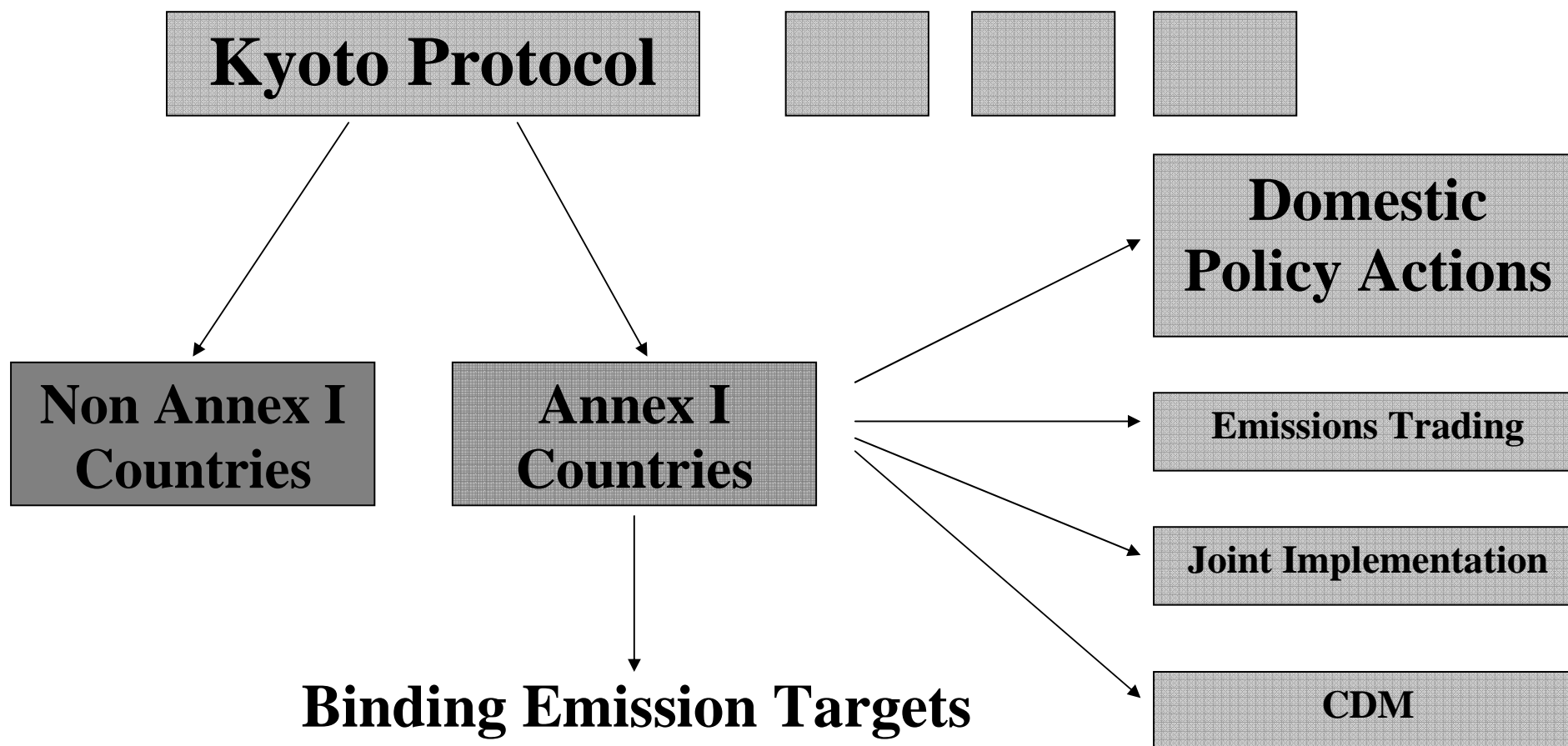
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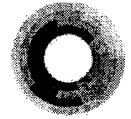
Mitigation options include

- **Reduce GHG emissions from the energy sector**
Reduce industrial, transport and building emissions
- **Reduce deforestation; increase reforestation & afforestation**
- **Modify agricultural practices to reduce emissions of greenhouse gases & build up soil carbon**



UN Framework Convention on Climate Change





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JI, CDM, and Intl ET

International Emission Trading

Authorization to exchange AAUs between Annex B countries.

Joint Implementation

Emission reduction projects undertaken in cooperation between two Annex B countries (or authorized entities from Annex B countries) in an Annex B country that generate Emission Reduction Units (ERUs), which can then be used to comply with national targets.

Clean Development Mechanism

Emission reduction projects undertaken in developing countries that generate Certified Emission Reductions (CERs), which can then be used to comply with emission reduction target of Annex B countries.

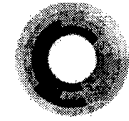


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Part II (a)

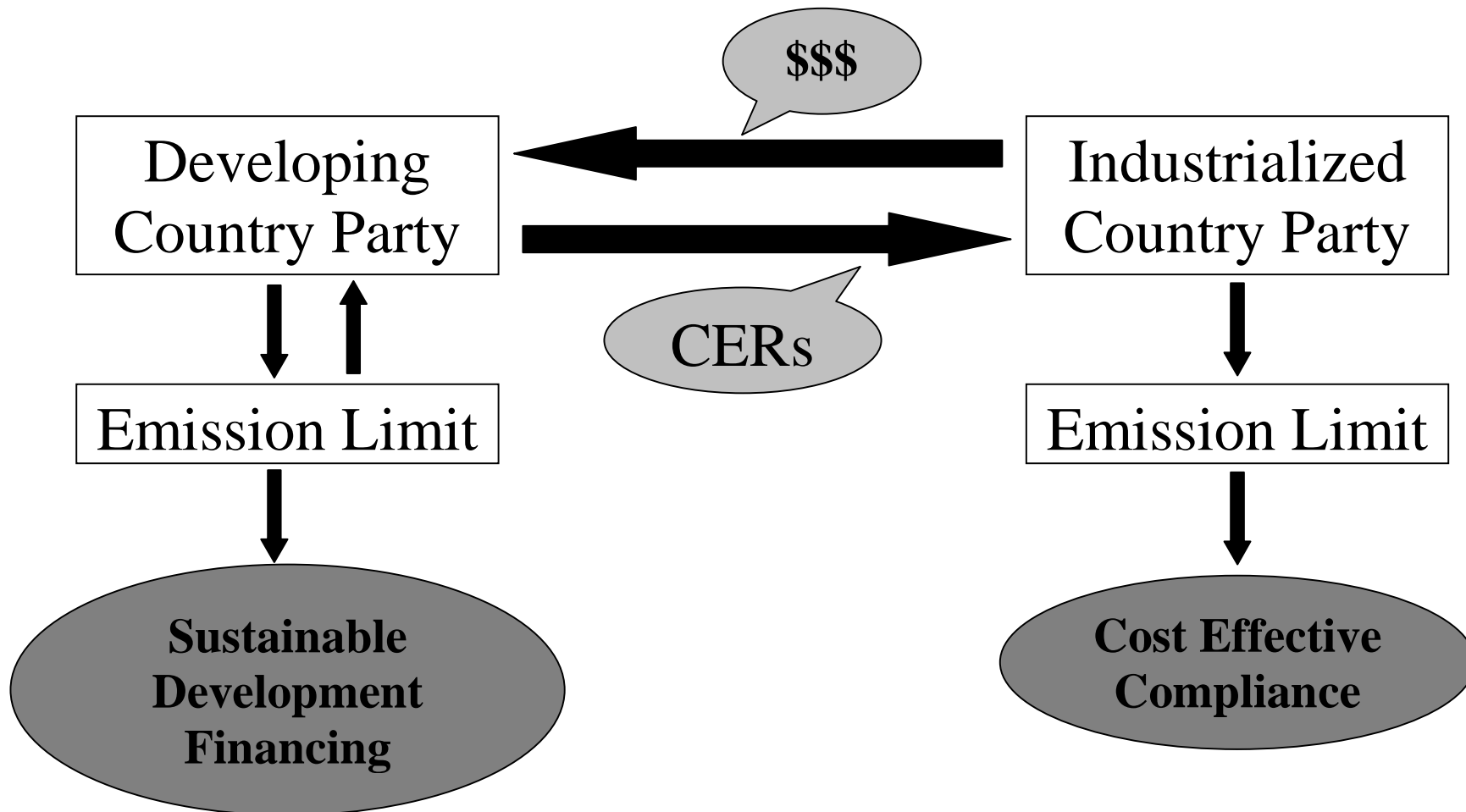
OPPORTUNITIES FOR AFRICA: THE CDM

CDM Concept

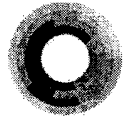


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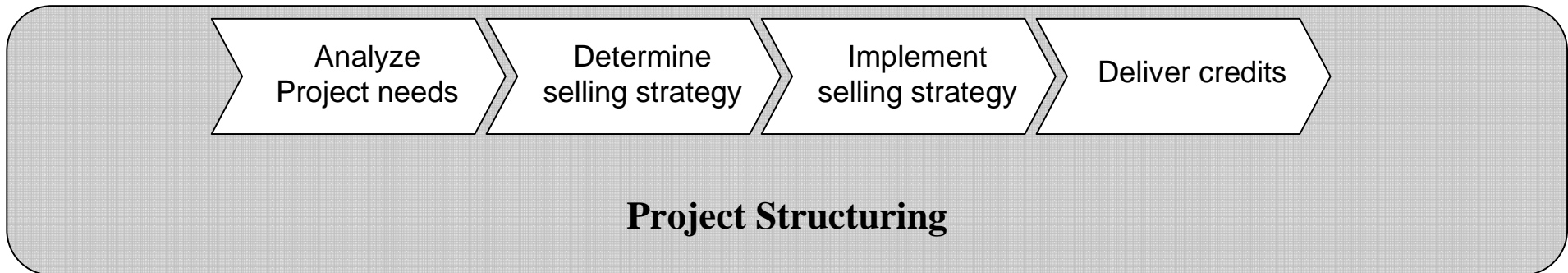
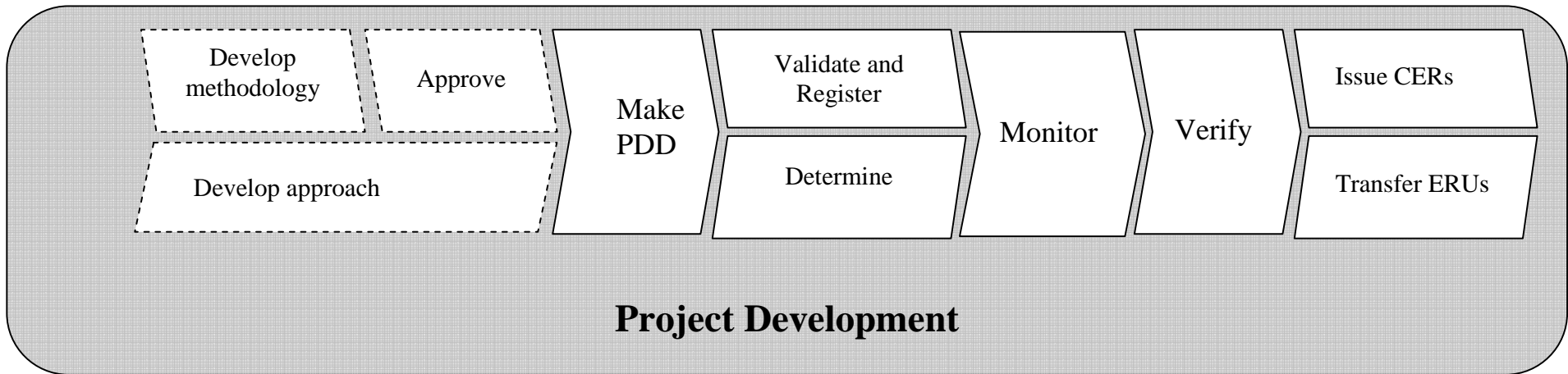
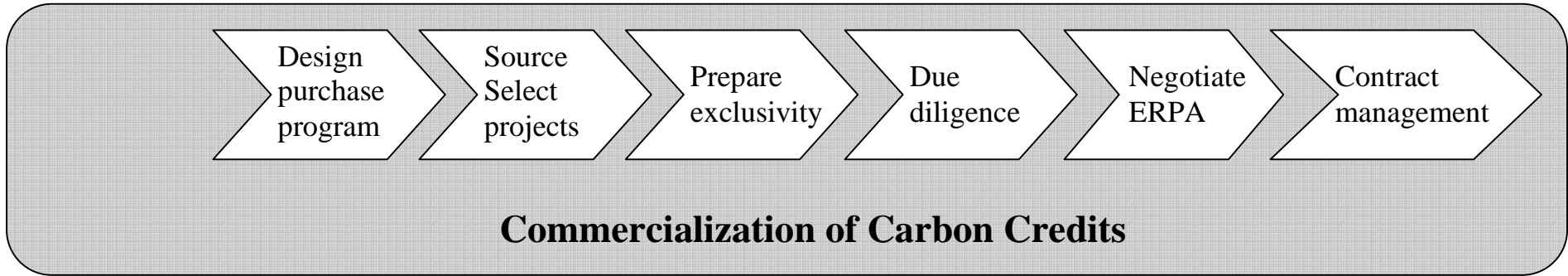
CDM is going to be a system of rules & procedures aided by an international board overseeing the transactions



Project Development



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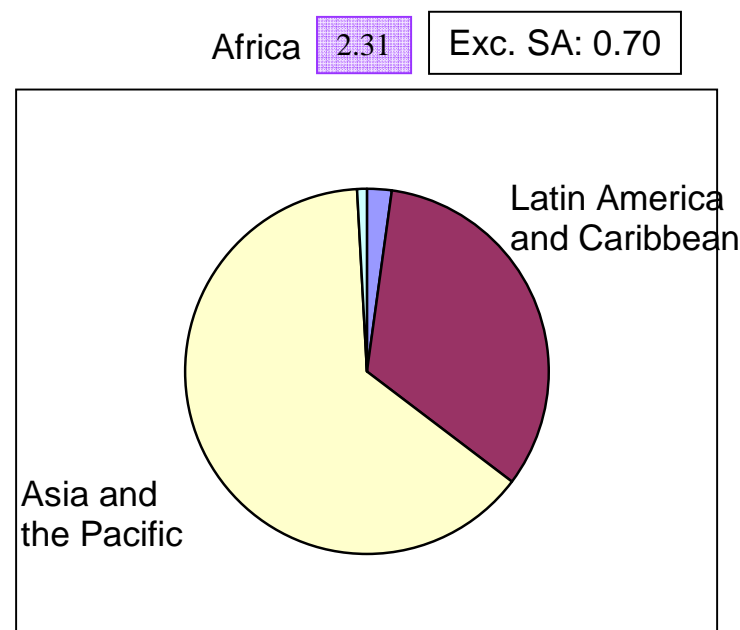


But: CDM - A Missed Opportunity for Africa?



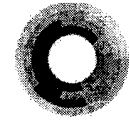
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Registered CDM projects by Region



Africa accounts for less than 3% of total CDM projects

90% of those projects are in South Africa

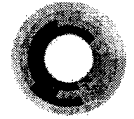


CDM Barriers in Africa

- Discriminatory nature of the CDM rules (exclusion of land-based projects, high transaction costs for small projects)
- Finance:
 - Lack of underlying finance
 - Conservative credit market
- Knowledge
 - Lack of awareness among the policy makers and political leadership about carbon market and mitigation activities
 - Lack of institutional capacity and technical resources (e.g. local consultants and experts) to be able to develop good quality mitigation projects in a cost effective manner

Risk

- No or weak DNAs in many countries
- Regulatory and political risks



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Part II (b)

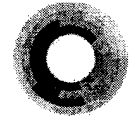
OPPORTUNITIES FOR AFRICA: PROGRAM OF ACTIVITIES



Programme of Activities

- **Address the failure of the CDM to reach to projects and programs targeting a multitude of small sources**
- **Targets large numbers of small and homogeneous greenhouse gas abatement activities**
 - **Geographically and/or temporally dispersed activities**
 - **Number and project owners unknown before the start of the project**
- **Negotiated with the dual (conflicting) purpose of**
 - testing sectoral approaches in the CDM for future negotiations
 - facilitating low-cost abatement measures otherwise by-passed under traditional CDM

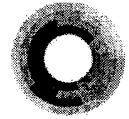
Why pCDM?



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- Reduced transaction costs
 - Only one PoA-DD for the entire program without size limitation
 - Simple inclusion of additional units through copy and paste of CPA-DDs
- Reduced CDM registration risks
 - Once the PoA and first CPA have been registered, inclusion of additional units should face no additionality or methodological risks
 - But: Revisions of the applied methodology affect future CPAs
- Program dissemination need not be fully determined at start of the project
 - Regular CDM requires unique identification of each activity at registration, e.g. each biogas digester implemented
 - PoA can be registered without such information. Individual units are added over time

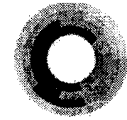
Current status



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- 11 PoAs listed on the U N FCCC website
 - 8 CDM and 3 J I PoAs
 - hosted by Bangladesh, Brazil, Honduras, Mexico, Senegal, South Africa, Tunisia, Uganda and Germany
 - Technologies include solar home systems, solar water heating, small hydro, distribution of efficient light bulbs, methane capture from animal waste, municipal waste composting, replacement and refurbishment of industrial heating boilers, heat pumps for residential buildings.
- None registered
- CDM EB to reassess PoA rules based on public submissions (delayed)

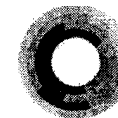
Disputed PoA Rules



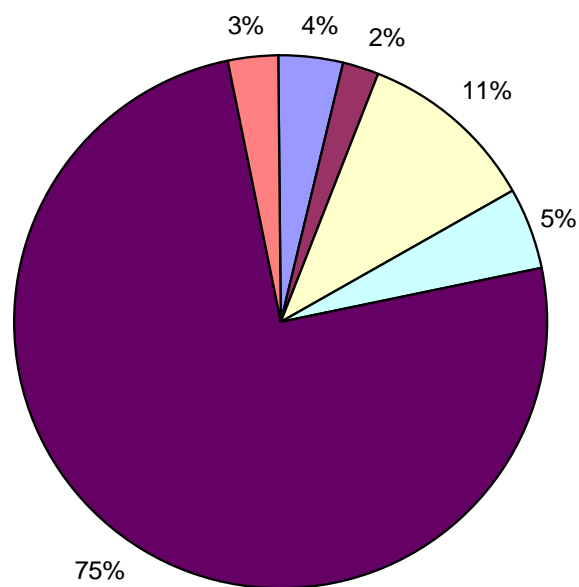
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- DOEs liable for erroneous inclusion of CPAs
 - No clear definition of what constitutes an erroneous inclusion
 - Inclusion supposed to be carried out as a quick and cost-effective desk check
- **Starting date of a CPA can only be after the registration of the PoA (different from regular CDM projects where credits can be obtained retroactively)**
- **PoAs can use only one baseline and monitoring methodology but not a combination of more than one.**

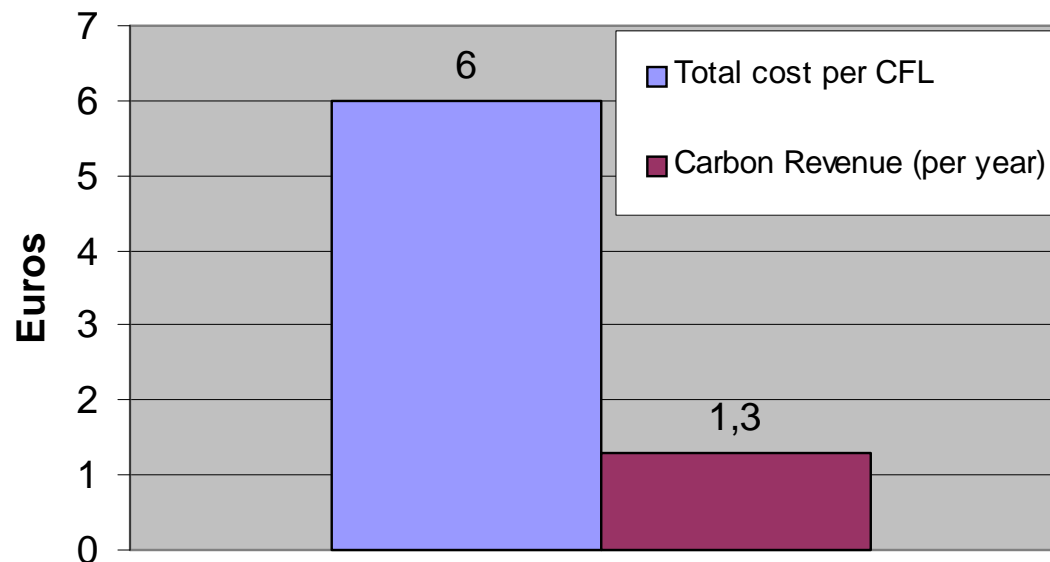
Compact fluorescent lamps



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CFL in India



Average lifetime: 10 years

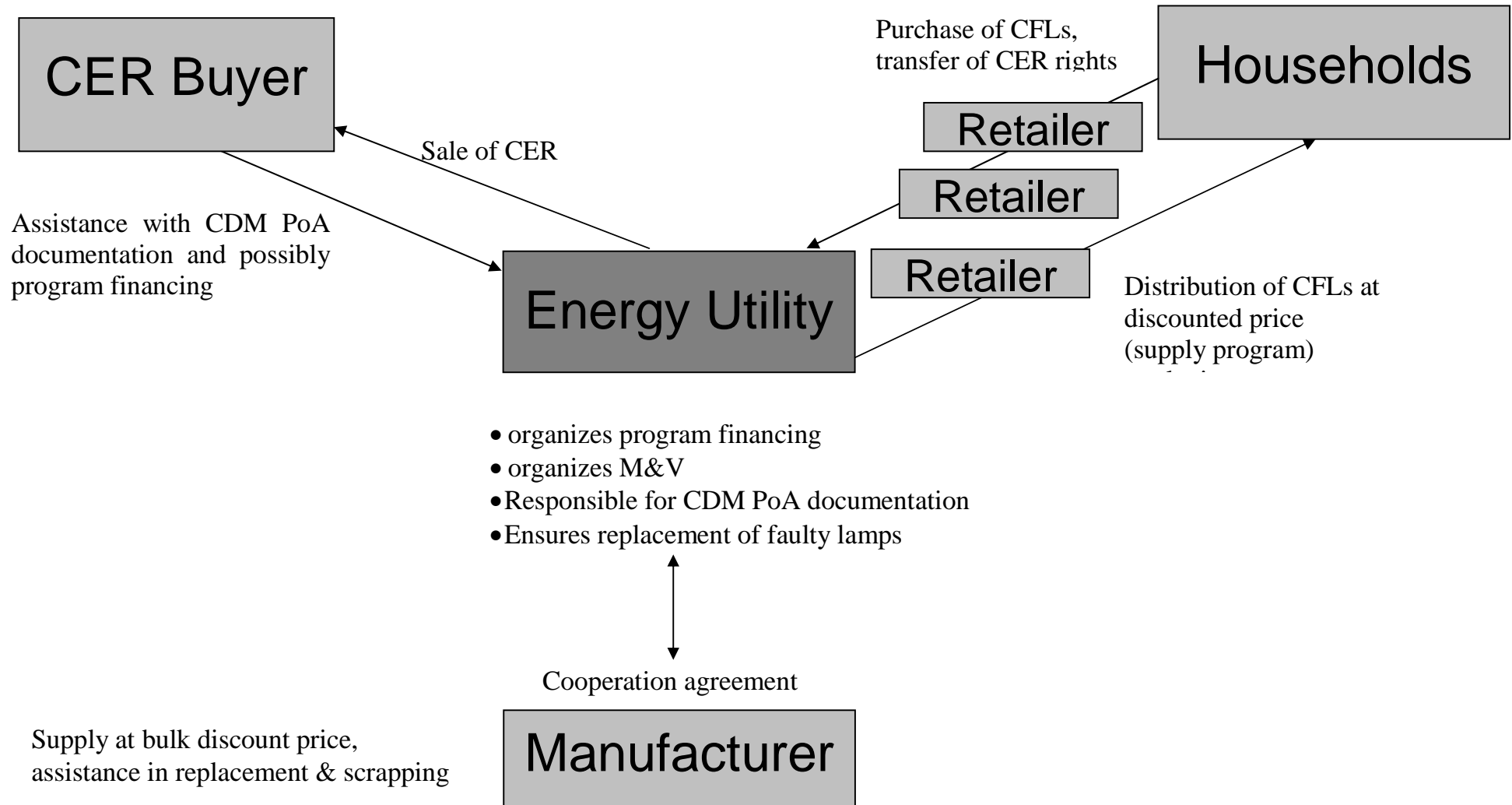
CER price: EUR 16

Total cost for 530,000 CFLs: 3,185,000 Euros

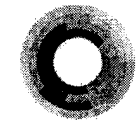
Compact fluorescent lamps



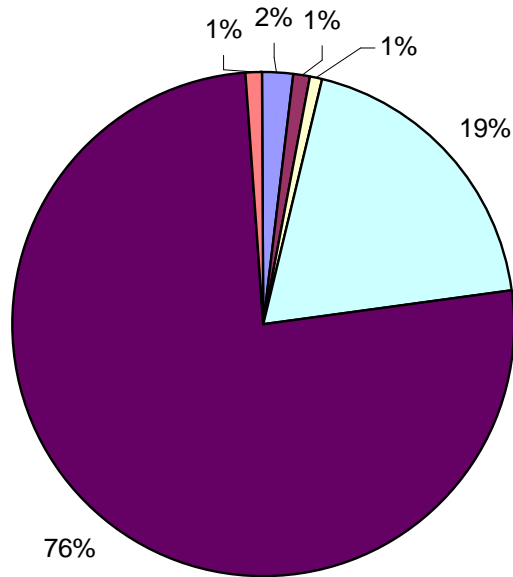
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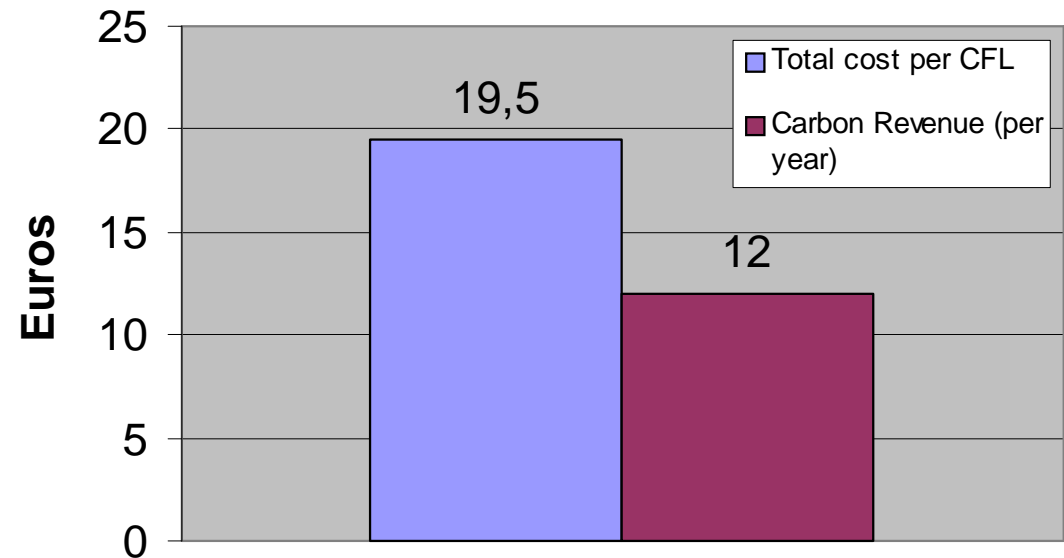
Household stoves



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Studies from Hulscher and Bailis

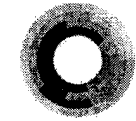


Average lifetime: 2 years

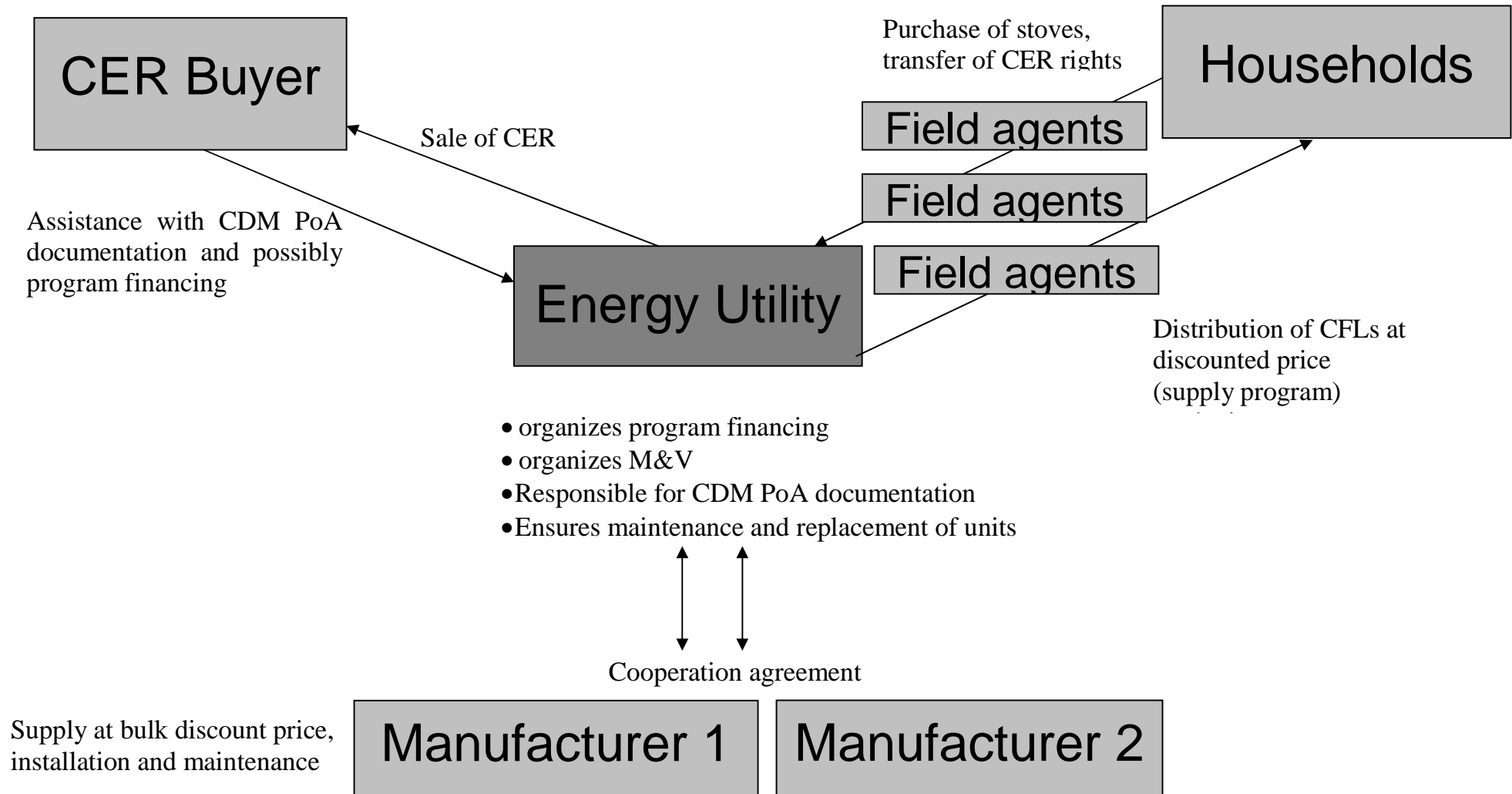
CER price: EUR 12

Total cost for 1,000,000 stoves: 19,500,000 Euros

Household stoves



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What matters most?



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- **Start with core business/interest and associated pCDM potential**
- **Focus early on one first programme idea**
- **Define early various roles: pure operator or also investor and risk taker**
- **Enter into a PoA partnership with an experienced and strong partner**
- **Plan for a 2 year preparation, implementation, registration and start up phase**
- **Minimize risk through a step-wise process including several decision making steps**



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Part II (b)

OPPORTUNITIES FOR AFRICA: VOLUNTARY CARBON MARKET

Voluntary Carbon Market



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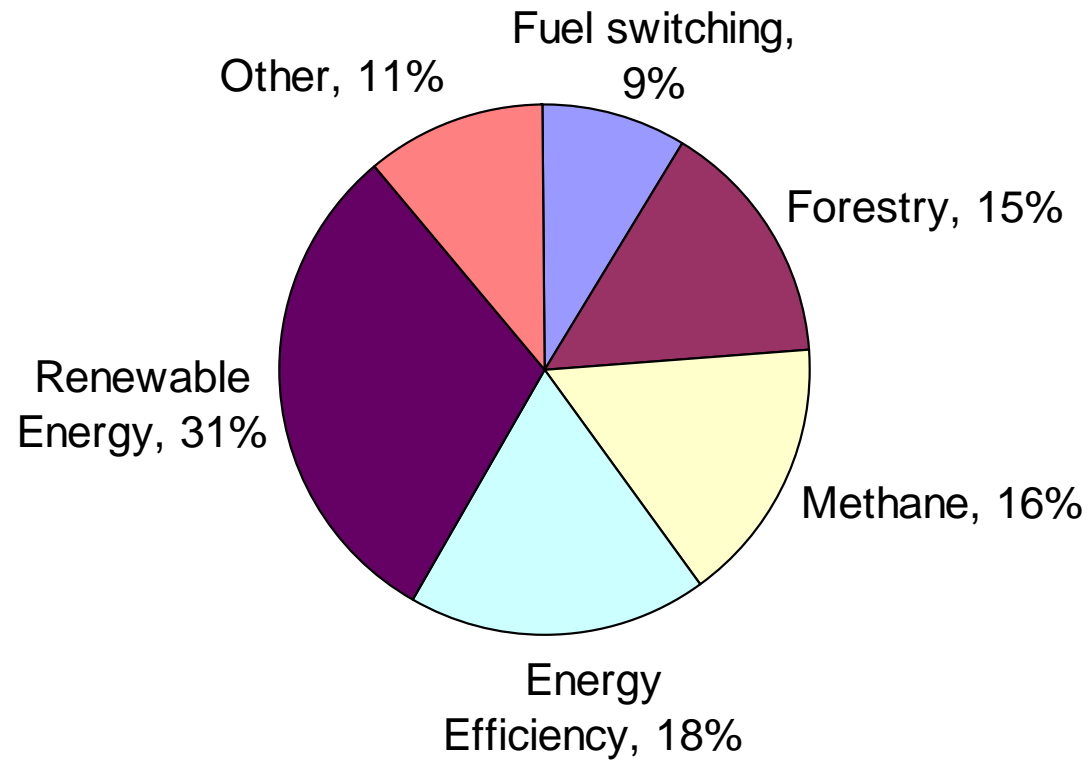
- Generation and measurement of emission reductions outside of a regulatory framework
- Definition of emission reductions on the basis of accepted standards and contractual arrangements
- Motivation:
 - Corporate social responsibility
 - Private and retail offsets
 - Philanthropic support
 - Pre-compliance and learning
- **Reduced transaction costs, broader scope, and increased flexibility. Reduced lead times.**

Project types

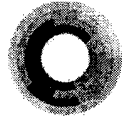


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Offset Project Types, 2007



Some numbers...



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- The voluntary carbon markets more than doubled in value between 2007 and 2008, from 65 million tonnes of credits traded worth US\$331 million in 2007 to 123 million tonnes worth \$705 million in 2008 (most of it however CCX).
- The average credit price increased 20% to \$7.34/tonne on the OTC Market, though credits still covered a wide range of prices from \$1.20/t to \$46.90/t.
- The most popular project types (by transaction volume) in 2008 were renewable energy projects (51 %), mostly hydro, wind, and biomass. Landfill gas was also a popular project type, claiming 16% of transaction volume.
- Third-party verification increased even beyond last year's impressive 87%. At least 96% of credits were third-party verified in 2008. As was the case in 2007, leading the pack in terms of transaction volume in 2008 was the Voluntary Carbon Standard (48%), followed by the Gold Standard (12%) and the Climate Action Reserve (10%).



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Part II (c)

OPPORTUNITIES FOR AFRICA: OUTLOOK

Regulatory developments



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- International negotiations
 - CDM likely to continue, but
 - Need for reform (governance and scope)
 - To be complemented with more ambitious schemes scaling up emission reductions in dev countries
- EU ETS Phase III
 - Demand for CDM credits depends on EU target (which depends on the overall Copenhagen deal)
 - Demand for credits from LDCs likely to continue, however, overall scale limited
- Developments in US
 - International off-sets likely to be eligible for compliance with US cap-and-trade obligations
 - Credits from countries with low GHG missions preferred (+ intl forest)



Implications for Africa

- **CDM in its current framework and rules is not a mechanism with great promise for Africa**
- **Reform needed to:**
 - Broaden the scope -to open the CDM for land-use, forestry and agricultural projects
 - Simplify rules and provide for exceptions for LDCs
 - Reform and kick-off program of activities
 - Broaden scope to include policy CDM
- **Complementary measures:**
 - Establishment of credit lines for underlying finance
 - Risk mitigation tools (guarantees) to stimulate private engagement