



ACAD
African Carbon Asset Development



UNEP
RISØ
CENTRE



Standard Bank

Carbon market experiences in Africa

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Context

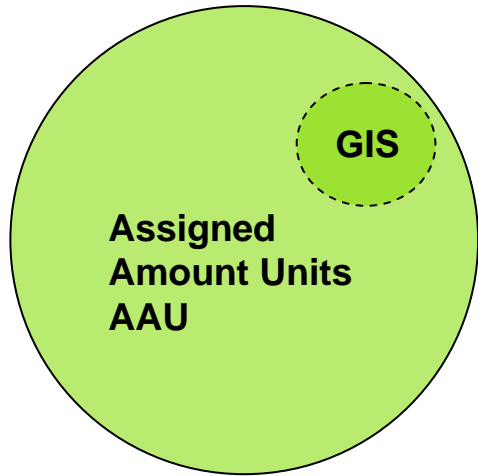
- Carbon can help fill financing gaps, but needs to leverage other financing sources
- Global upturn in renewable energy investment still largely bypassing SSA
- African carbon market needs catalysts to take to scale
- Public funding for seed capital and risk sharing can play a critical role
- Demand for African projects is strong, and growing

Global Carbon Market

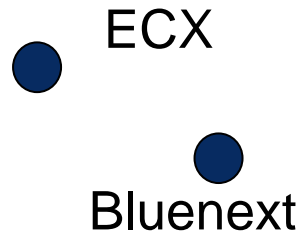
- **Allowances** (cap and trade system)
 - Emission allowances are defined by regulations at the international, national, regional or firm level : Kyoto-ET, EU-ETS, Domestic: UK, Australia, Japan, Canada, Korea. Firms: BP, Shell
 - Linkage between EU ETS and project-based mechanisms
- **Project-based** (baseline and credit system)
 - Emission reductions created and traded through a given project or activity (CDM and JI). Legal units are CERs and ERUs, respectively.
- **Voluntary** (compensation)
 - Individuals and companies account and trade emissions on a voluntary basis (operations and travel compensation, learning, PR)
 - Some companies buying CDM credits for voluntary purposes

A highly fragmented, regulated market

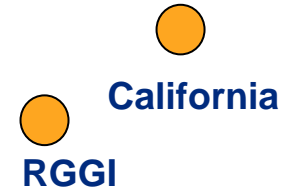
Kyoto Market



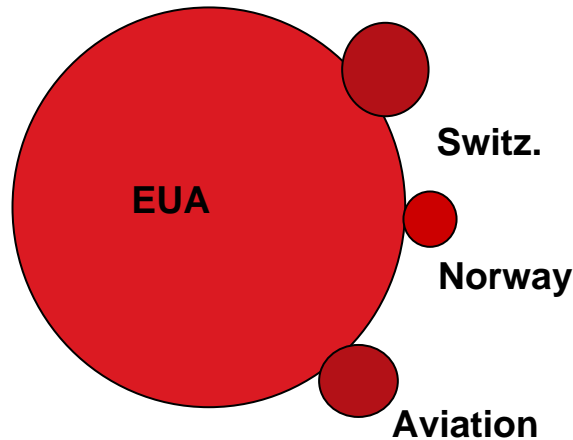
Stock Exchange



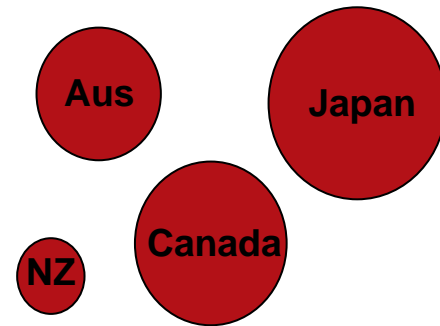
US State/Regional



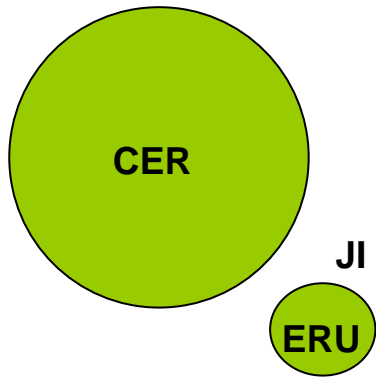
EU ETS



National Trading Schemes

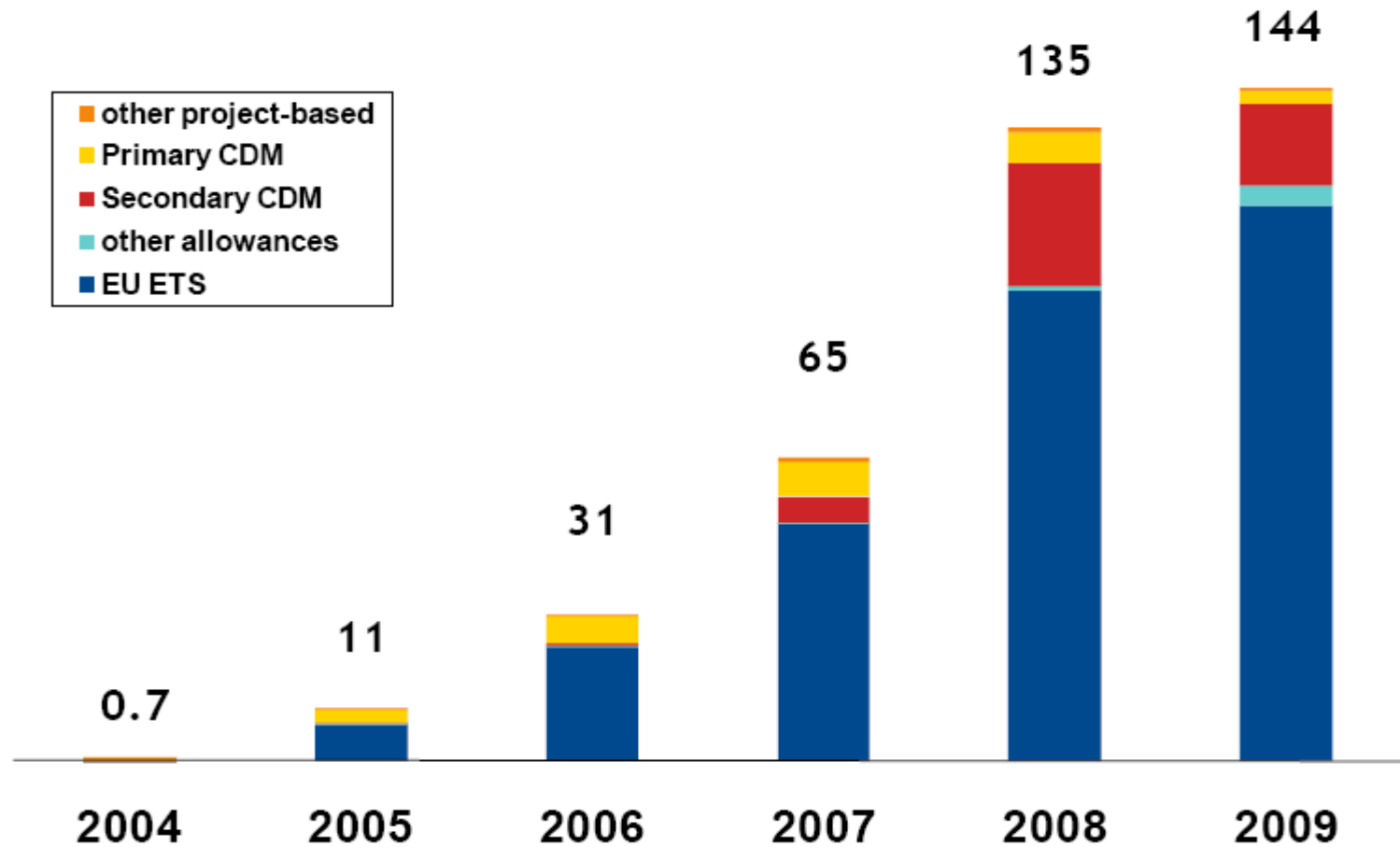


CDM – Tanzania, Kenya, Uganda



European Emission Trading Scheme

(in Billion US\$)



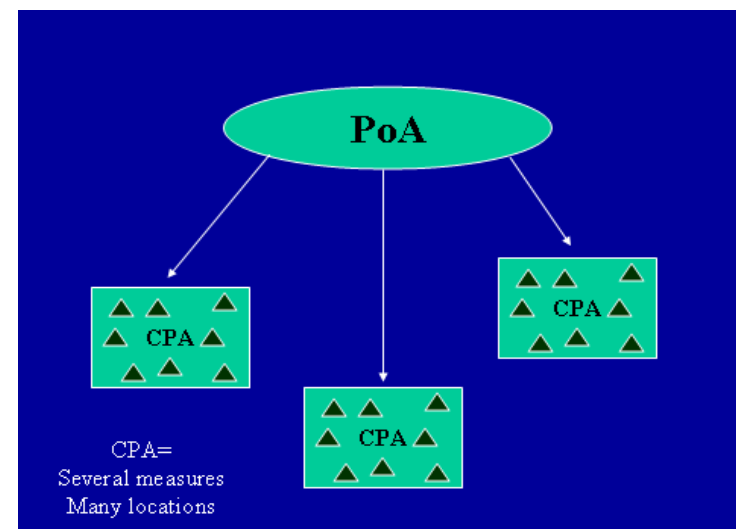
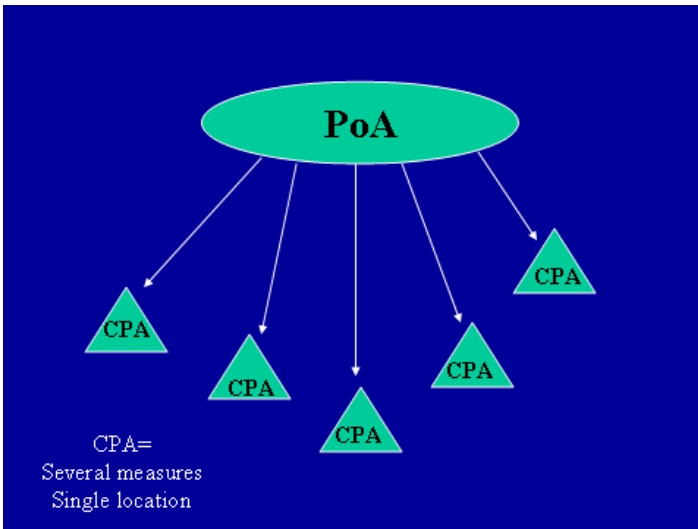
- About 5,150 projects in the CDM pipeline with roughly 100-125 new entering each month
- 407 million CERs have already been issued, with a billion more projected by 2012
- Billions of dollars have been mobilised for GHG emission reductions in developing countries
- Stringent auditing requirements, resulting in average credit issuance success rate of 97%

Large Scale CDM

Small Scale CDM (not so small!)

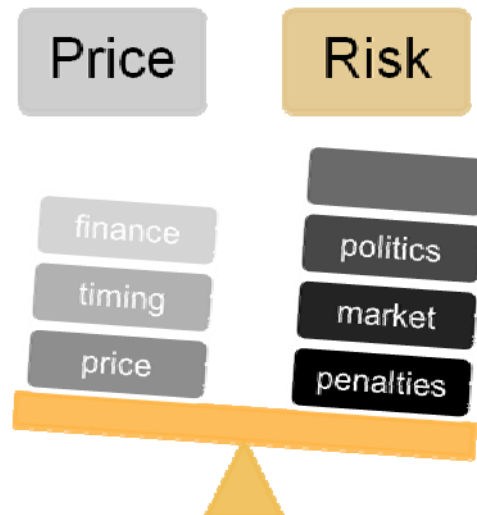
Programmatic CDM (PoAs)

Allows for registering a large number of small dispersed CDM eligible activities coordinated under a CPA to be registered under the same umbrella, as long as the same technology and methodology is used. Also allows longest crediting period (4 X 7 years = 28 years)



How to make money out of carbon credits?

- Sell forward
- Sell futures
- Sell spot
- Attract project finance



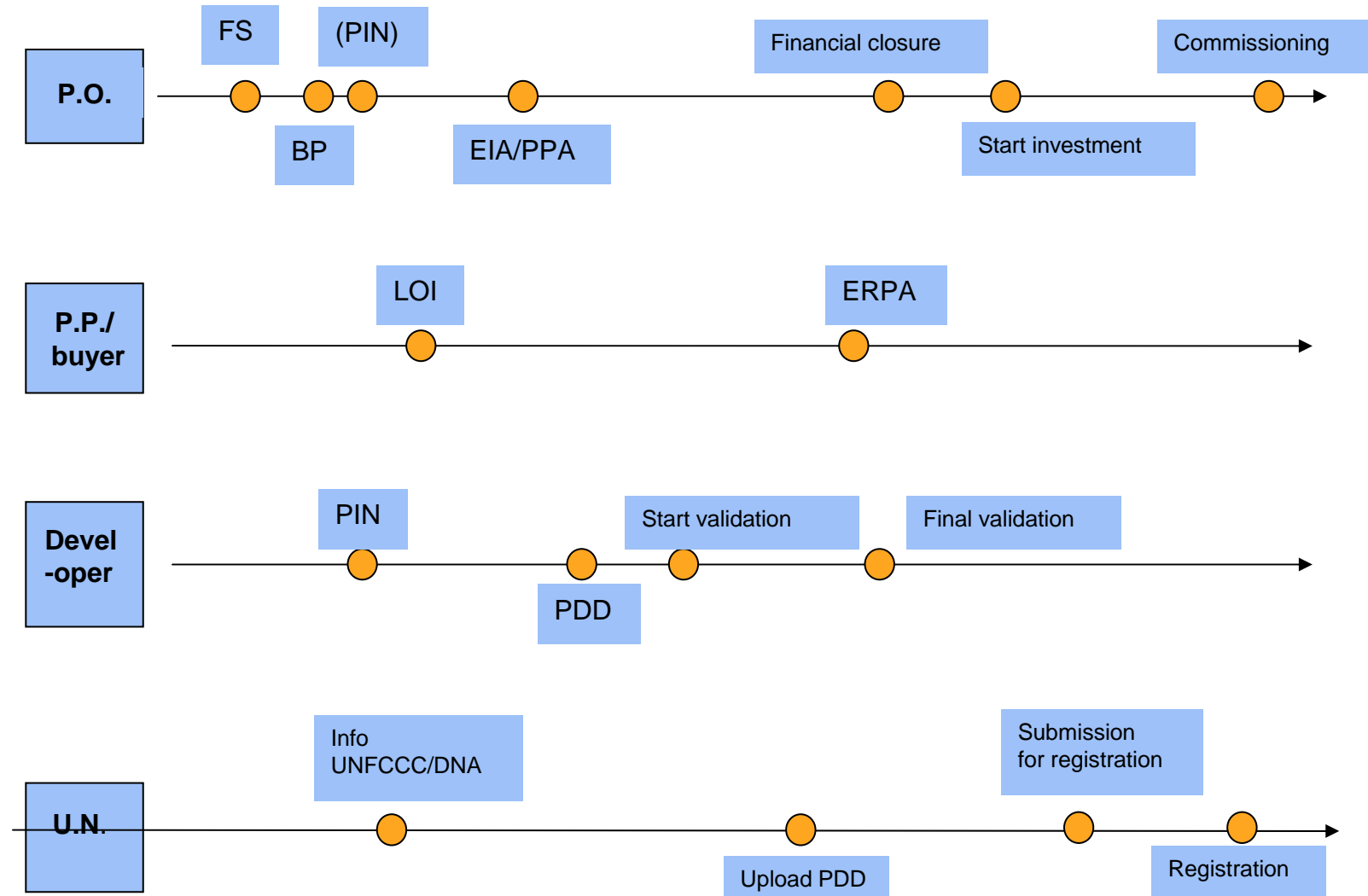
What affects prices?

- Market: timing
 - demand and supply
- Project status
 - higher prices when project is more developed
- Contract: risk distribution
 - assuming risk is rewarded
- Project characteristics
 - bonus for additional social and environmental benefits

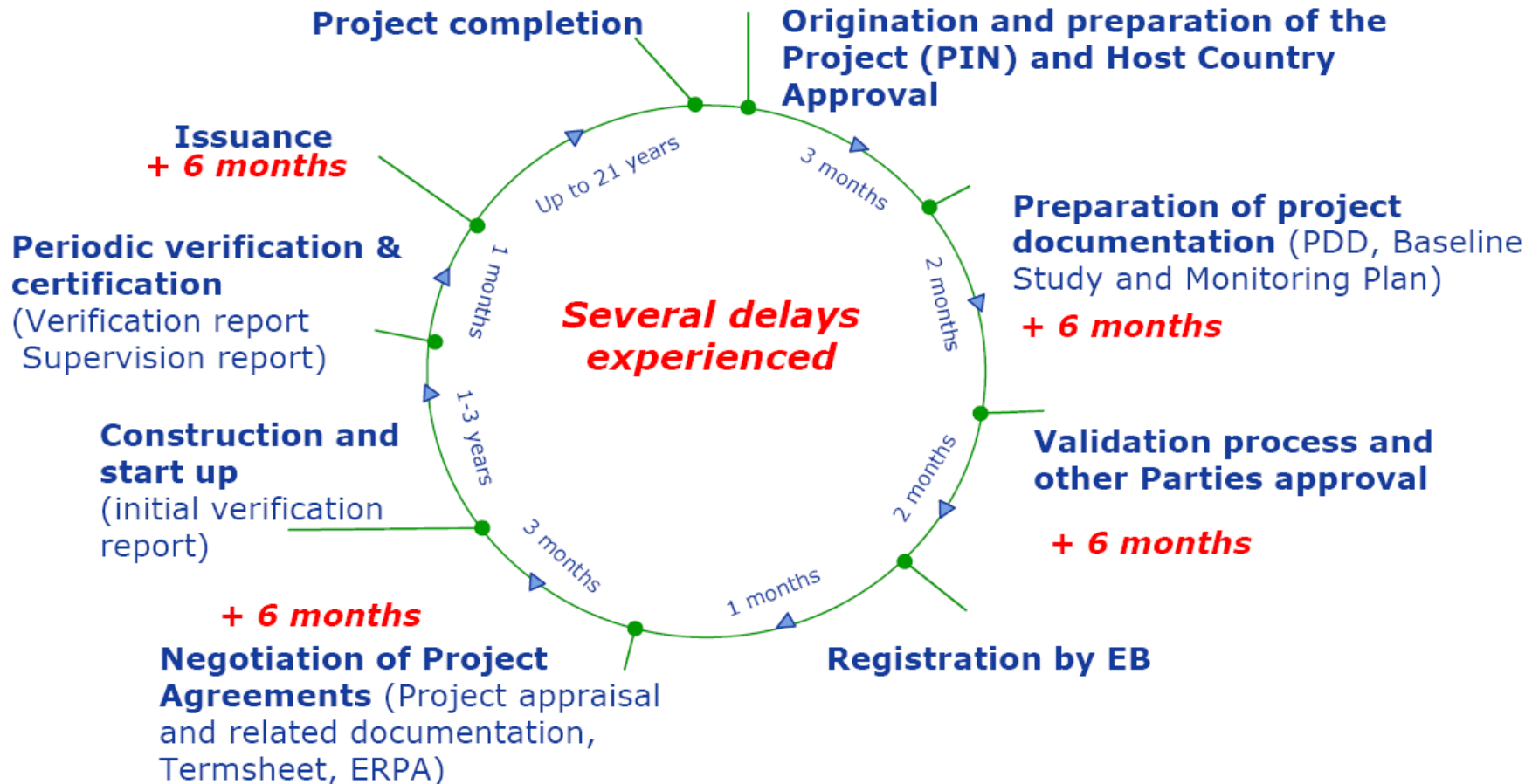
RISKS IN MORE DETAIL

- Registration: Binary!!
- Performance/volume: Will the project perform? What volume of CERs will it produce (versus PDD)
- Verification: Will it be done? Properly? On time? What volume? Will the verifier find any problems?
- Delay: Will registration, verification or issuance be delayed? Why? What impact?
- Eligibility: Will the country remain qualified for carbon trading under the Kyoto Protocol (eg Bulgaria)?
- Methodology: Baseline accurate? Will the methodology change?
- Market risk: Is the developer selling guaranteed volume or un-guaranteed volume?
- Pre-2013/Post-2012

Overlay of CDM cycle with investment cycle



...the approval cycle is complex...



Significant inertia in the CER supply chain

Cumulative # of projects

UNEP RISOE CDM/JI PIPELINE JUNE '10

Africa	Number	kCER2012	
Country		kCER2012	
South Africa	33	23106	23.7%
Kenya	16	3349	3.4%
Egypt	14	17036	17.5%
Uganda	13	1603	1.6%
Morocco	13	3654	3.7%
Nigeria	8	34112	35.0%
Tanzania	6	2170	2.2%
Congo DR	4	1016	1.0%
Tunisia	4	4257	4.4%
Ivory Coast	3	1560	1.6%
Senegal	3	678	0.7%
Rwanda	3	388	0.4%
Cameroon	3	580	0.6%
Sudan	2	367	0.4%
Mali	1	94	0.1%
Mozambique	1	111	0.1%
Madagascar	1	210	0.2%
Zambia	1	387	0.4%
Ethiopia	1	179	0.2%
Swaziland	1	252	0.3%
Liberia	1	215	0.2%
Cape Verde	1	340	0.3%
Ghana	1	1553	1.6%
Mauritius	1	231	0.2%
Equatorial Guinea	0	0	0.0%
Total	135	97,449	100.0%

**Now 135
African Projects**

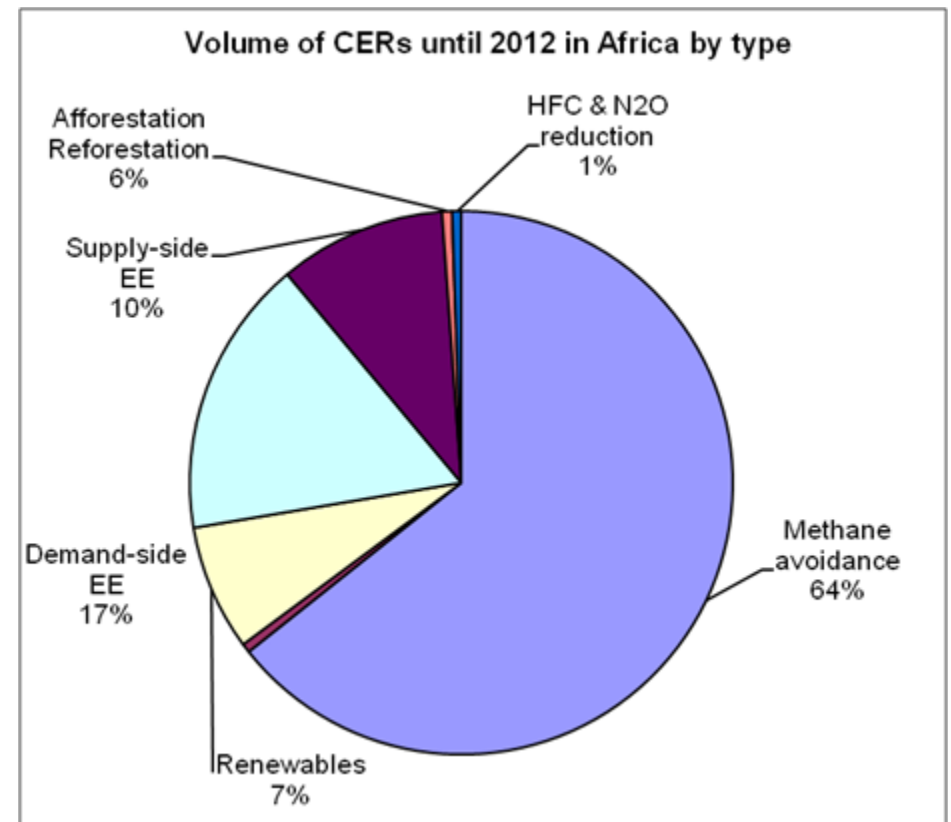
**Of which 45 are
registered or requesting**

**With potential
carbon revenue
around 1.275 billion
USD by 2012**

Types of Africa CDM Projects

*Landfills & N2O & Gas Flare Reds.
2/3 of CERs*

TYPE	Number		kCER2012
Fugitive	5	3.7%	27.3%
N2O	5	3.7%	16.8%
Landfill gas	27	20.0%	16.8%
Wind	13	9.6%	6.6%
Biomass energy	20	14.8%	6.1%
Cement	2	1.5%	5.8%
Fossil fuel switch	10	7.4%	5.1%
Hydro	12	8.9%	4.3%
EE OwnGeneration	4	3.0%	3.9%
Reforestation	17	12.6%	3.2%
Geothermal	2	1.5%	1.2%
EE households	4	3.0%	0.6%
Solar	4	3.0%	0.6%
Methane avoidance	4	3.0%	0.5%
EE industry	2	1.5%	0.5%
Afforestation	3	2.2%	0.5%



CDM Challenges

Non Africa-specific:

- Complex Modalities & Procedures
- Transaction costs
- Heavy institutional requirements for project cycle.
- Knowledge gap between buyers & sellers



Africa-specific:

- Limited access to finance
- Financial intermediaries lack of knowledge of CDM & risk mgt.
- Lack of entities capable of bundling projects
- Lack of trained national CDM consultants
- Investment climate/domestic regulatory framework
- Limited budgetary support for operations of DNAs
- Majority of potential in small projects, difficult to attract financing

UNEP Activities : Investment mobilization and engaging the finance sector

- ACAD Facility (for African carbon projects)
- SCAF Facility (for renewables)
- 2nd African Bankers' Carbon Finance & Investment Forum. Nov 4-5, 2010
- Dakar: Carbon finance perspectives for the banking sector. Feb 2008
- Financing CDM guidebook



African Bankers' Carbon Finance Investment Forum
May 28 – 30, 2007
Johannesburg (Midrand)
South Africa

Event Sponsors:

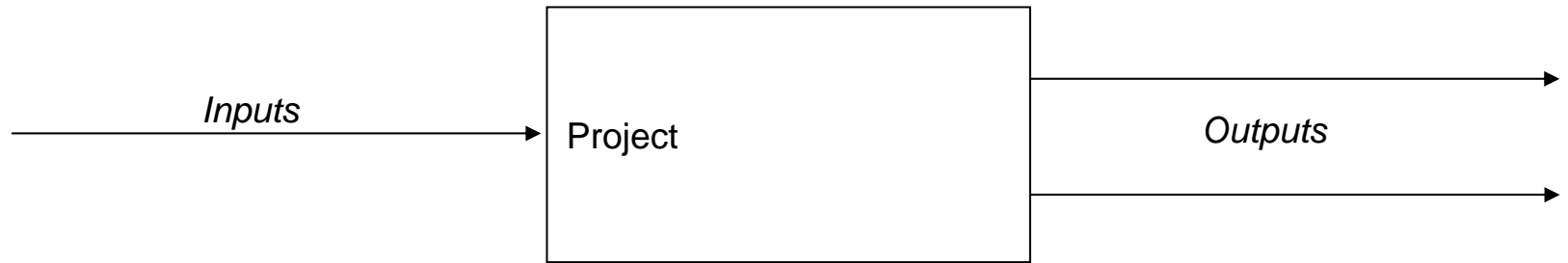
WBL of ASSET
gtz
United Nations
Development Programme

“Emissions trading can achieve not only a more cost-effective reduction in global emissions but a more just one, enabling significant flows of investment into developing countries... [This market] could grow to between \$50 and \$100 billion.”
— Rt. Hon. Gordon Brown

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Event Organisers:
UNEP RISO CENTRE
DBSA

Characteristics of a Bankable Project (1)



Reliable supply
Predictable price

Experienced, successful developer
Appropriate permits/approvals
Good EPC contracts
Good equipment
Appropriate debt/equity ratio
Adequate financial performance

Reliable output
Predictable price
Reliable and credit-worthy off-take

Characteristics of a Bankable Project (2)

- Key carbon risks: Will you finance prior to registration?
- Assumed
 - Volumes
 - Prices
 - Delays
- Creditworthiness of off-taker
- ERPA terms
 - Key conditionalities
 - Volume assurances
- Capability and track record of the CDM developer!

Introducing the ACAD Facility

- Innovative **public-private partnership** for green financing supported by the German Government's (BMU) International Climate Initiative which aims to facilitate the realization and financial closure of highly replicable African carbon projects. Launched in fall 2009.
- ACAD addresses key barriers to more robust African carbon market by:
 - Enhancing transactional capacity within African banks
 - Reducing high early-stage costs/risks
 - Providing a jump-start financing solution
- UNEP facilitates the partnership working closely with Standard Bank and other financial institutions and investors.
 - ACAD secretariat embedded in Standard Bank – J'burg following intl tender

ACAD is a catalytic platform that works in a number of ways to help projects reach financial close and generate credits

- Grant funding to help share CDM costs such as validation or registration
- Capacity Building for local financial institutions
- Funding of technical studies or papers to ‘unblock’ issues in African market
- Technical assistance/financial advisory from UNEP Risø and Standard Bank

So far 10 projects in 6 countries have been selected:

- ACAD has made its first disbursement
- Over 100 African bankers trained on carbon finance

For more information:

www.acadfacility.org

Example: IFM Cogeneration Project

- Creates 17.1 MW of “autonomous” clean power at Buffelsfontein plant from captured waste gas (normally flared to CO₂)
- Ensures security of power, production and reduces ~200 ktCO₂ emissions annually plus other local air pollutants
- “Leapfrogging” technology for SA
- ACAD grant to defray costs of validation and initial verification by SQS, a carbon auditor as well as CDM registration



Thank You !

