

UNEP CD4CDM Project: Context and Scope

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The CD4CDM Project

Donor: Netherlands Ministry of Foreign Affairs

Executing/Implementing Agency: UNEP Risoe Center

Project Implementation Partners in Tanzania:

- EPMS (environmental consultancy)
- CEEST Foundation (NGO)
- Vice President's Office (DNA for CDM)

Project Goals

- Improve TZ CDM policy and legal framework
- Raise awareness of benefits and opp's
- Train/capacitate national experts
- Support a pipeline of CDM projects
- Promote investment through website, trade missions, investor guide, etc.



CD4CDM Tanzania – Example of Activities

- **Targeted DNA Support:**
 - CDM web site
 - National CDM Investors' Guide.
- **Preparation of pipeline of CDM projects by local and international consultants and support for interaction with carbon buyers**
 - Travel to Carbon Expo and Africa Carbon Investment Forum
- **Capacity building workshops targeting:**
 - All national stakeholders, especially policymakers, private sector, technical consultants, investors.
 - Bankers and financial intermediaries.
 - Sectoral workshops (e.g. municipal waste management.)

Wide array of activities involving all major stakeholders.

UNEP - Added Value and Mandate

⇒ ***Not a buyer. Not a seller.***

- Unbiased advisory services & research products
- Trusted by both buyers & sellers

⇒ ***In-country experience in 25+ countries.***

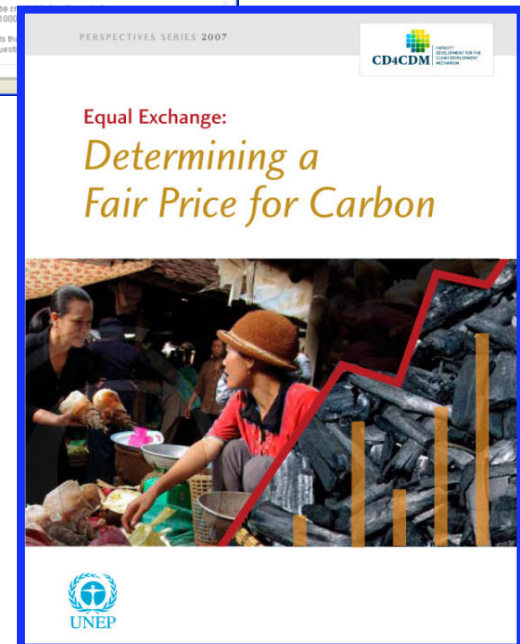
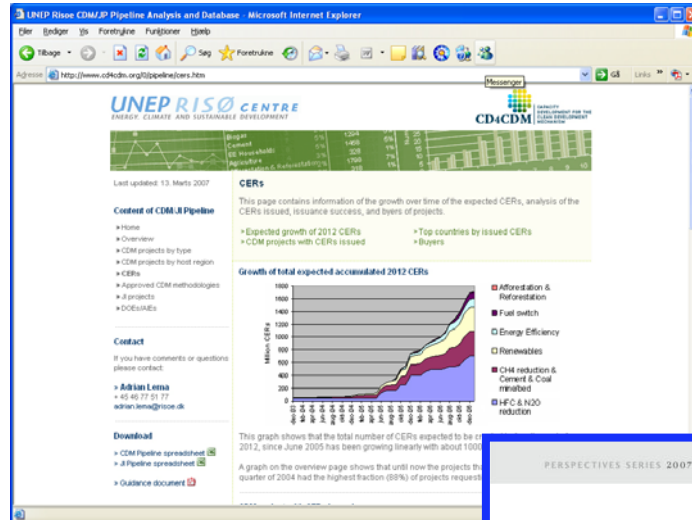
- Intimate knowledge of host countries' situation
- Access to valuable field information

⇒ ***Paving the way.***

- Public-use research products (CDM Pipeline database)
- First mover in many high sovereign risk countries

Impartiality and geographical coverage as main strengths.

**For more information and resources visit :
www.cd4cdm.org**

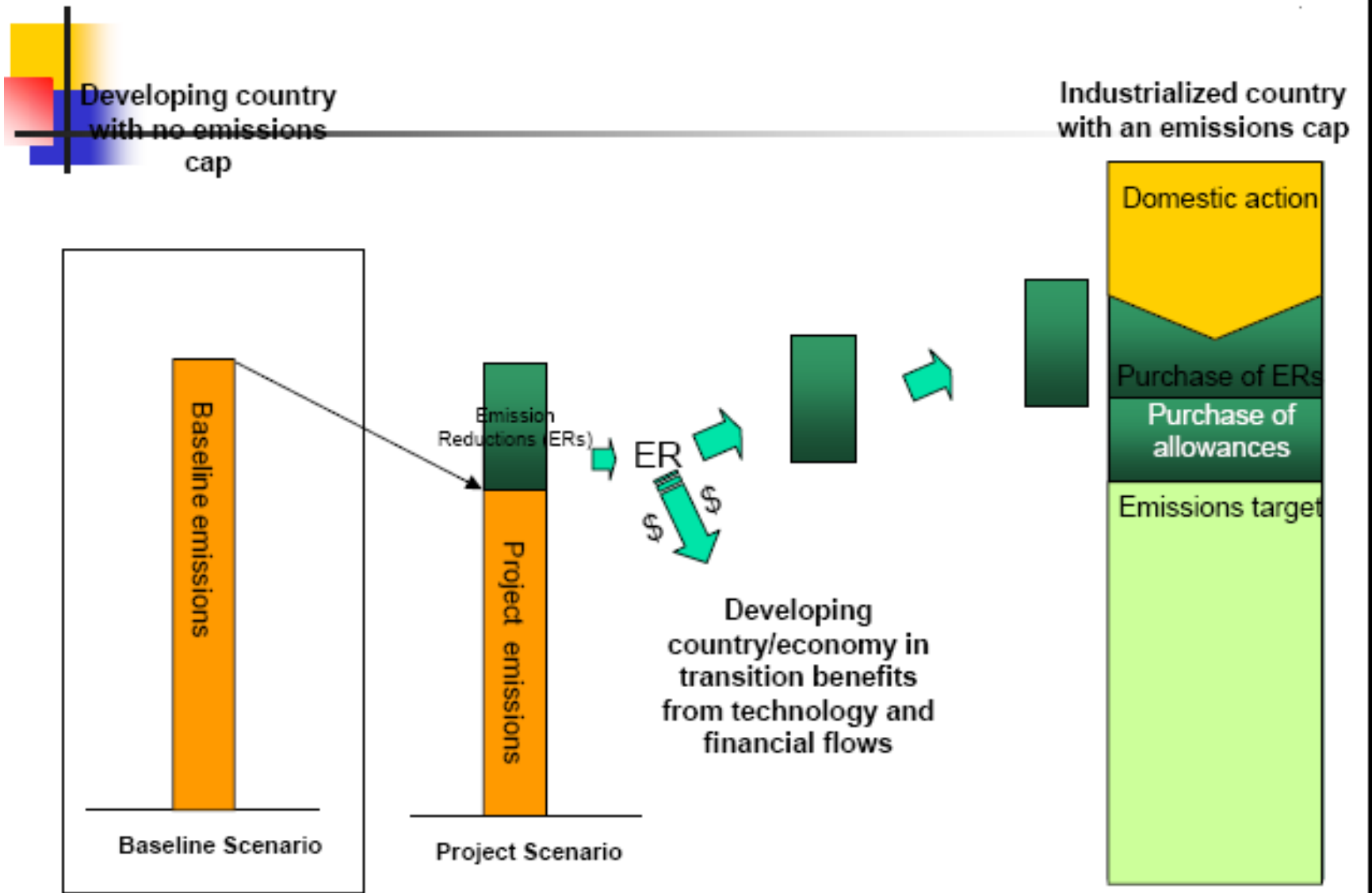


Overview and Dynamics of the Global Carbon Market

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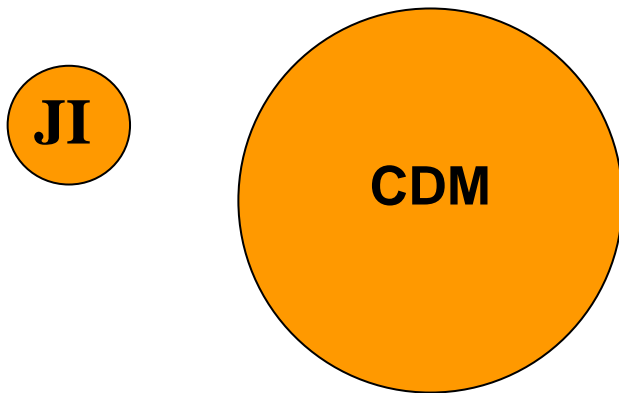
Why a Carbon Market?

- Regulations (real or anticipated) create constraints on emissions that governments, firms may emit
 - **Kyoto Protocol**
 - **EU Emissions Trading Scheme**
- Compliance can be achieved through
 - a) in-house action (“make”) or
 - b) purchase (“buy”) of allowances or credits
- Since GHG emissions mix in the atmosphere, it is not important exactly where they are reduced
- Gains from trade fundamental to the market



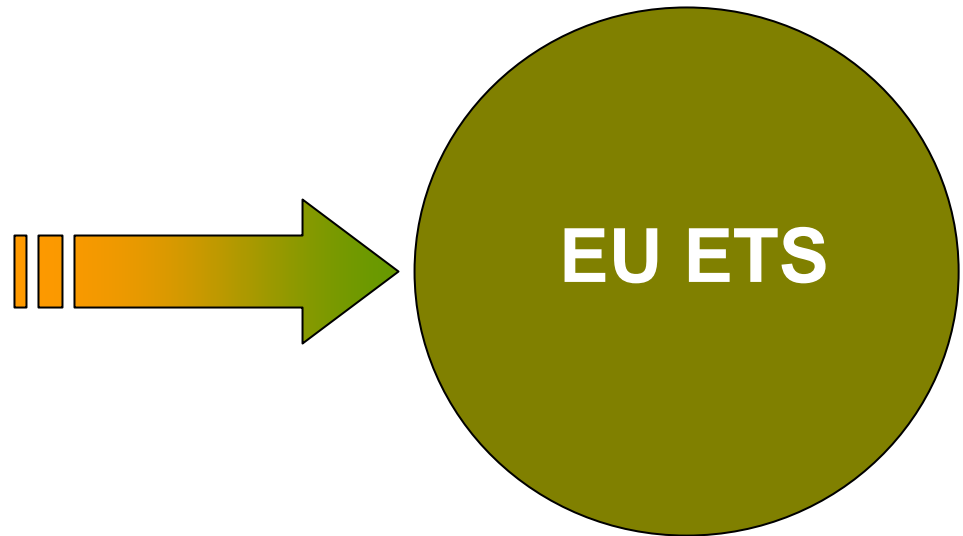
Structure of the Carbon Market

Project-Based Offsets ("Credits")



● Voluntary/retail

Allowance Markets



● New South Wales
Certificates

● Chicago Climate
Exchange

Market Drivers

Potential Gap '08-12 (in MtCO₂e)

EU-15	1,500
Canada	1,300
Japan	750
<u>Rest of Europe & NZ</u>	<u>200</u>
TOTAL	3,750

- Kyoto Compliance Gap
- EU ETS + key regulations
 - phase II NAPs, higher fine
 - CDM credit importation caps
- Uncertainty about *how much* AAUs from E Europe can be sold, and whether any will buy
- CDM supply constraints:
 - Credits in high demand, but supply “tight”. Only ~1000 Mt contracted by 2012, but potential for far more.
 - Financial, time and capacity

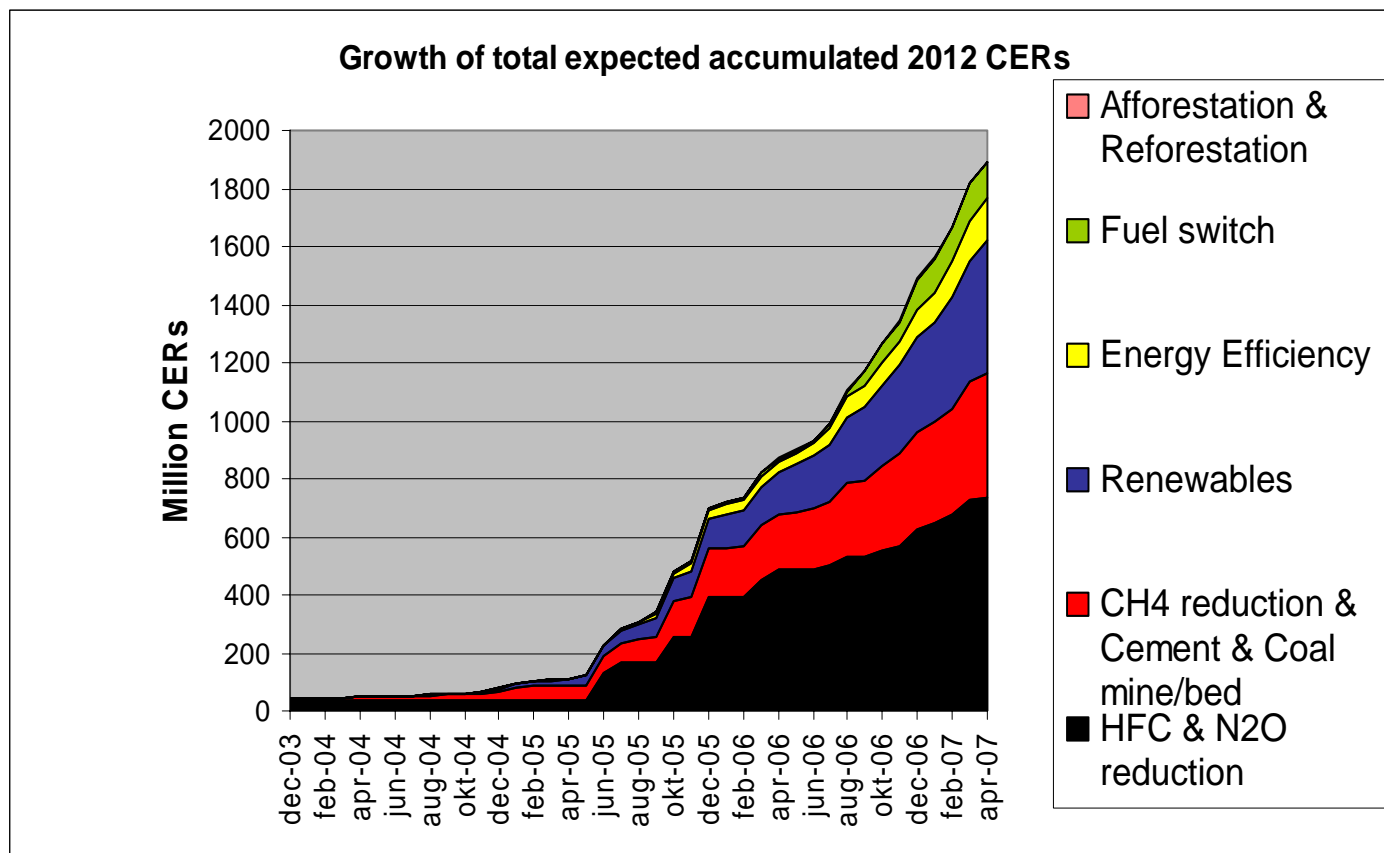
Market trends

- Growth in trade has been exponential, not linear. CDM transactions about €3.9 billion last year.
- As in any market, supply and demand, and hence prices are volatile. EUA prices more so than CERs
- Private European and Japan buyers predominate
- Some correlations emerging between prices of different carbon assets (EUAs, CERs, ERUs, AAUs, etc.), but fundamentally different products.

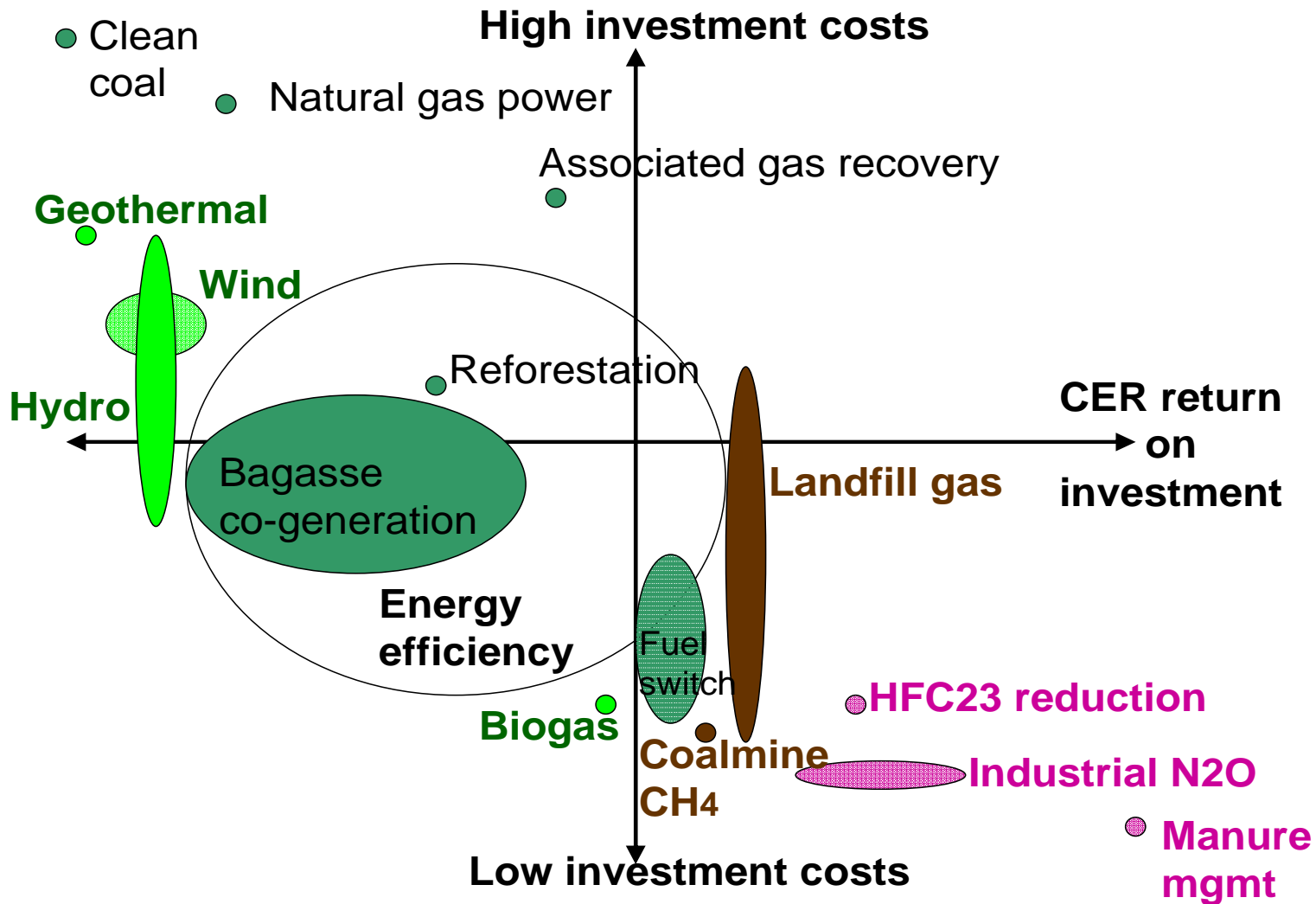
Status of CDM projects: 1936 in the pipeline

Status of CDM projects as of 10 May 2007	Number
At validation	1165
Request for registration	75
Request for review	15
Correction requested	17
Under review	8
Total in the process of registration	115
Withdrawn	5
Rejected by EB	14
Registered, no issuance requested	452
Registered, request for CERs	18
Registered, correction requested	2
Registered, request for CER issuance review	6
Registered, under review	0
Registered. CER issued	178
Total registered	656
Total number of projects (incl. rejected & withdrawn)	1955

Expected CERs at 2012 from existing projects



Estimated Historical Return on Investment from CDM Projects

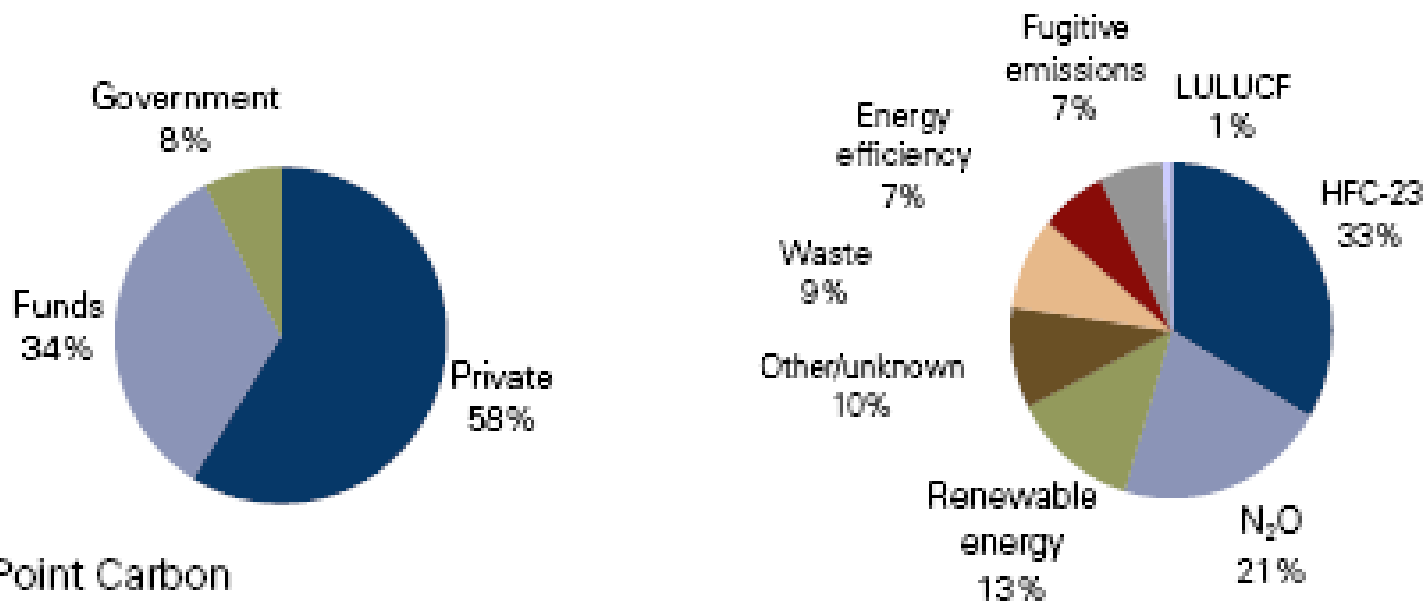


* Taken from Jan Ellis and Sami Kamel, *OECD/IEA/UNEP Risoe Analysis on Barriers to CDM Projects*, 2007

CER purchases now driven by private sector

Figure 7: Who are they and what do they want, Part I

The relative share of categories of CDM buyers (left) and project types (right) in 2006.



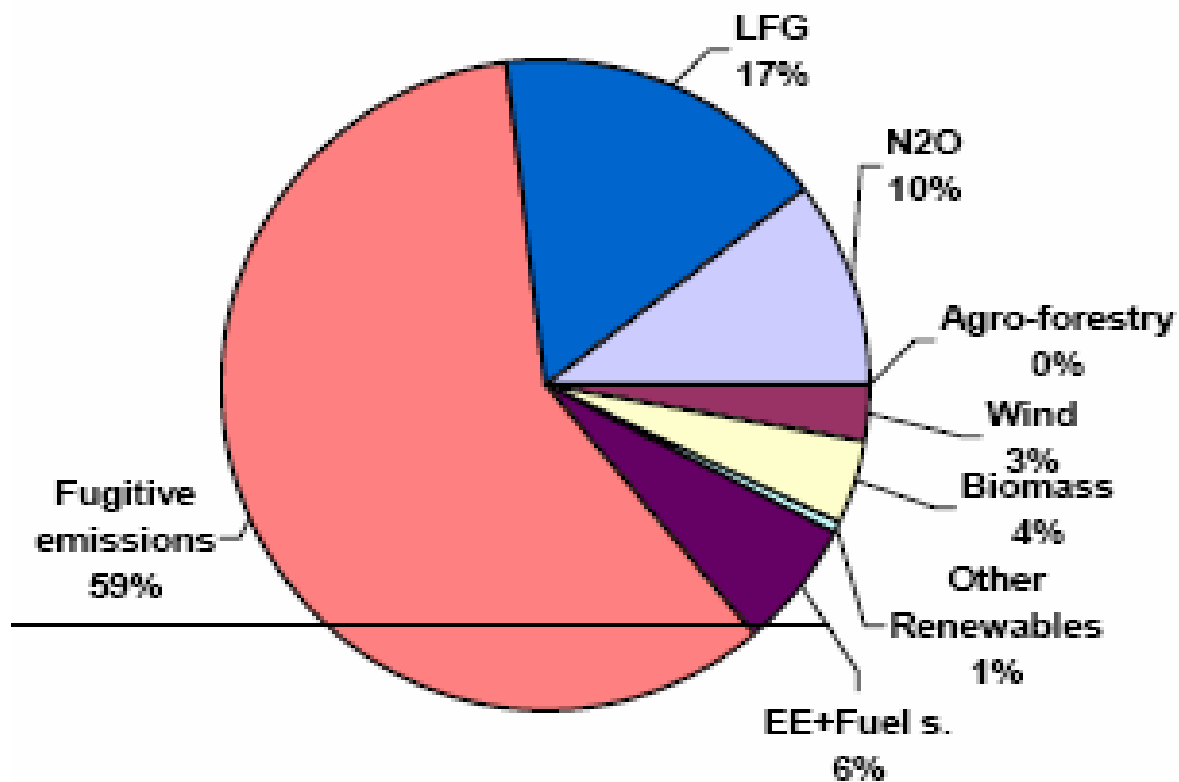
Source: Point Carbon

Large emerging countries dominate the pipeline

- China has 493 projects in the pipeline (but 50.2% of CERs)
- India has 619 projects in the pipeline (but 16.2% of CERs)
- Brazil has 225 projects in the pipeline (but 7.7% of CERs)
- These three countries account for 69.1% of projects (but 74.1% of CERs)
- World Bank, UNFCCC, URC estimates SSA 1.3% to 3.0% of total.

Total in the CDM Pipeline	Number		2012 kCERs	
Latin America	545	28,2%	327870	16,8%
Asia & Pacific	1317	68,0%	1504222	77,0%
Europe and Central Asia	17	0,9%	5986	0,3%
Sub-Saharan Africa	26	1,3%	75552	3,9%
North Africa & Middle-East	31	1,6%	40464	2,1%
Less developed World	1936	100%	1954094	100%

Africa Share in volume (2006, year-to-date)

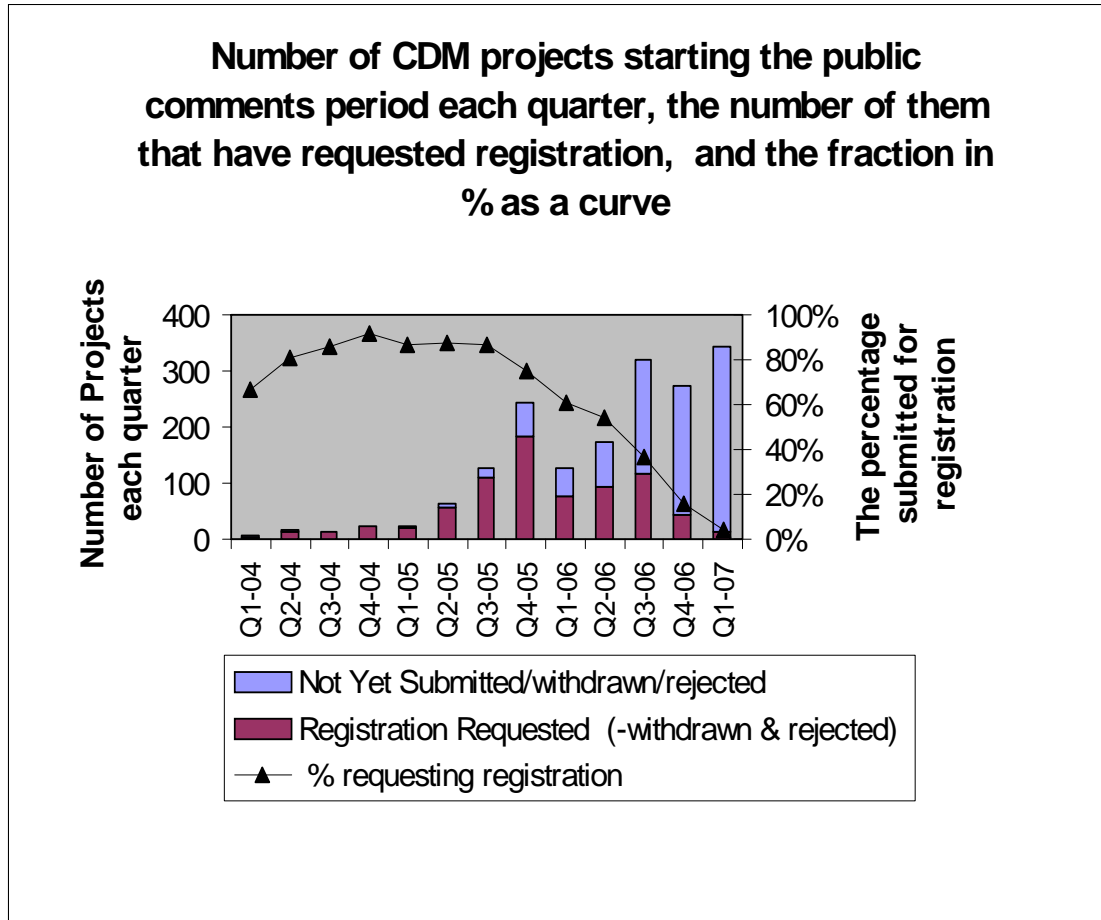


Growing Voluntary Market

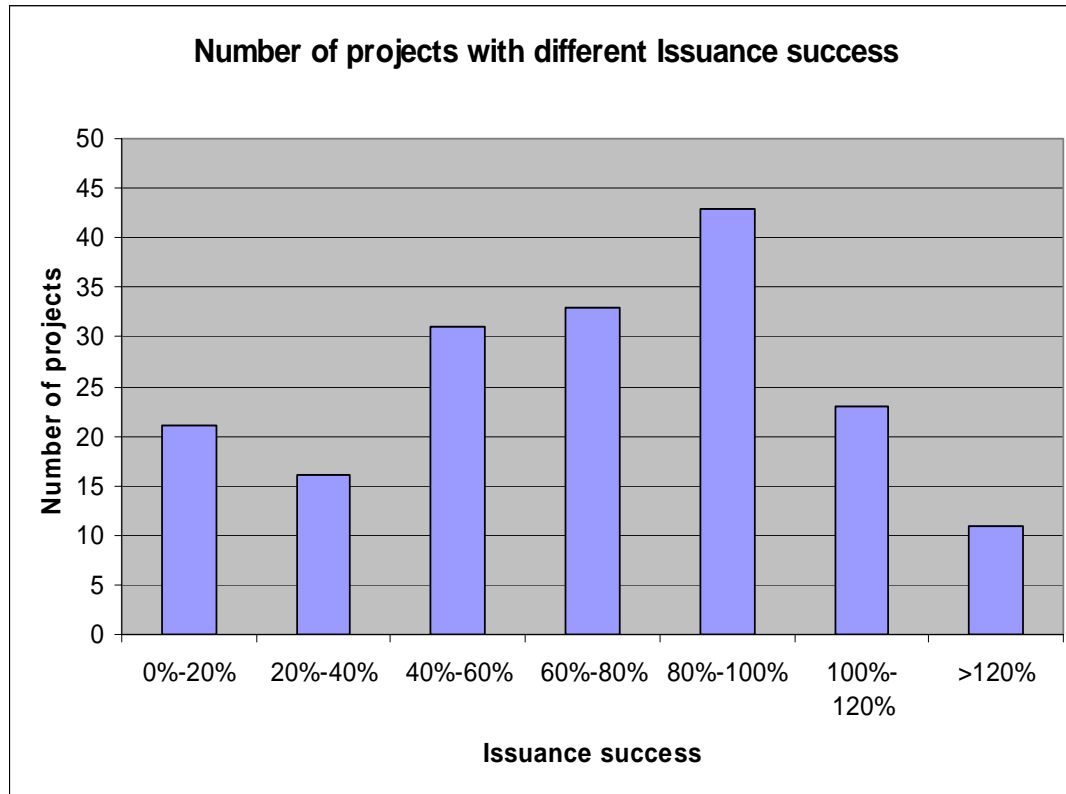


- A growing number of firms engaged in reducing their carbon 'footprint' absent regulations
 - These have large-scale emissions (2002 survey: 18 firms with more carbon emissions than France had voluntary targets for 2010)
 - Various motivations: corporate responsibility, public relations, strategic positioning, competitive advantage, learning-by-doing, etc.
- “Carbon neutral” trend (event, firm, product)
 - World Cup, G-8 Summit, British Airways
 - allowing individual consumers to affect carbon market

Only about 85% of the projects get registered



**Not all expected CERs are issued.
The average "Issuance Success" is 80.4%.**



A Growth Story

- **Overall US\$ 30 billion ('06)**
 - more than doubled from 2005
- **Project Market US\$ 4.8 billion**
 - doubled from 2005
 - CDM accounts for 88% of value
- **Secondary market emerges**
- **Voluntary Market expands**
 - US\$ 0.1 billion + ('06) confirmed

Insights on Price Differential

- Large price differential:
 - EU Allowances: 7 - 25 €/ tCO₂e (spot and forward contracts). Currently € 15
 - Project-based credits: 3 - 23 €/ tCO₂e (forward contracts on expected CERs). Currently € 8.5+
- Allowances and credits have **different risk profiles**:
 - **country risks**: high in CDM, none in allowances
 - **Compliance/regulatory risks**: high in CDM, very small in allowances
 - **Delivery risks**: higher in CDM
 - **Project and performance risk**: only CDM

Key Price Determinants

- Guarantee of delivery of registered ERs
 - Who takes risk that baseline or methodology will not be approved? EB won't issue CERs? etc
- Creditworthiness of project sponsor
- Viability of underlying project, and liabilities of seller in case it under-performs
- ER vintage: pre- or post-2012
- Cost of validation and potential certification
- Host country support or barriers
- Additional environment and social benefits

Prices Depend on Risks

(weighted average prices in US\$ per ton CO₂e)

