



# State and Trends of the Carbon Market 2007

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# World Bank Carbon Funds & Facilities



Total funds pledged = US\$ 2.02 billion (16 governments, 65 firms)



- **Prototype Carbon Fund.** \$180 million (closed). Multi-shareholder. Multi-purpose.



- **Netherlands Clean Development Mechanism Facility.** \$268.3 million (closed). Netherlands Ministry of Environment. CDM energy, infrastructure and industry projects.



- **Community Development Carbon Fund.** \$128.6 million (closed). Multi-shareholder. Small-scale CDM energy projects.



- **BioCarbon Fund.** \$89.9 million (Tranche One closed totaling \$53.8 million). Multi-shareholder. CDM and JI LULUCF projects.



- **Italian Carbon Fund.** \$155.6 million (closed). Multi-shareholder (from Italy only). Multipurpose.



- **Netherlands European Carbon Facility.** \$56.6 million (closed). Netherlands Ministry of Economic affairs. JI projects.



- **Spanish Carbon Fund.** \$282.4 million (closed). Multi-shareholder (from Spain only). Multipurpose.



- **Danish Carbon Fund.** \$69.4 million (closed). Multi-shareholder (from Denmark only). Multipurpose.



- **Umbrella Carbon Facility.** \$737.6 million (Tranche One closed). 2 HFC-23 projects in China.



- **Carbon Fund for Europe.** \$65 million. Multi-shareholder. Multi-purpose.

# Global Carbon Market Triples



**Overall**                    **US\$ 30 billion ('06)** > US\$ 11 billion ('05)

**EUAs market**    **US\$ 24.4 billion ('06)** > US\$ 7.9 billion ('05)

**Project Market doubles**

**US\$ 4.8 billion ('06)** > US\$ 2.4 billion ('05)

**CDM accounts for 88% of this value**

**Secondary market emerges**

Portfolios of guaranteed compliance assets

**US\$ 0.44 billion + ('06) through intermediaries**

**Voluntary Market expands**    **US\$ 0.1 billion + ('06)** confirmed

**Price Signal to Market Drives Capital Allocation**

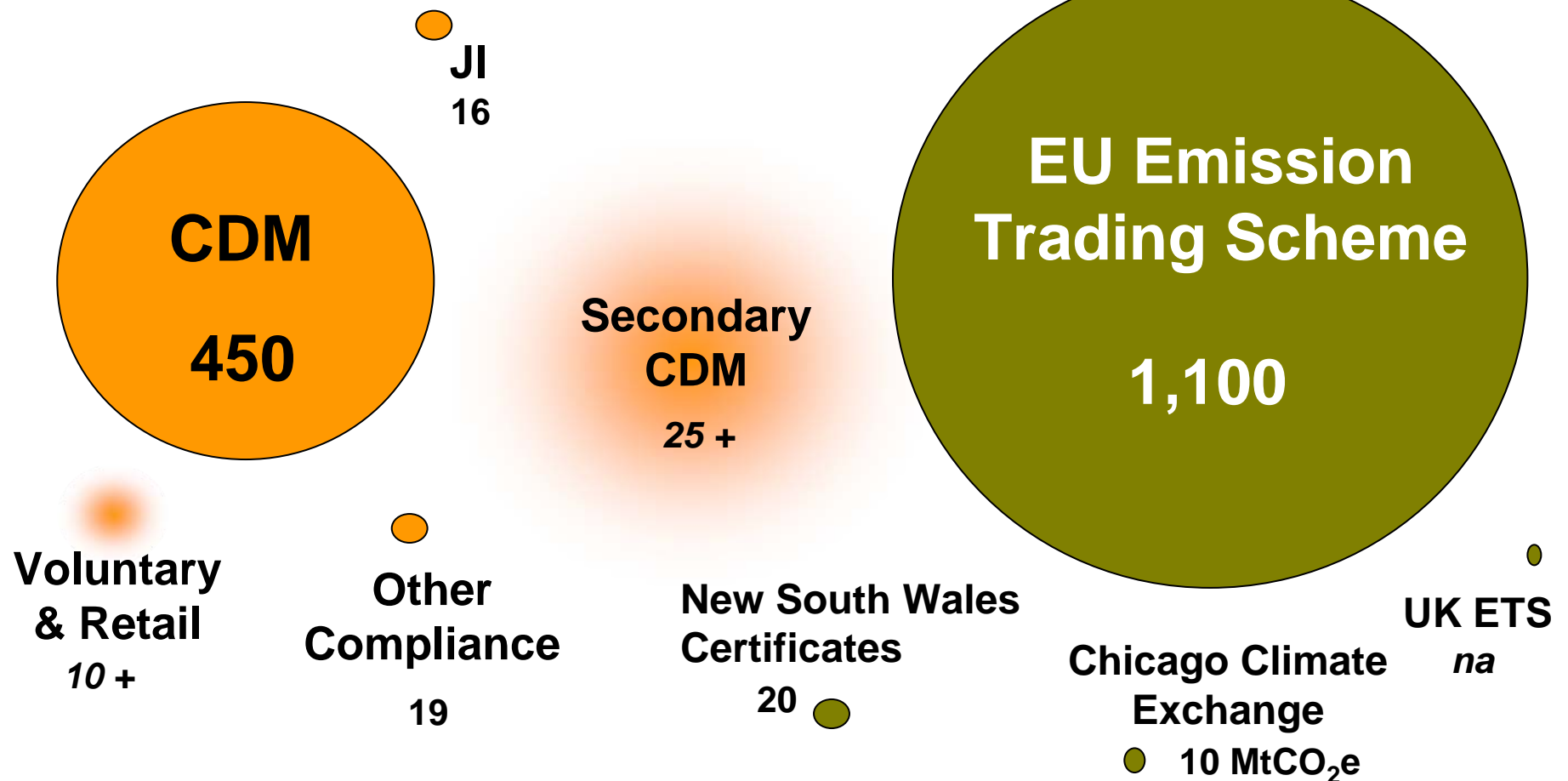
# Volumes transacted in 2006



(in MtCO<sub>2</sub>e)

## Project-Based Transactions

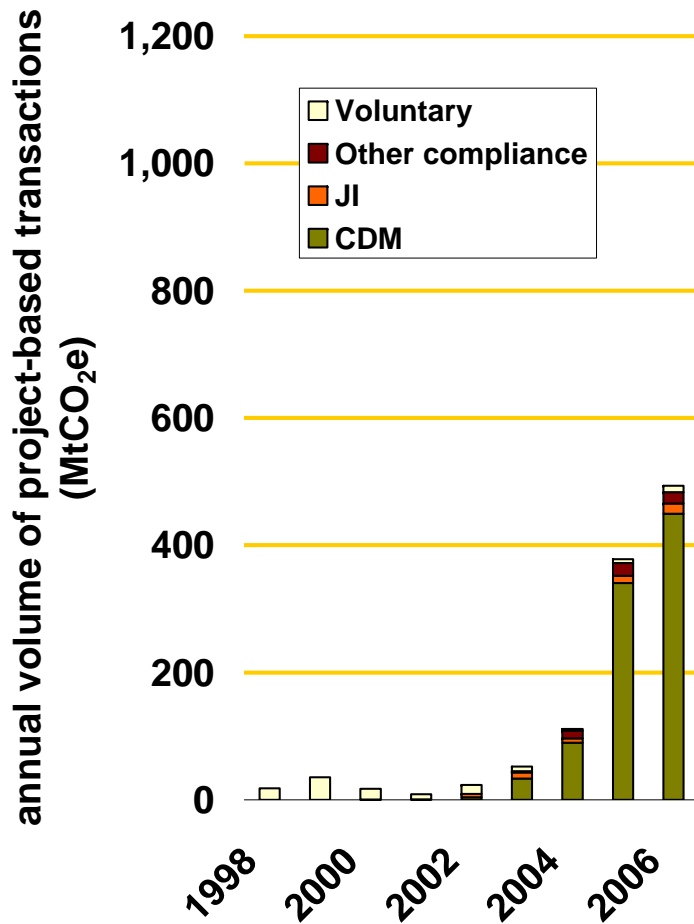
## Allowance Markets



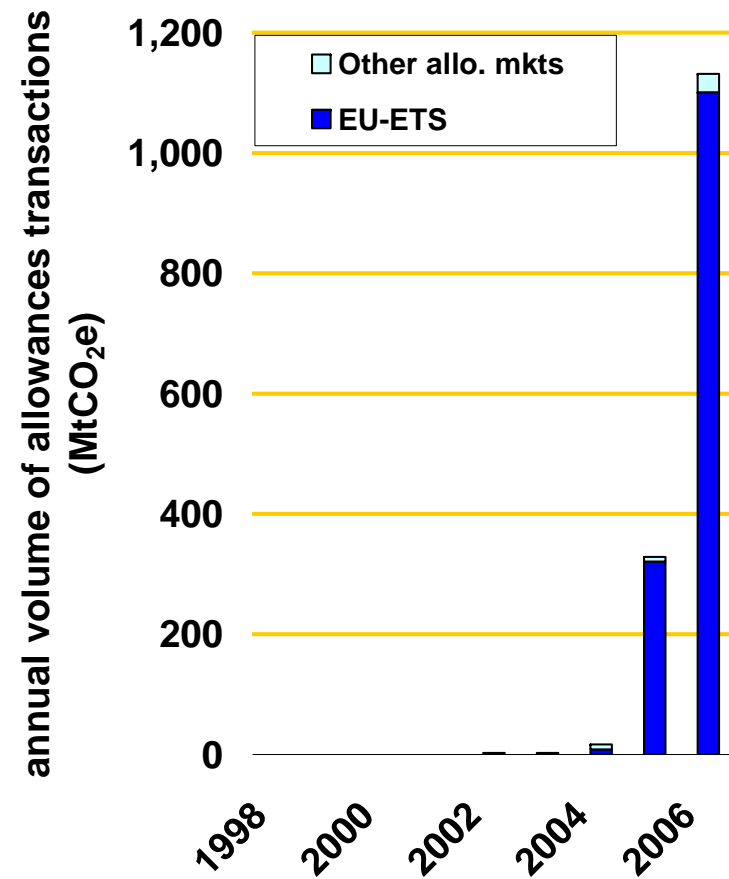
# Evolution of largest C mkts.



## Project-based transactions



## Allowances transactions





# Markets for Allowances

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# Disconnected EU ETS markets



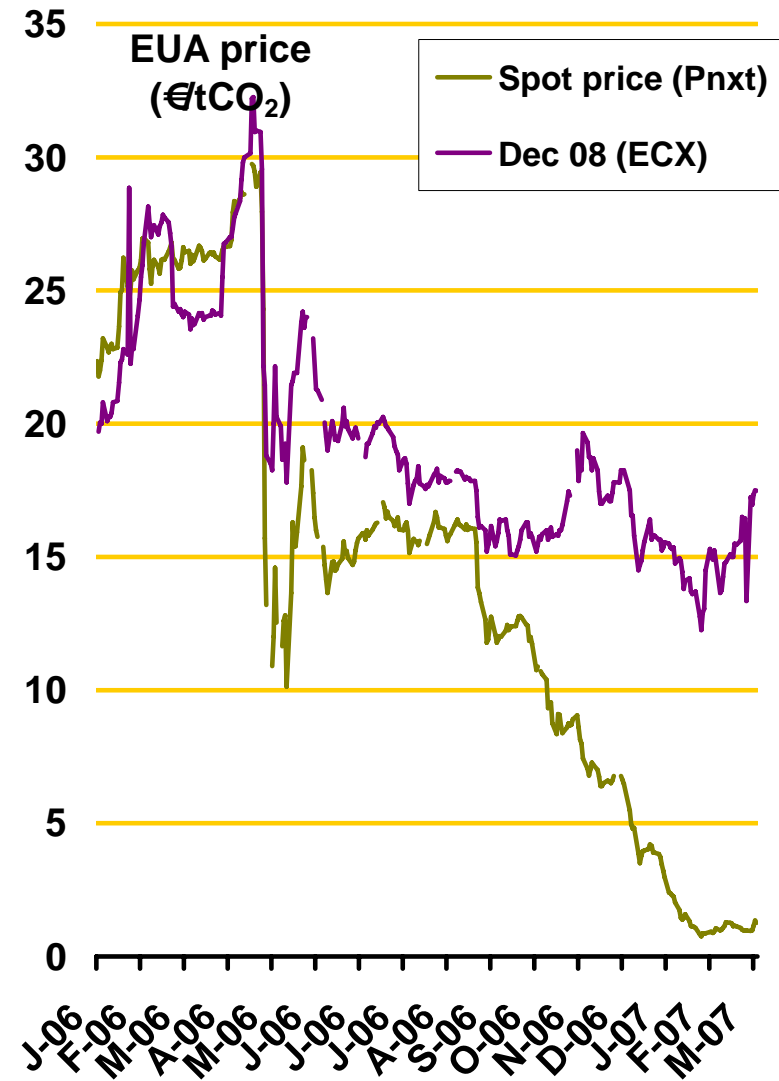
## PhI is long pushing EUA prices < €2

- Overall generous allocation, weather, energy price & no EUA banking
- Utilities have covered Ph I position
  - CERs to be banked to Ph II

## PhII expected to be short, > €12

EU: *“If more allowances were to be issued by Member States than the likely quantity of actual emissions in 2008-12 meeting the Kyoto commitments would be severely compromised and little or no environmental benefit would be provided.” COM(2006) 725*

- Market prices reflect analysts' **shortfall consensus:**  
**900-1,500 MtCO<sub>2</sub>e**  
(level of effort required = 8-10 %)
- EU Directive allows EUAs banking

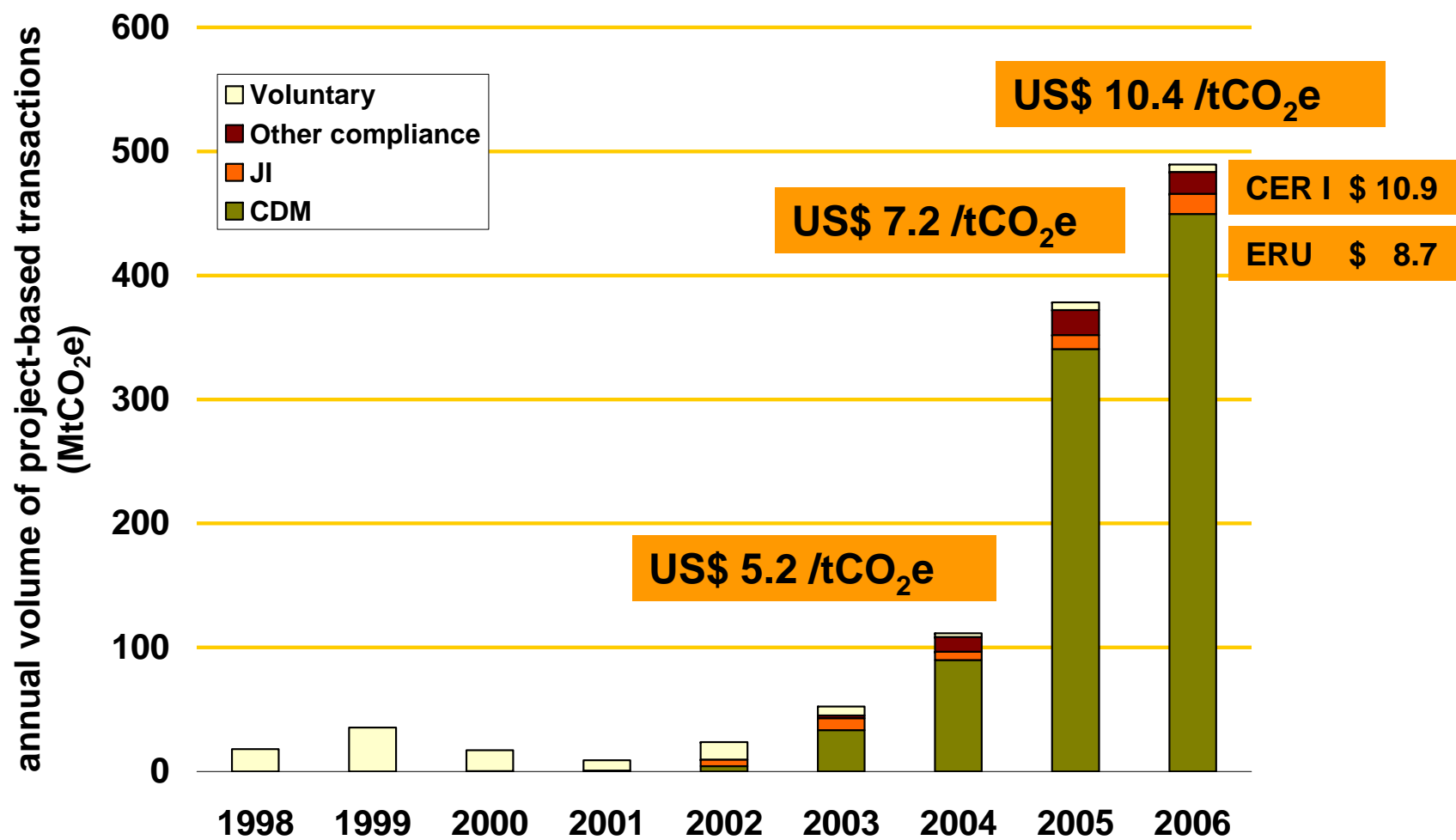




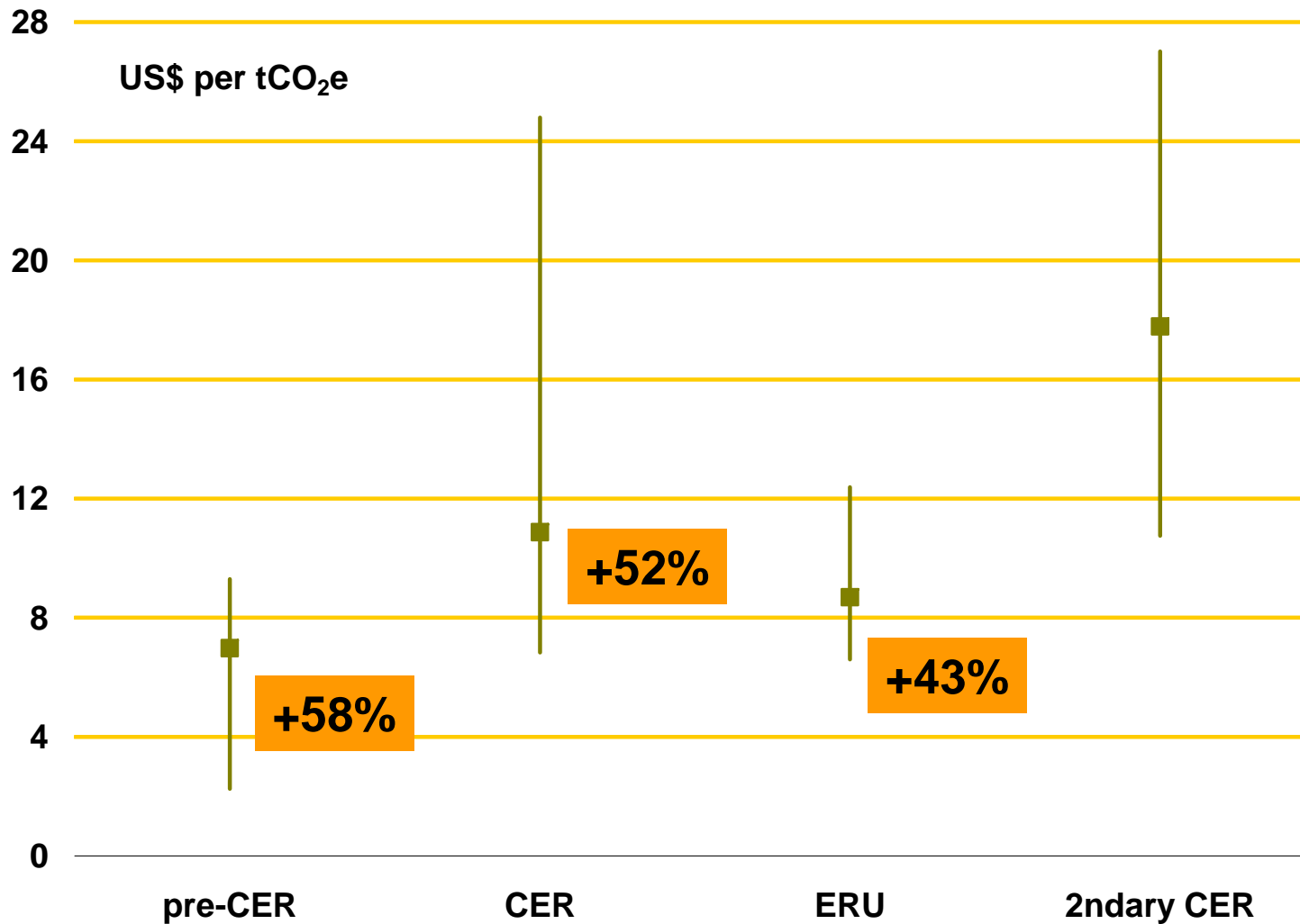
# Project-based transactions

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# Project-based Credits: Volumes and prices up



# Prices up across segments

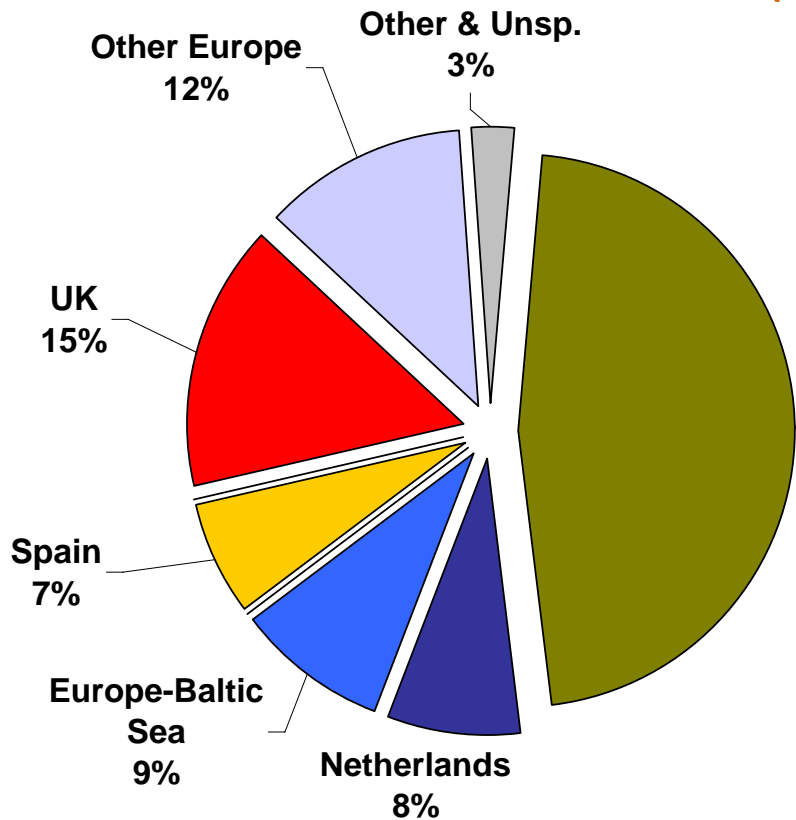


# CDM&JI Buyers

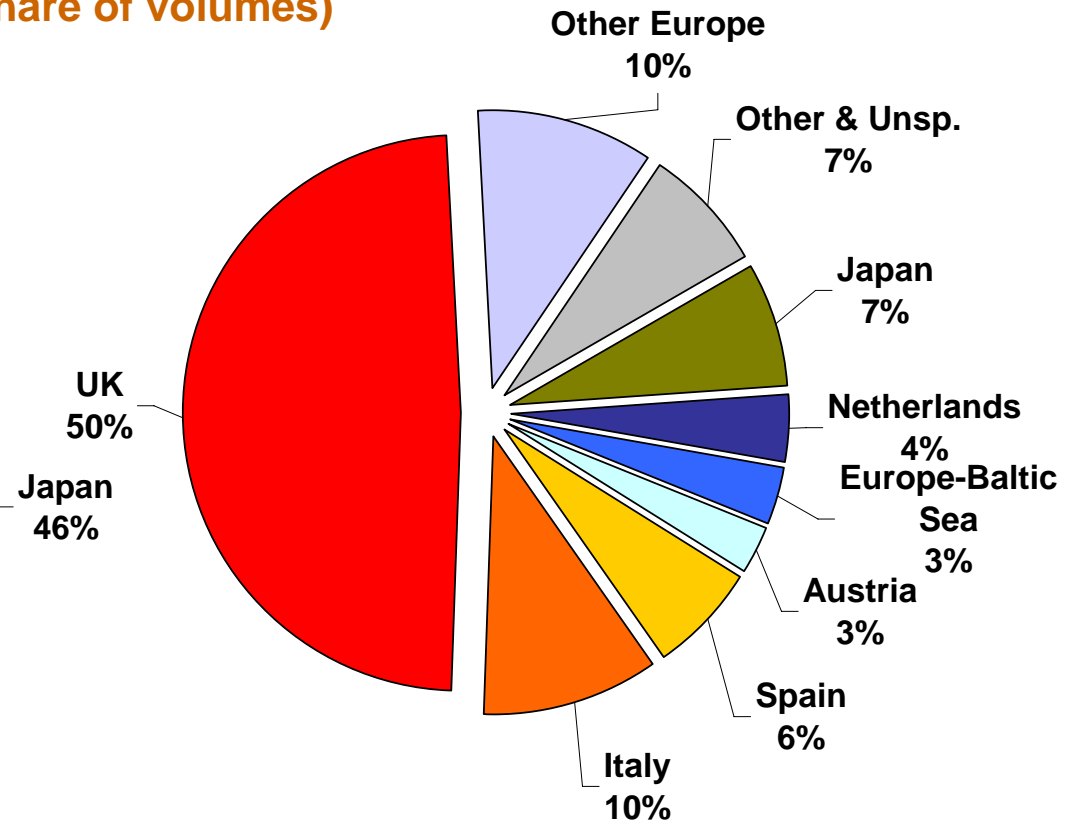
## EU Private Sector 75% of demand



(share of volumes)



Jan. 2005 to Dec. 2005



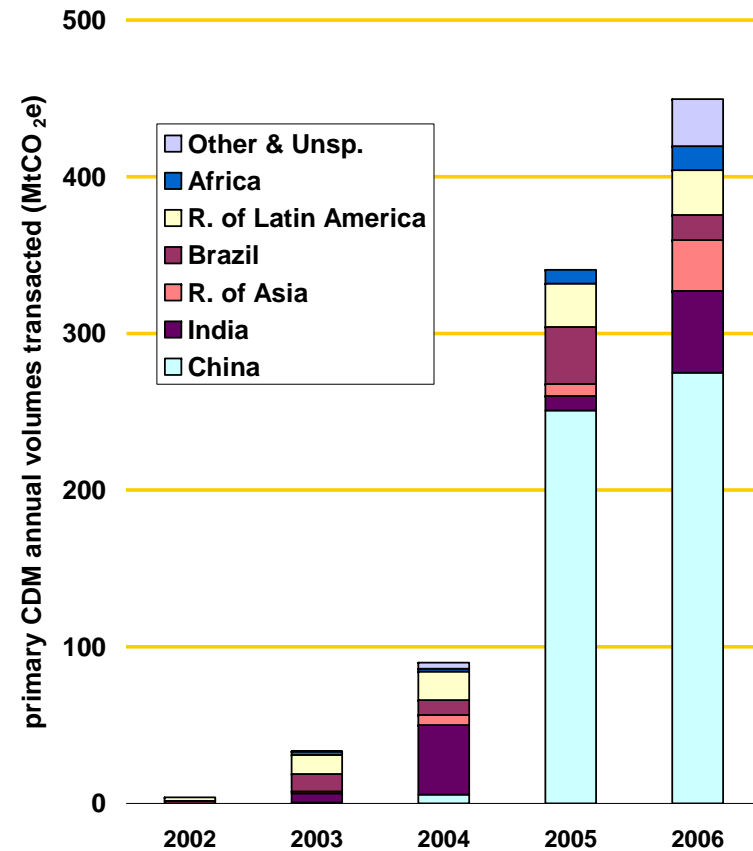
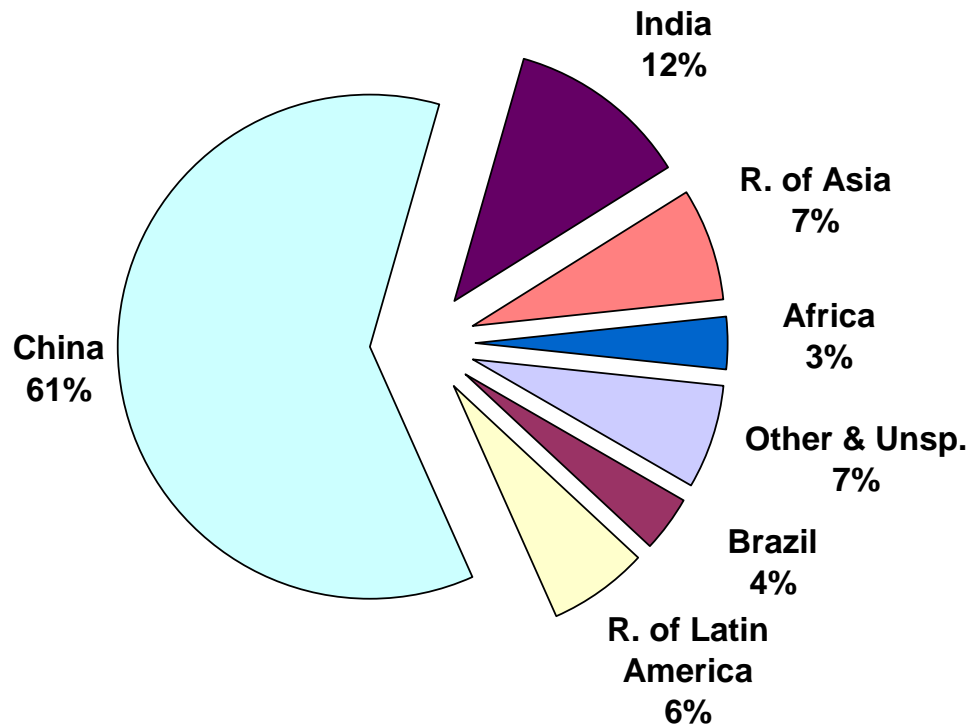
Jan. 2006 to Dec. 2006

# CDM Sellers

## China leads supply



(share of volumes)



Jan. 2006 to Dec. 2006

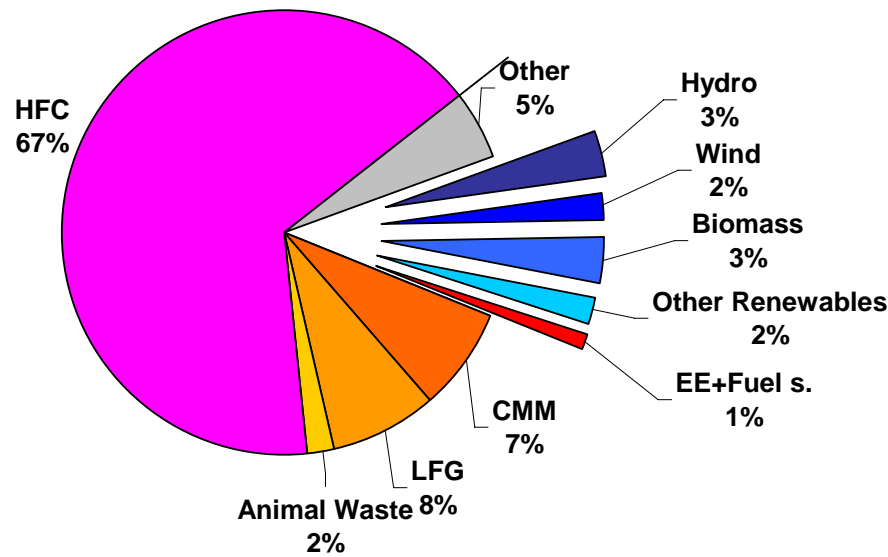
# CDM Asset classes

## Share of Clean Energy Rises



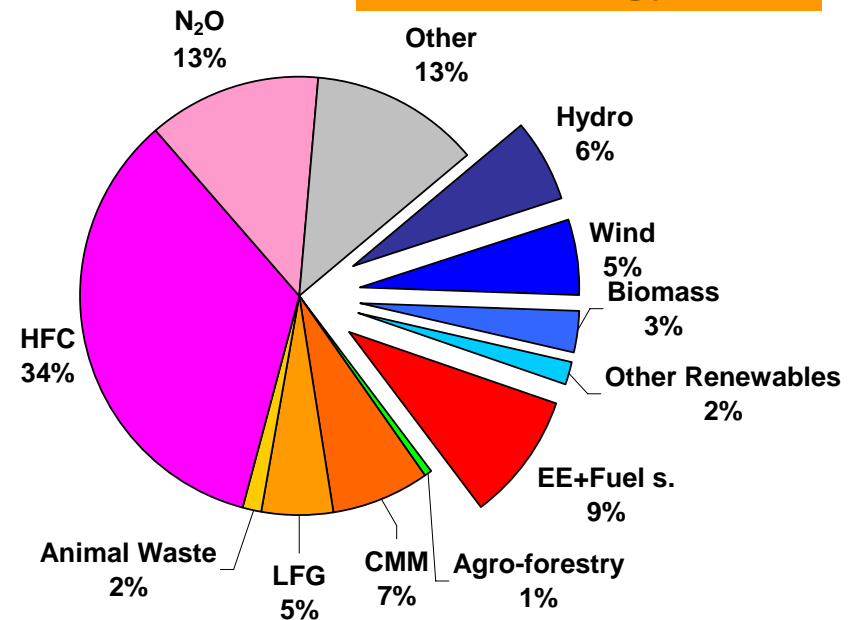
(share of volumes)

**Clean energy: 11%**



Jan. 2005 to Dec. 2005

**Clean energy: 25%**



Jan. 2006 to Dec. 2006



# CDM & Clean Energy

## Investment leverage 2002-2006

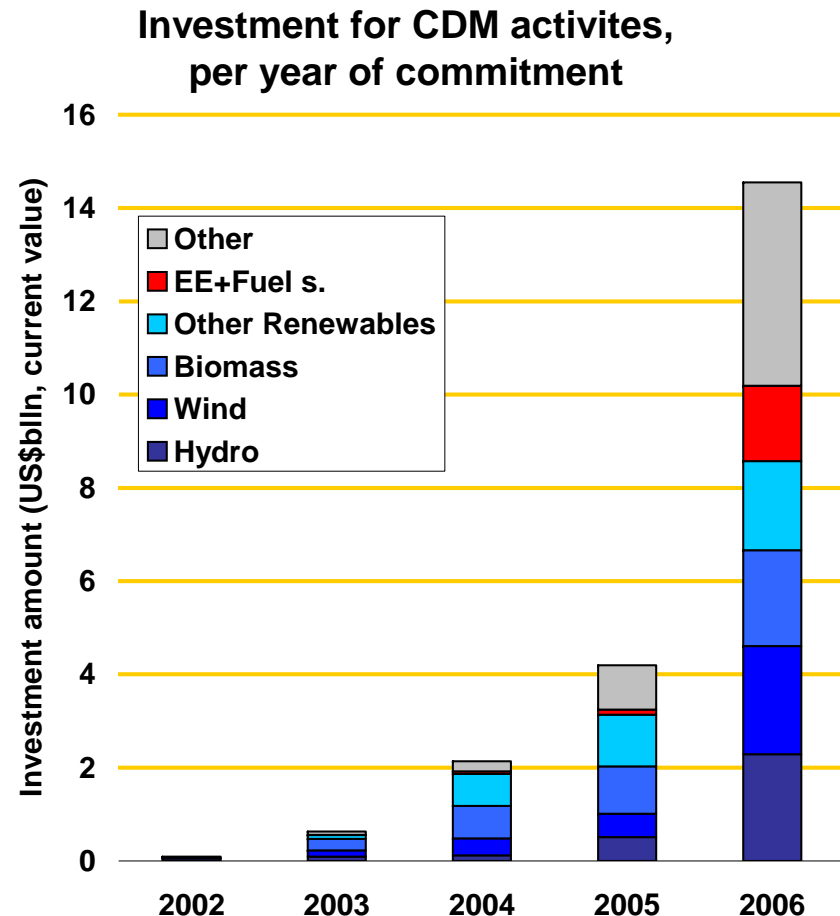
**Cumulative CDM deals = US\$ 7.8 billion**

**US\$ ~2.7 billion for clean energy** (current prices)

**\$1 carbon = ~\$8 invested for clean energy**

**US\$ 16 billion leveraged for clean energy in developing countries since 2002**

**US\$100 billion invested for clean tech globally in 2006**





# Voluntary Carbon Compensation

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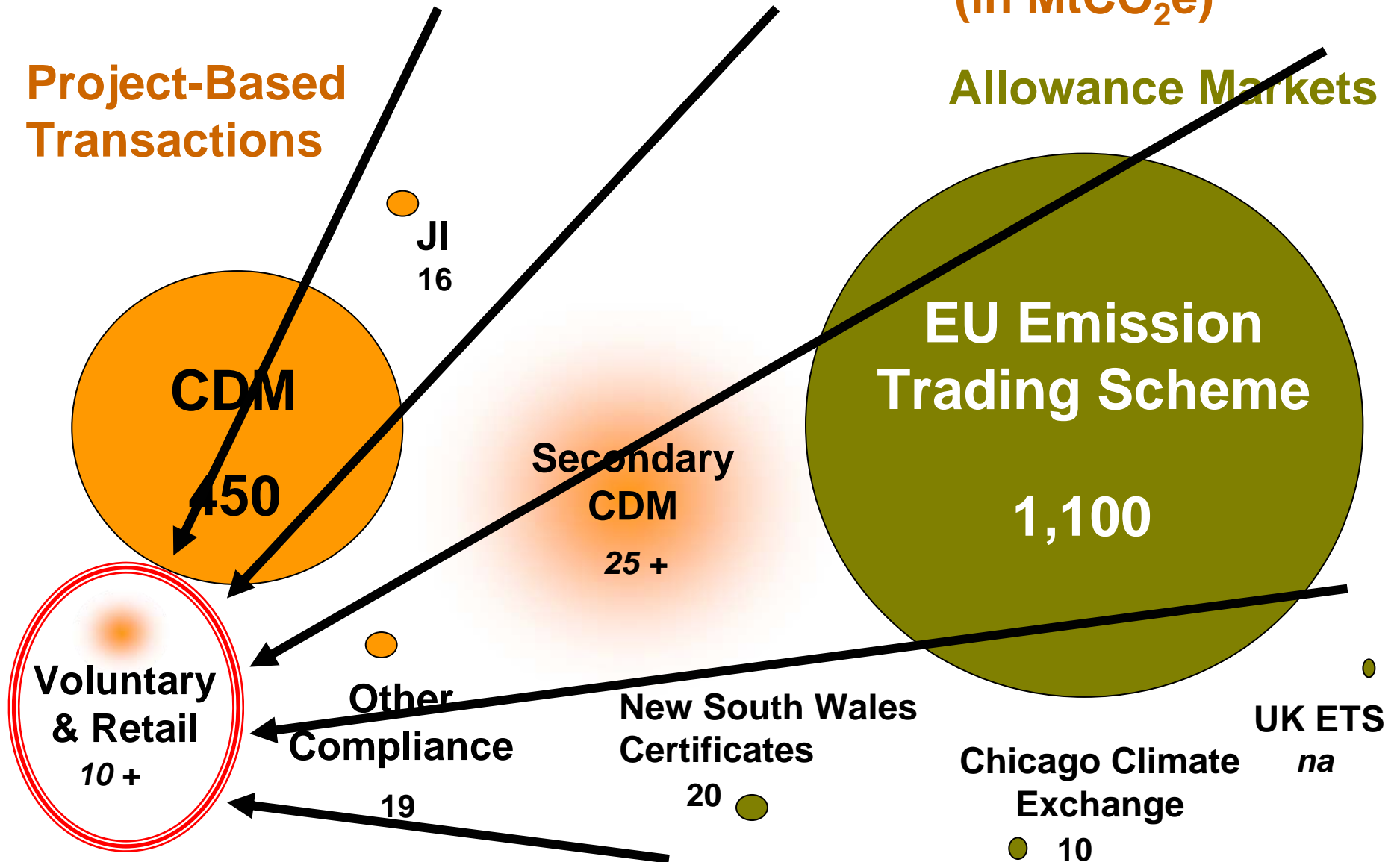
# Volumes transacted in 2006



(in MtCO<sub>2</sub>e)

Project-Based Transactions

Allowance Markets



# A fragmented, but growing mkt



## Who's buying?

Entities not under compliance (Europe, w/ recent push in the US)

- **companies** C-neutral for PR or “capacity building”
- **good & service providers**: C-free shipping, event organizers, *etc.*
- **individuals**: commuting, travels, housing, *etc.*
- **intermediaries** (retailers).

## Who's selling?

**Africa**, but also **local offsets** in North America.

## Steady growth in the next few years?

From 10+ MtCO<sub>2</sub>e in 2006 to 400 MtCO<sub>2</sub>e by '10 (60% in the US)

# Smaller w/ strong SD attributes



## Why selling?

Small projects, methodology issues, outside Kyoto

## Asset classes

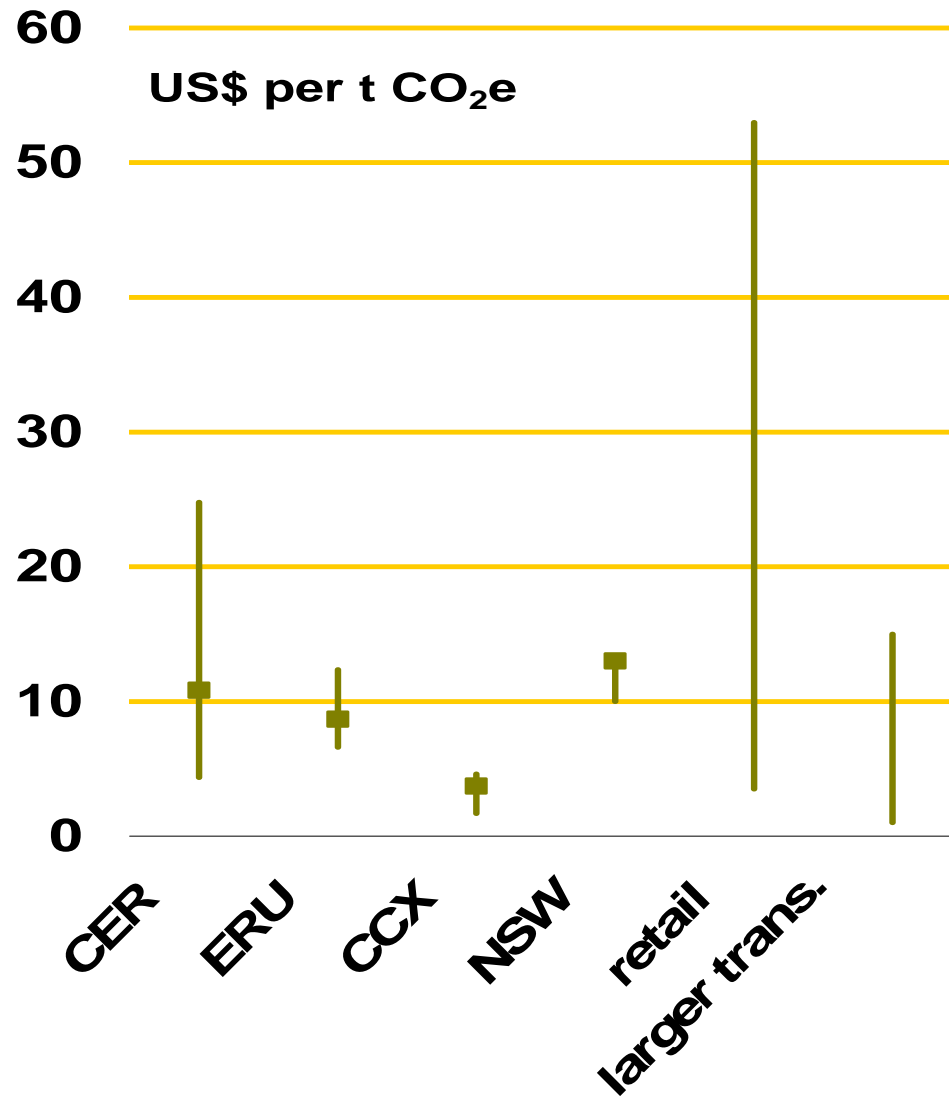
Typically small **forestry** projects, w/ **SD & community benefits**

Now, more on Energy Efficiency and Renewable Energies

## Examples

- Kuyasa low-cost urban housing energy upgrade (7k tCO<sub>2</sub>e/yr)
- Avoided deforestation in Mozambique (100 tCO<sub>2</sub>e/yr)
- Ecuadorian Rain Forest Restoration (650 tCO<sub>2</sub>e/yr)
- A/R activities at Scolel Te (Mexico) (30 tCO<sub>2</sub>e/yr)
- Wind farm in China and Turkey (>50k tCO<sub>2</sub>e/yr each)

# Prices: sustainability commands premium



# Looking for a standard



Projects selection criteria:

**Credible** tCO<sub>2</sub>e w/ SD and community benefits > prices

**More than 15 standards** addressing diversely:

**Additionality, Verification, Registration, Permanence**

Credible **compliance units received strong interest**

CDM/JI, CCX, NSW

**New standards** being developed, **capitalizing on CDM**

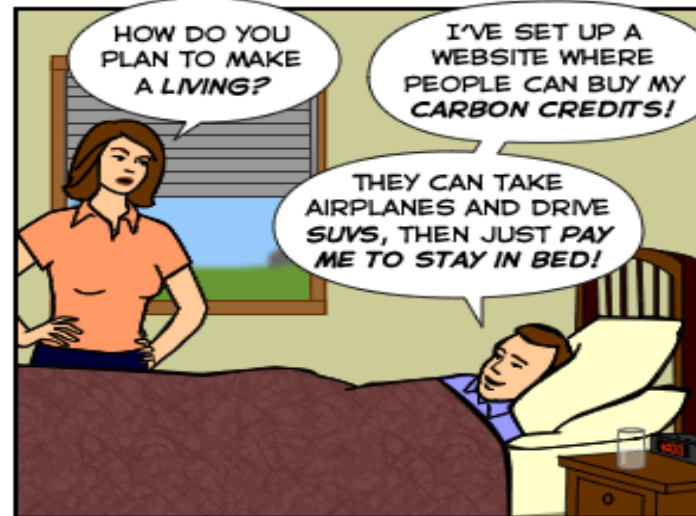
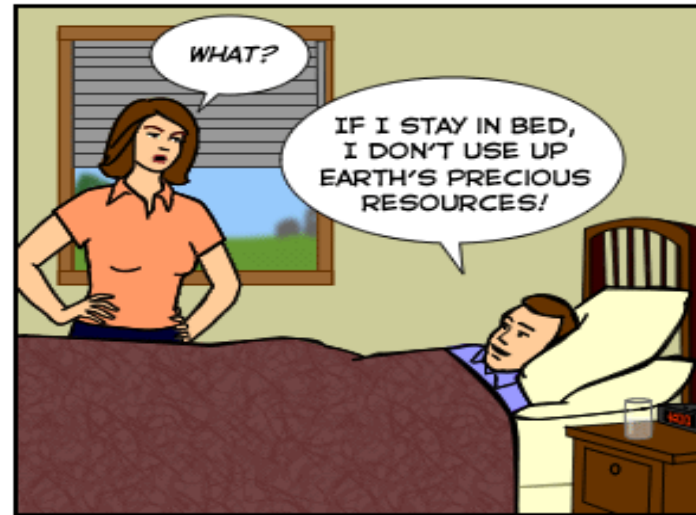
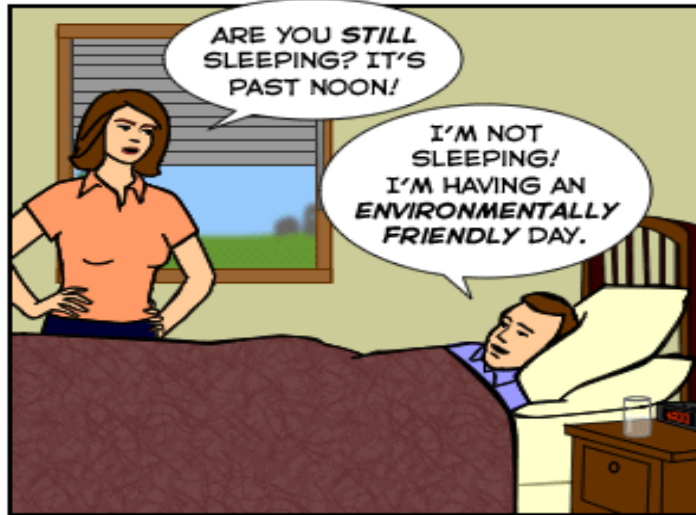
Standard	Gold Standard	VCS	VER+
<b>Sponsors</b>	WWF, SSN, Helio International	the Climate Group, IETA, World Economic Forum	3C and Tuev Sued
<b>Status</b>	2003 for CDM and JI May 2006 for Voluntary	final by Dec 07	active
<b>Offset types</b>	EE (demand side) & RE w/ <b>community benefits</b>	all project types	all project types
<b>Website</b>	cdmgoldstandard.org	v-c-s.org	tuev-sued.de

# Not there yet...



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# Outlook

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# Market balance 2008-2012



## 2008-12 demand for Kyoto mechanisms (Analysts' expectations)

Demand from EU ETS = 1,140 MtCO<sub>2</sub>e (900 -1,400 MtCO<sub>2</sub>e)

**Based on varying assumptions of growth adjusted for improvement in carbon intensity**

Expected demand from EU Governments: 450 MtCO<sub>2</sub>e

Expected demand from Japan: 100-500 MtCO<sub>2</sub>e (avg: 350MtCO<sub>2</sub>e)

Expected demand from Ro Europe and NZ: 200 MtCO<sub>2</sub>e

**Based on varying assumptions of Parties about performance of additional (and existing) policies and measures**

## Will sufficient supply be stimulated, contracted and delivered?

- **CDM/JI: How many reductions will they deliver on time?**  
At what price?
- **AAU/GIS: How many, when and at what price? Some host countries have expressed their interest in setting GIS (Ukraine, Latvia)**

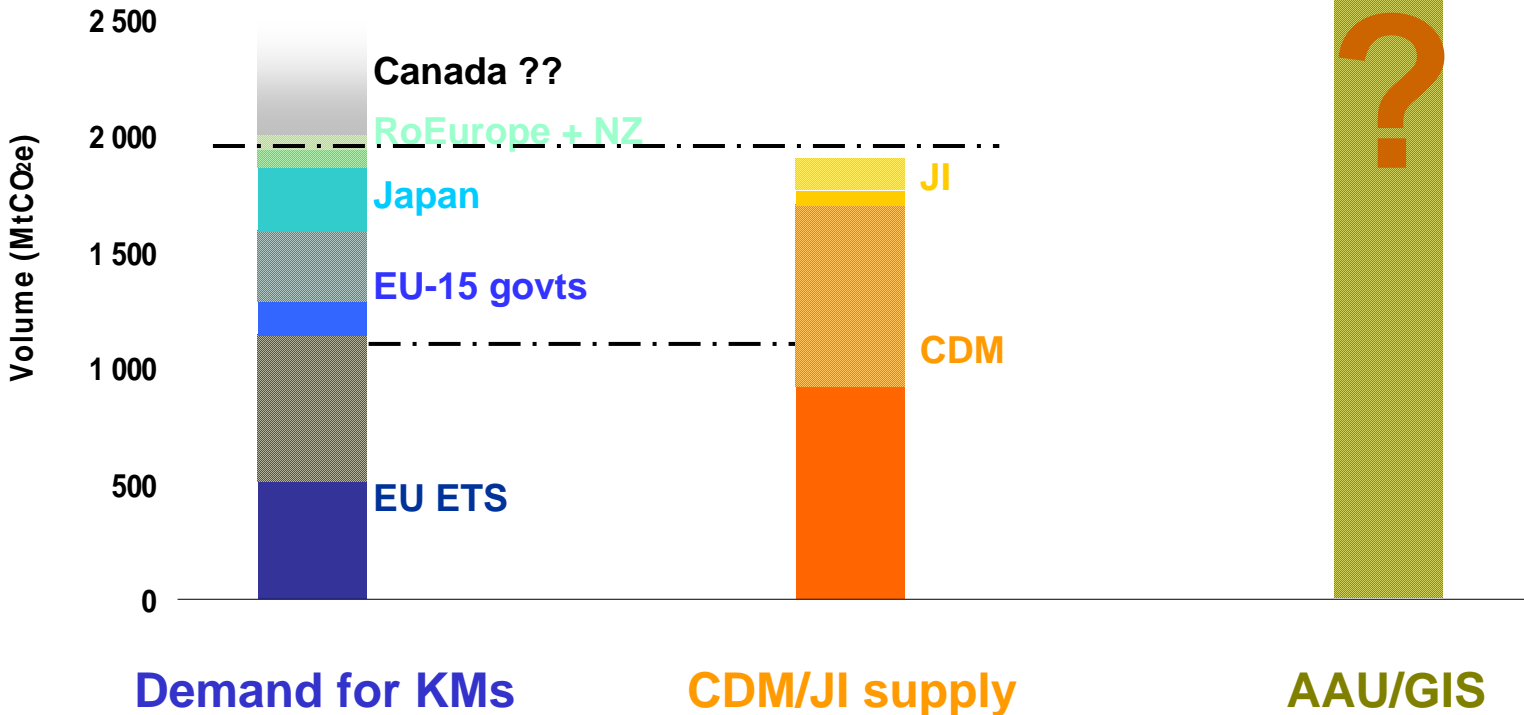
# Expected Kyoto Balance



Already contracted  
917 MtCO<sub>2</sub>e  
Residual demand  
1,083 MtCO<sub>2</sub>e

Already contracted  
930 MtCO<sub>2</sub>e  
Not yet contracted  
> 975 MtCO<sub>2</sub>e

Potential supply  
6000-7,100 MtCO<sub>2</sub>e



: amount not yet contracted

## Beyond 2012:

### A bridge to a safe climate future ?



- Developing countries and EITs have strongly responded to EU and Japan demand.
- Markets to manage GHG emissions have demonstrated their ability to source ERs.
- Experience should encourage countries considering ambitious targets to “avoid dangerous climate change”.
- This requires efforts in all sectors, including those not easily reached by the carbon market.



## **Without ambitious targets....,**

“the development and deployment of existing and new clean technologies would stall, and the evolution of a dynamic and liquid global market would be severely undermined”.

EU Commission, October 2006  
COM(2006) 725



**Thank you**

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Full report available at

**[www.carbonfinance.org](http://www.carbonfinance.org)**