

State and Trends of the Carbon Market 2007

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World Bank

Media Workshop

Vienna, August 2007

A market



Market characteristics:

- Like Goods and/or services bought and sold e.g. housing market
- Demand and supply determines price and expectations
- Different Segments, e.g. flat or house
- Pricing varies based on characteristics (e.g. location, size, quality)
- Requires ancillary markets, e.g. finance, insurance, electricity, plumbing
- Regulation; protection against fraud

Methodology



This study is based on the following:

- Analysis of the **World Bank's confidential project database**;
- **Interviews with market players** (natural buyers (Europe & Japan), fund managers, developers, sellers, DNAs, private equity funds, hedge funds, banks, traders & brokers), assisted by **Natsource**;
- A comprehensive **review** of published literature;
- Cross-reference with **IETA market sentiment survey**.

Project database includes:

- **More than 930 project-based transactions** (ERPAs signed)
- Completeness of information >90% in all fields except on exact terms and price of transaction >60%.

Aggregate data on allowance markets:

- From **major exchanges and OTC sources**.

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

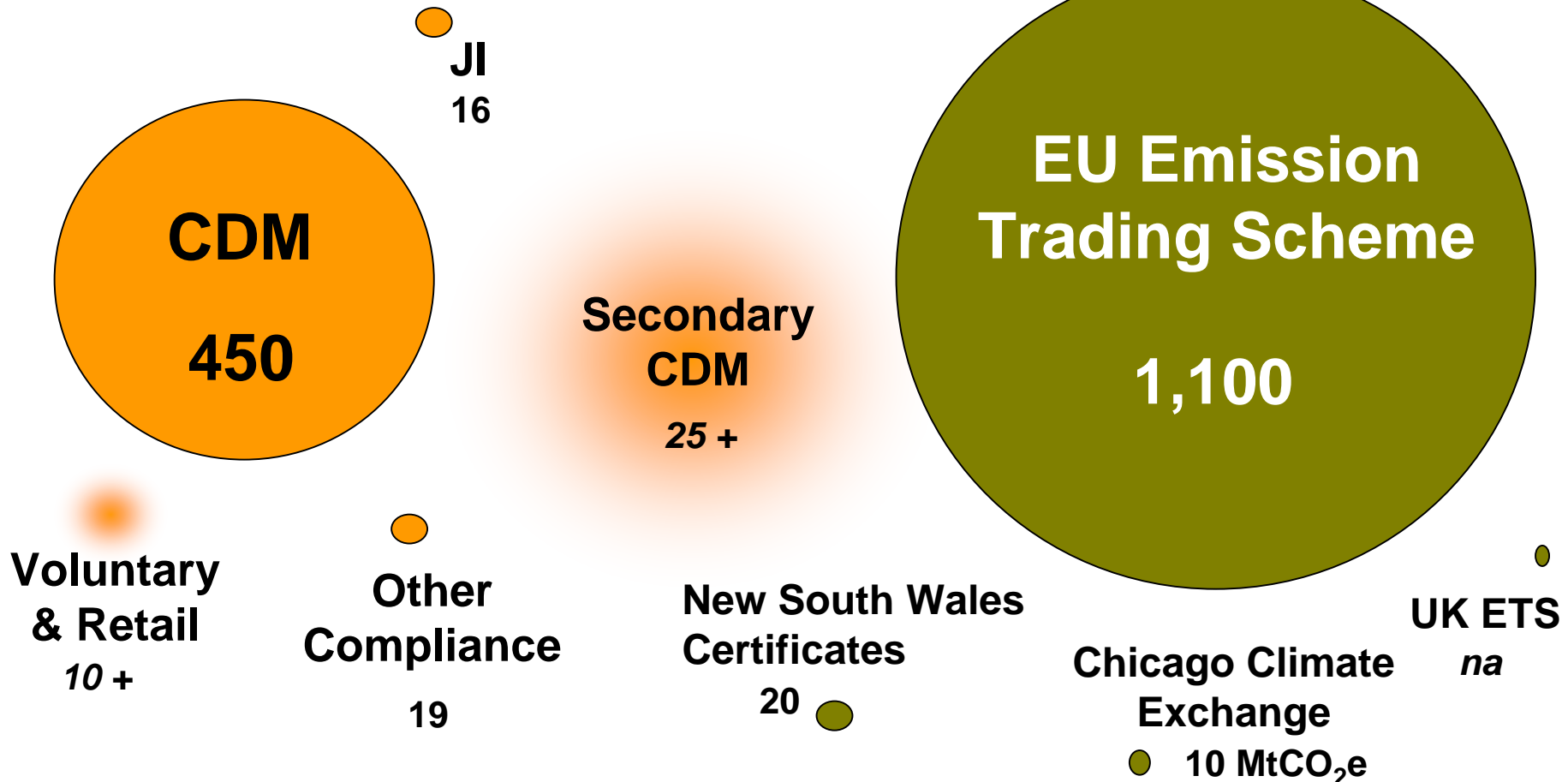
Volumes transacted in 2006



(in MtCO₂e)

Project-Based Transactions

Allowance Markets





Markets for Allowances

Disconnected EU ETS markets



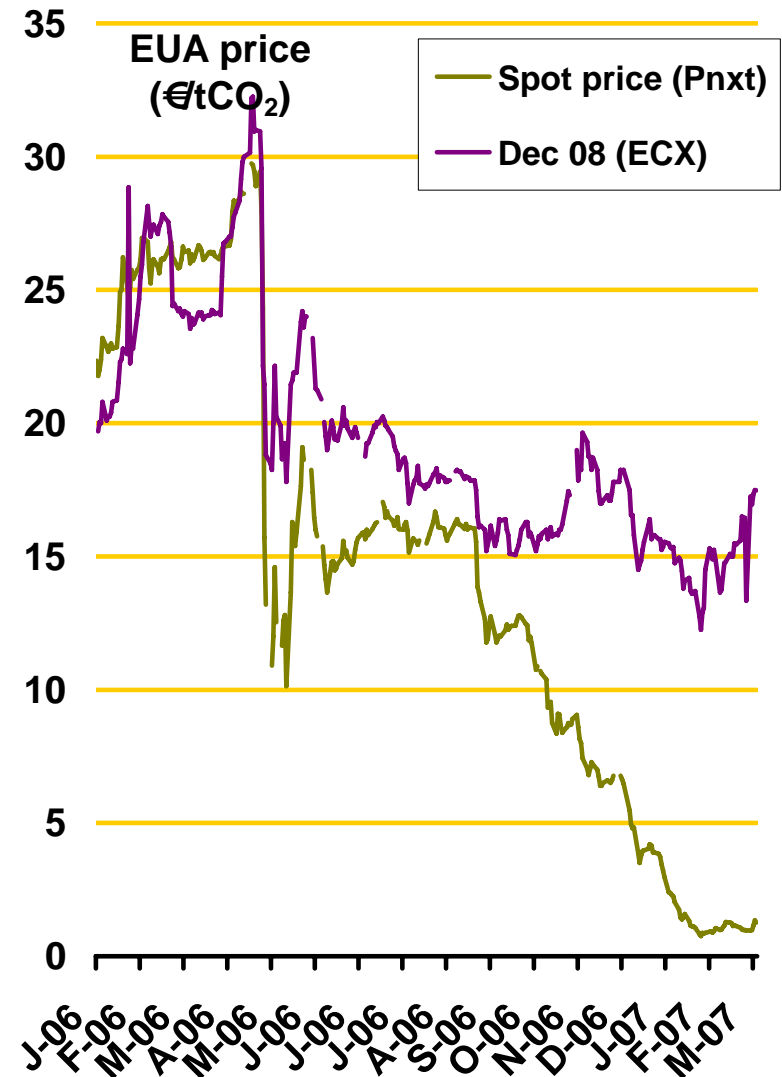
Ph-I is long, pushing EUA-I < €1 now

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

Ph-II expected short, EUA-II > €15 now

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

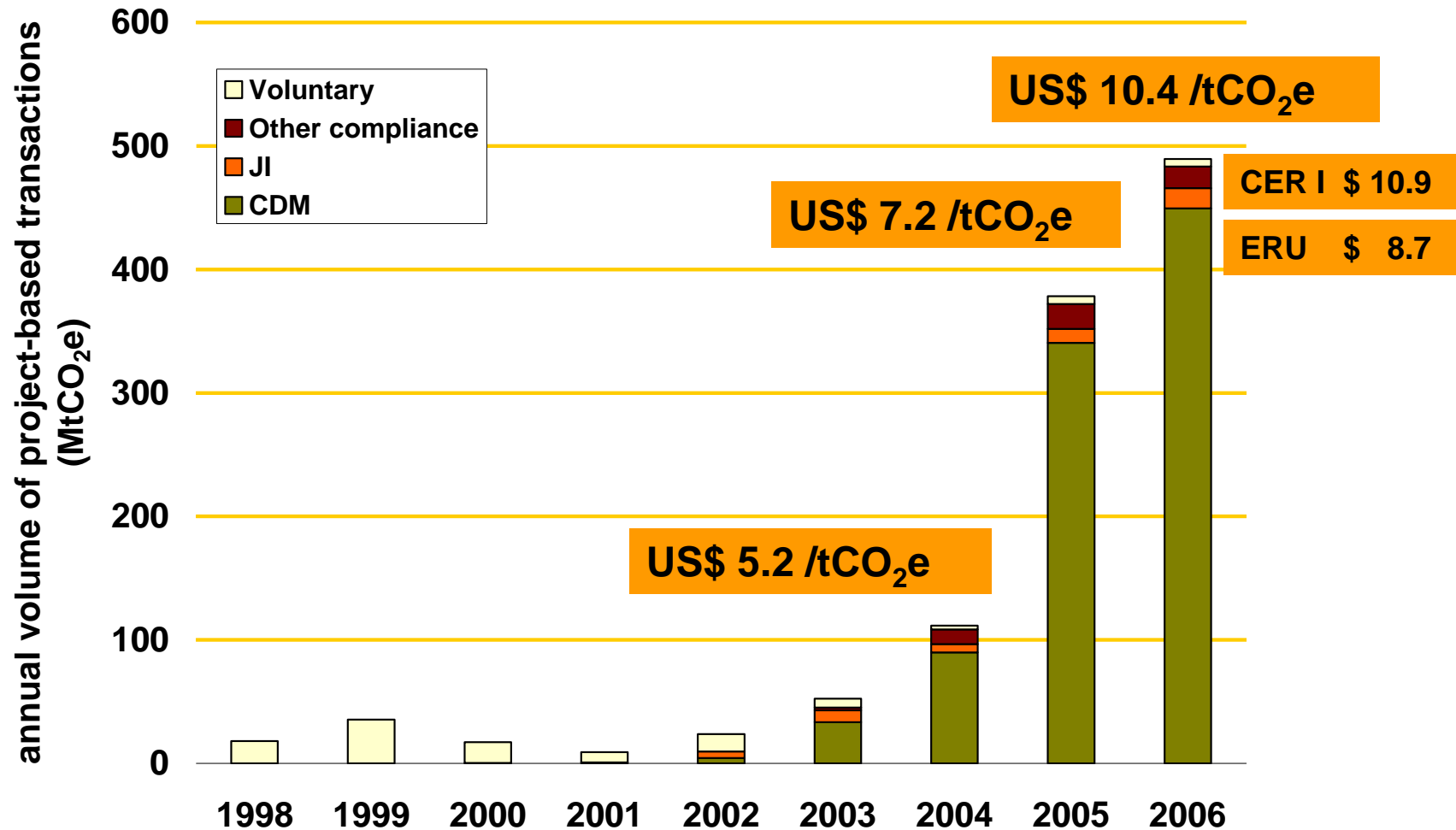
- Market prices reflect analysts' **shortfall consensus:**
900-1,500 MtCO₂e
(level of effort required = 8-10 %)
- EU Directive allows EUAs banking



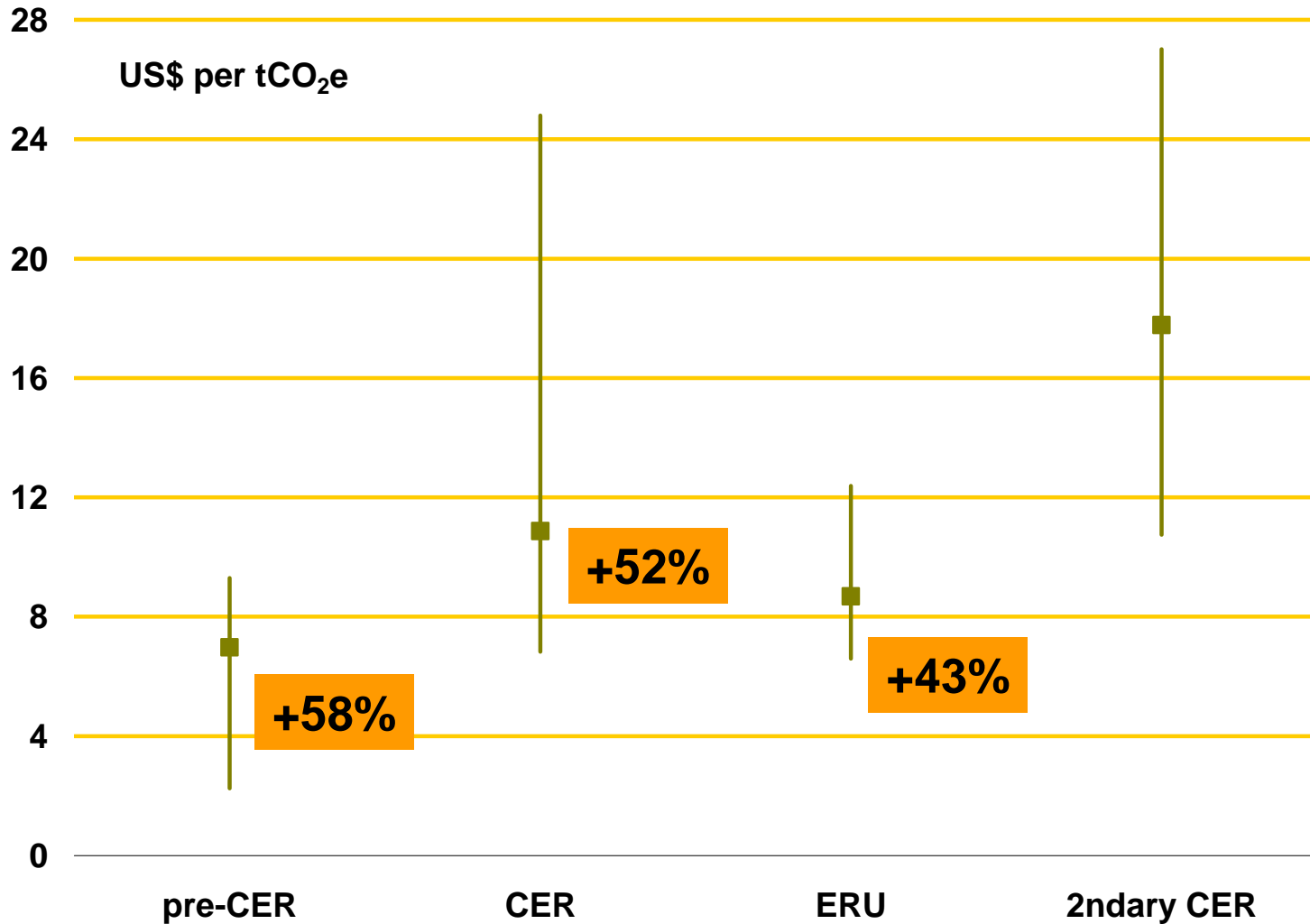


Project-based transactions

Project-based Credits: Volumes and prices up



Prices up across segments

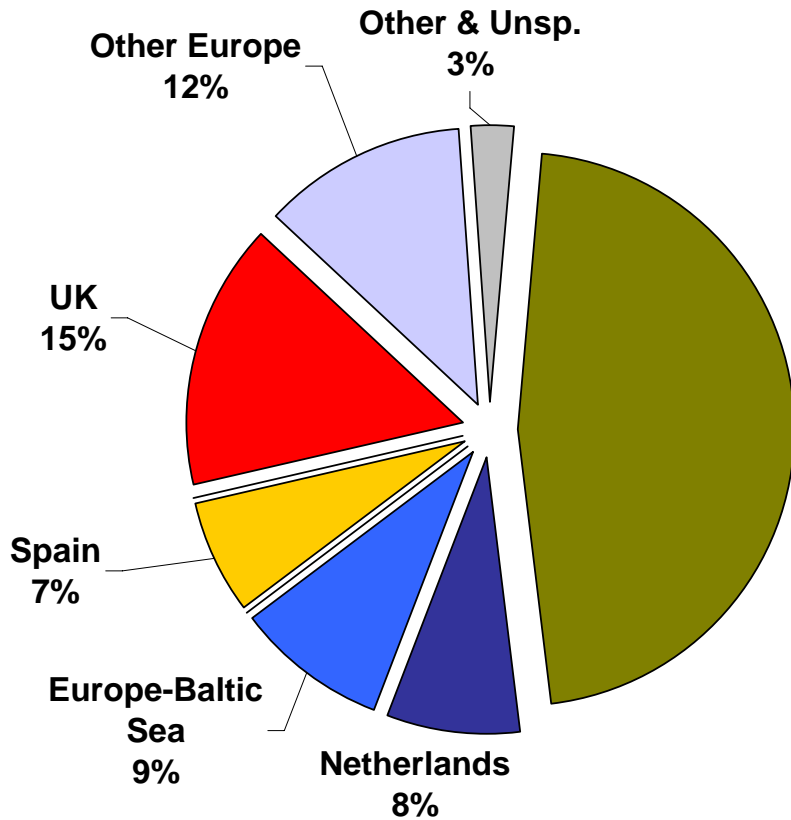


CDM&JI Buyers

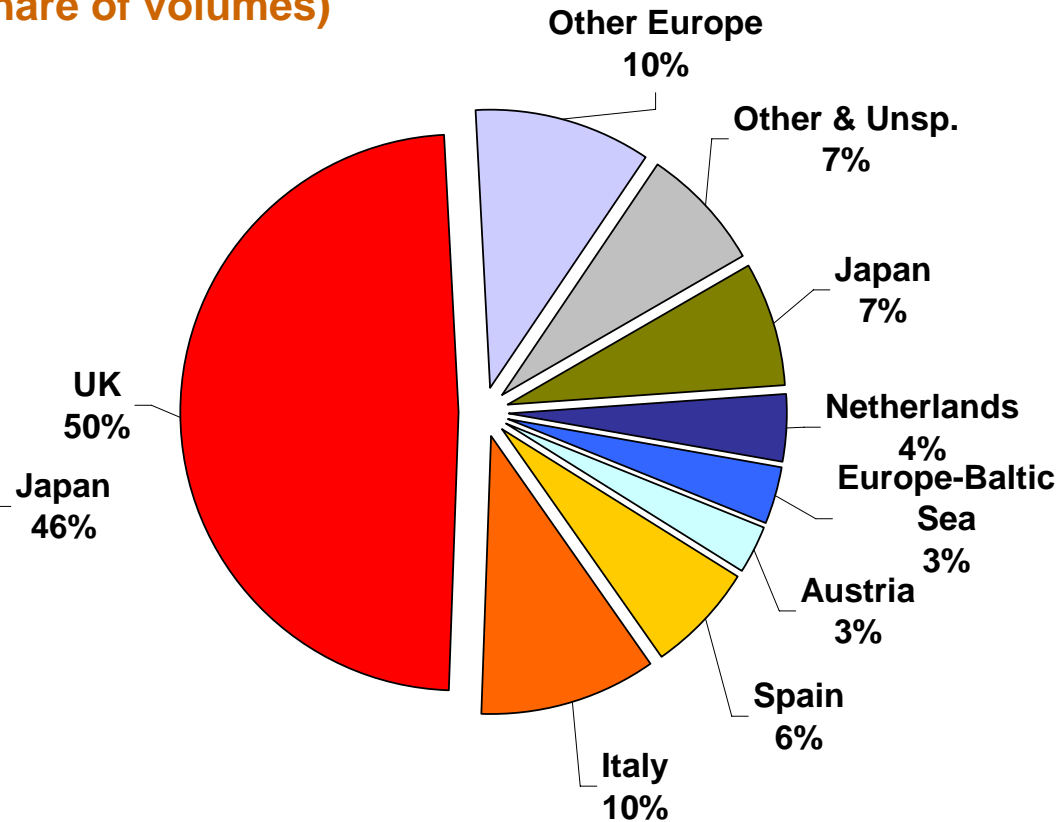
EU Private Sector 75% of demand



(share of volumes)



Jan. 2005 to Dec. 2005



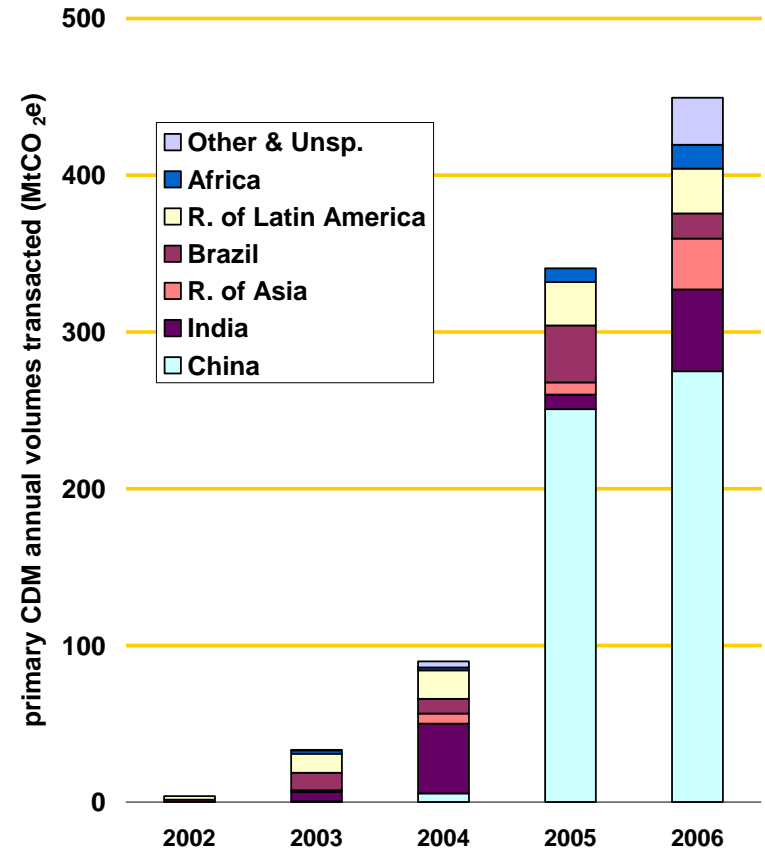
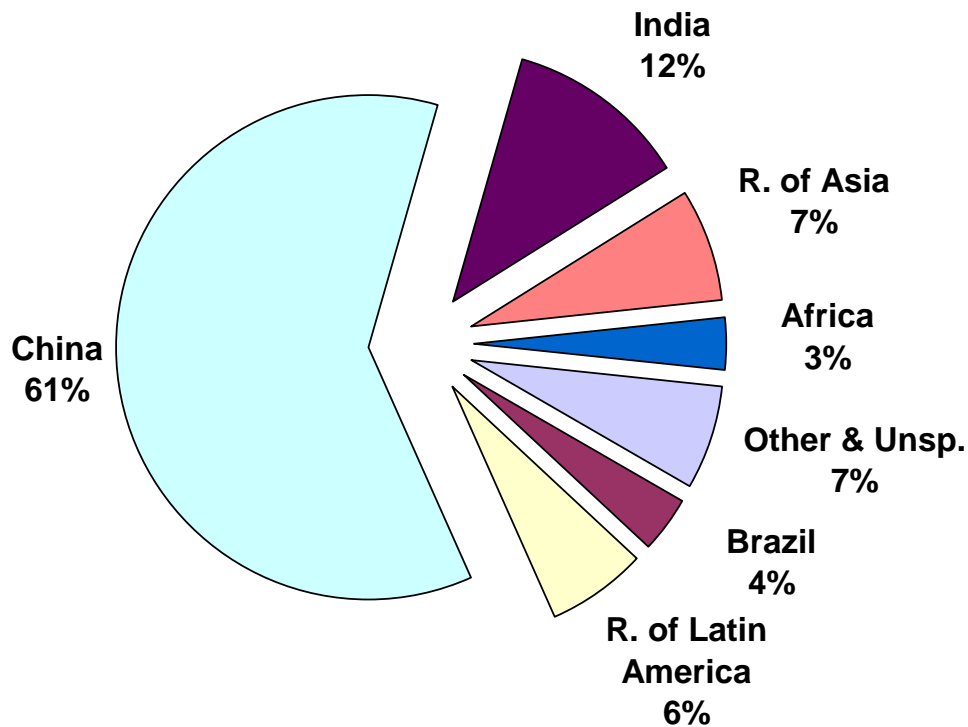
Jan. 2006 to Dec. 2006

CDM Sellers

China leads supply



(share of volumes)



Jan. 2006 to Dec. 2006

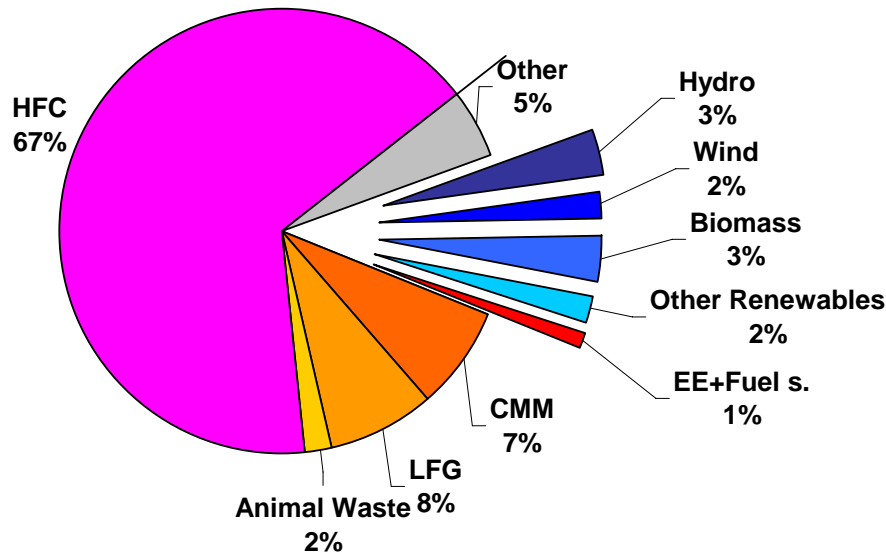
CDM Asset classes

Share of Clean Energy Rises



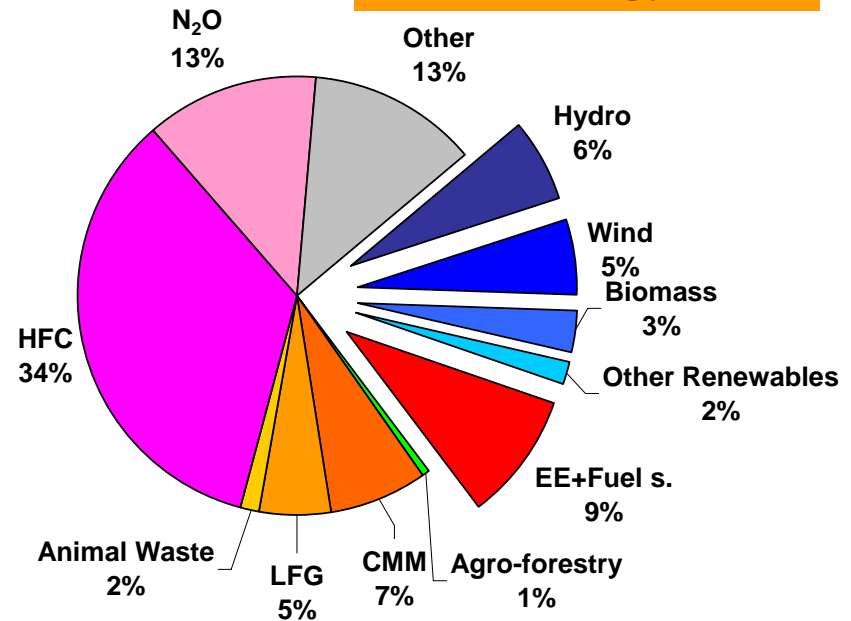
(share of volumes)

Clean energy: 11%



Jan. 2005 to Dec. 2005

Clean energy: 25%



Jan. 2006 to Dec. 2006

CDM & Clean Energy



Investment leverage 2002-2006

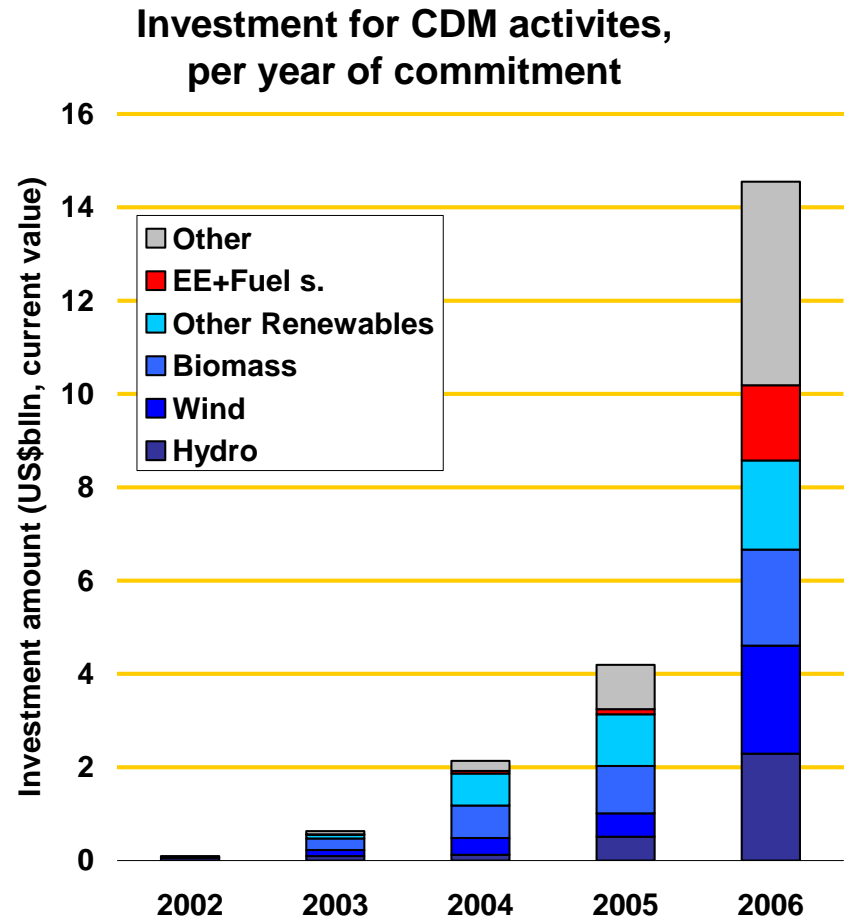
**Cumulative CDM deals =
US\$ 7.8 billion**

**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**





Outlook

Market balance 2008-2012



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

Demand from EU ETS = 1,140 MtCO₂e (900 -1,400 MtCO₂e)

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

Expected demand from EU Governments: 450 MtCO₂e

Expected demand from Japan: 100-500 MtCO₂e (avg: 350MtCO₂e)

Expected demand from Ro Europe and NZ: 200 MtCO₂e

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)

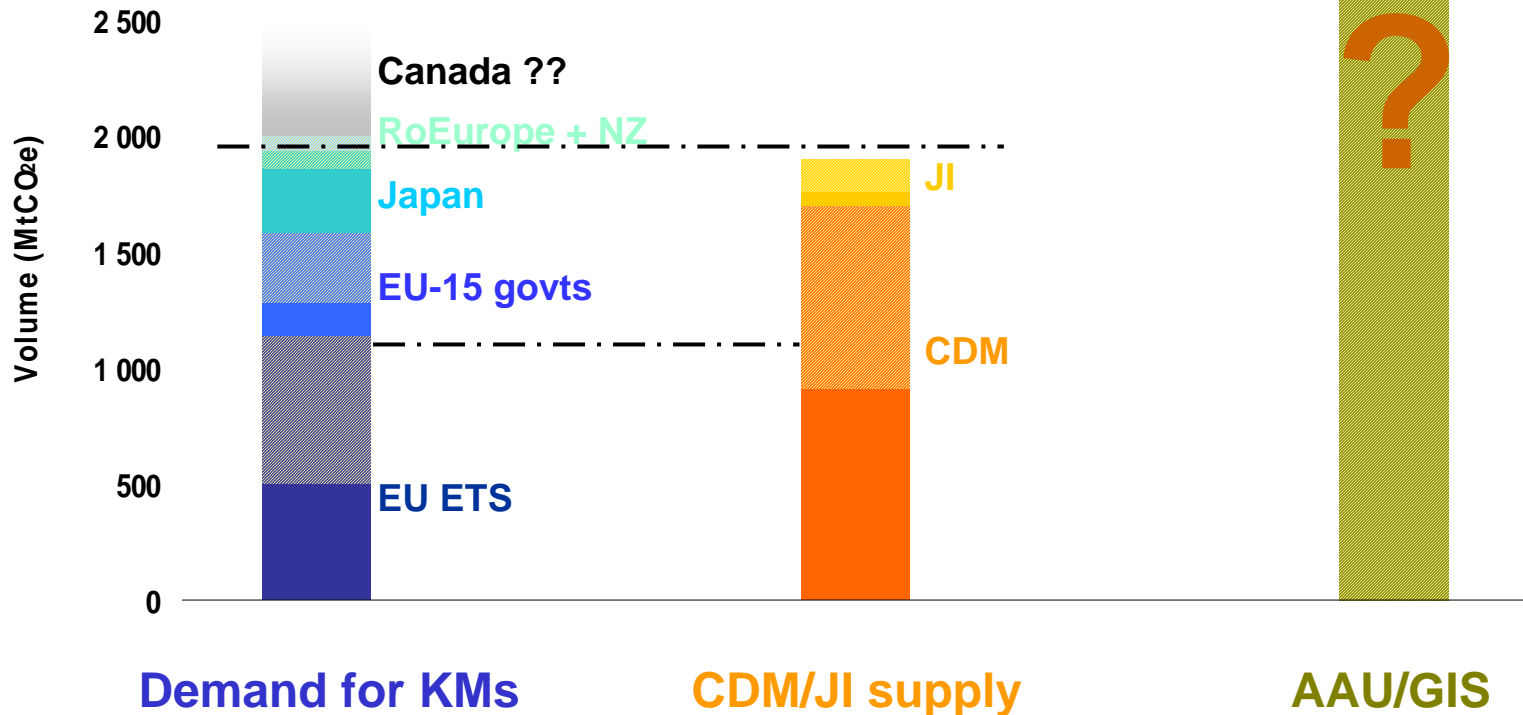



Expected Kyoto Balance

Already contracted
917 MtCO₂e
Residual demand
1,083 MtCO₂e

Already contracted
930 MtCO₂e
Not yet contracted
> 975 MtCO₂e

Potential supply
6000-7,100 MtCO₂e



: 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

Full report available at

www.carbonfinance.org