



# Assistance for Action

## Aviation and Climate Change Seminar

23 - 24 October 2012

ICAO Headquarters, Montréal, Canada



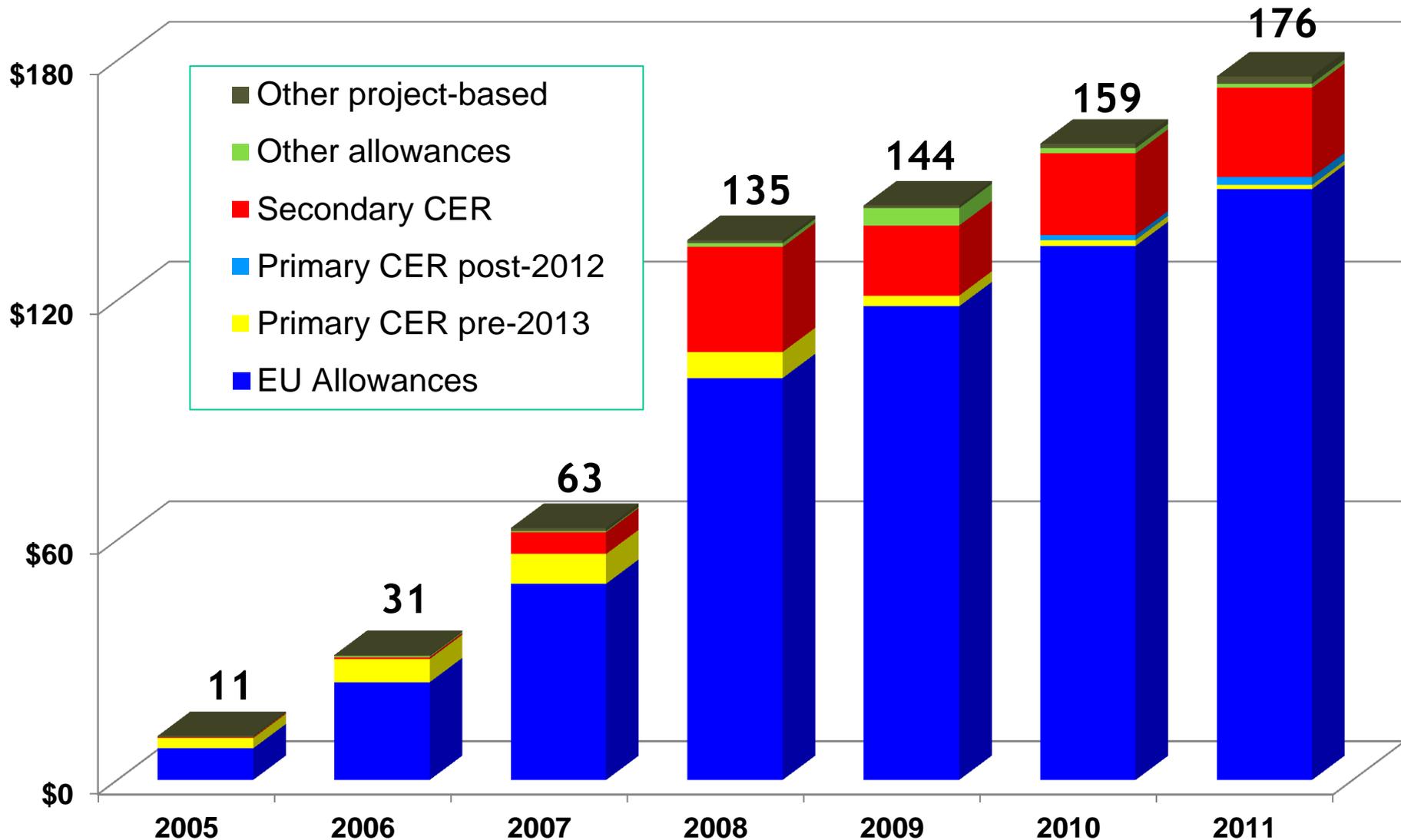
# State and Trends of the Carbon Markets

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World Bank

# Steady increase of global market value

(in Billion US\$)



# EU and other markets increasing value

(in Billion US\$)

post-2012  
CDM  
2.0

+63%

New Zealand

0.4

+249%

N. America

0.5

-18%

Secondary  
CDM + JI  
23.1

+12%

EU ETS Allowances  
147.8

+11%

pre-2013 CDM

1.0

-32%

JI

0.3

-36%

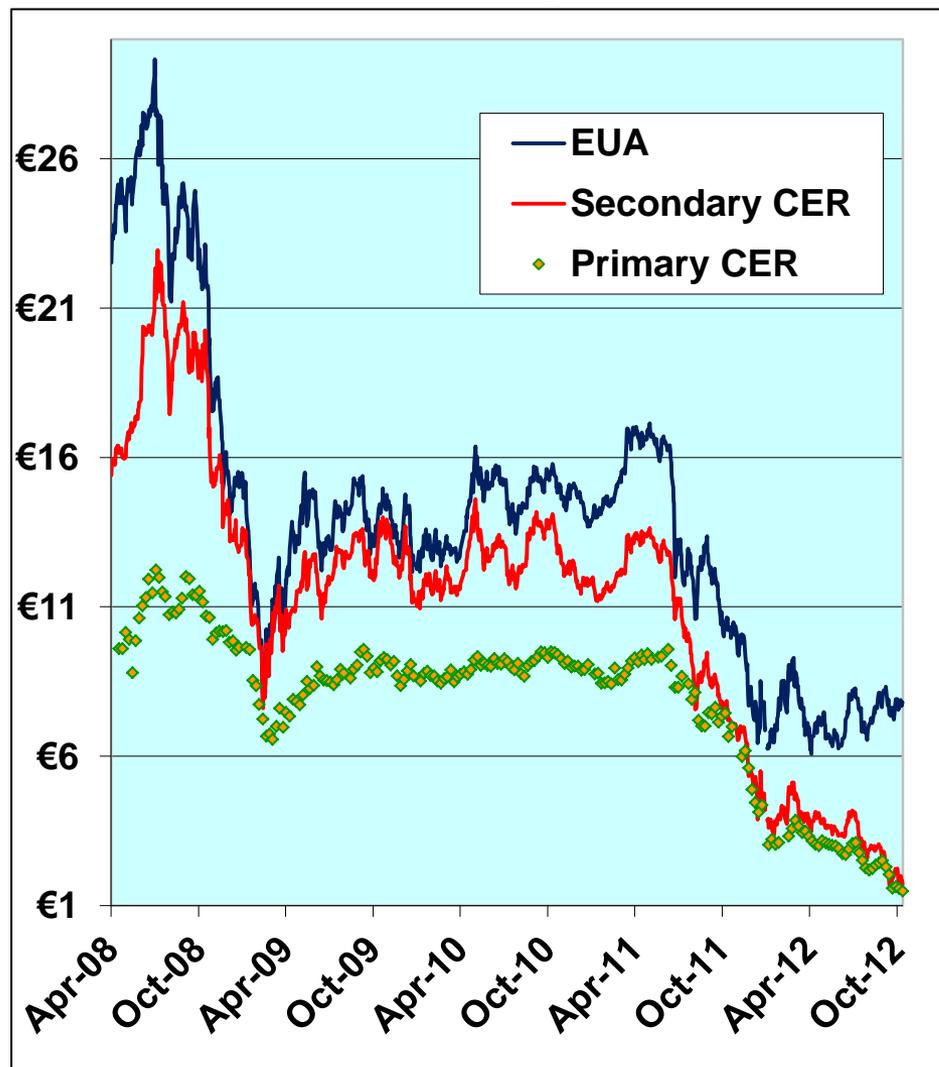
AAU

0.3

-49%

# EU ETS: how to deal with oversupply

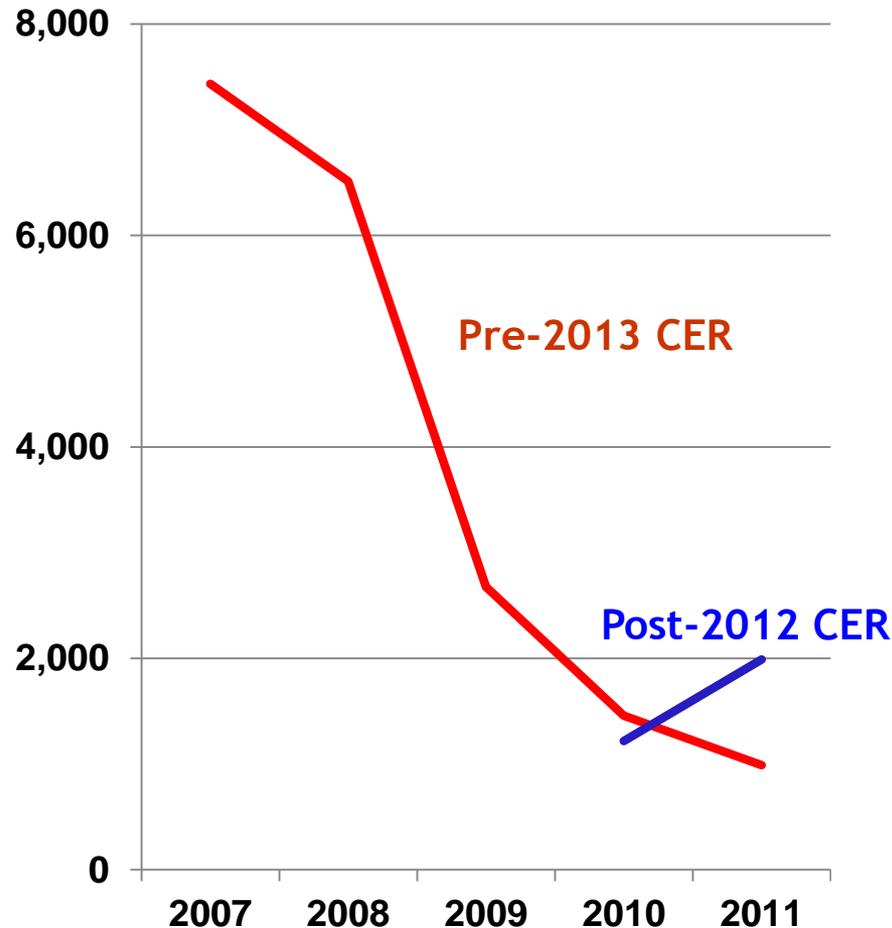
EUA, secondary CER & primary CER prices  
(€ per tCO<sub>2</sub>e)



- Oversupplied Phases II + III reflected in historic low prices
- Increasing trading volumes as demand shrinks: financially-driven trades
- Policy intervention under discussion to deal with the imbalance: supply set-aside

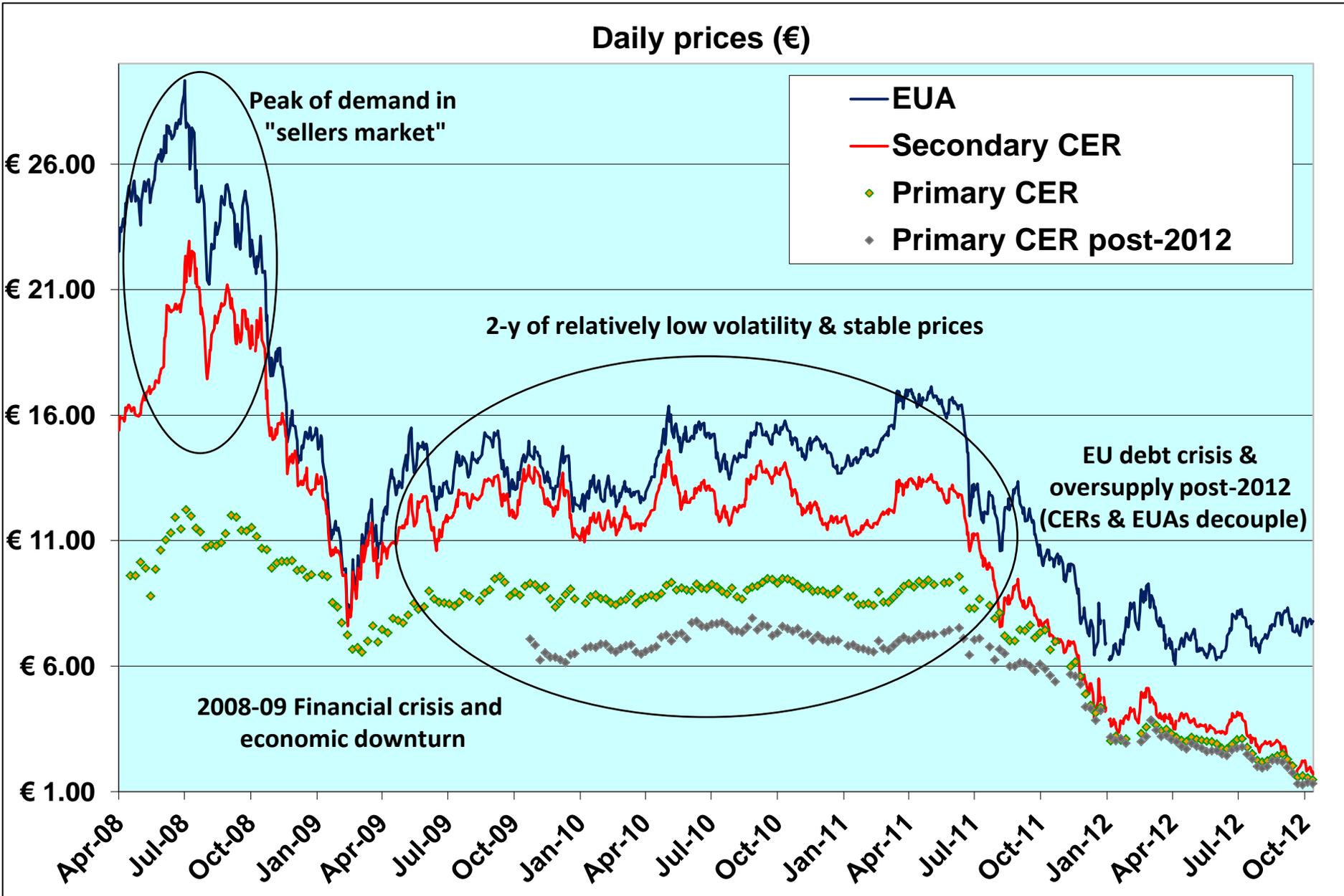
# An emerging post-2012 CDM market

Pre-2013 and post-2012 market values (US\$ million)

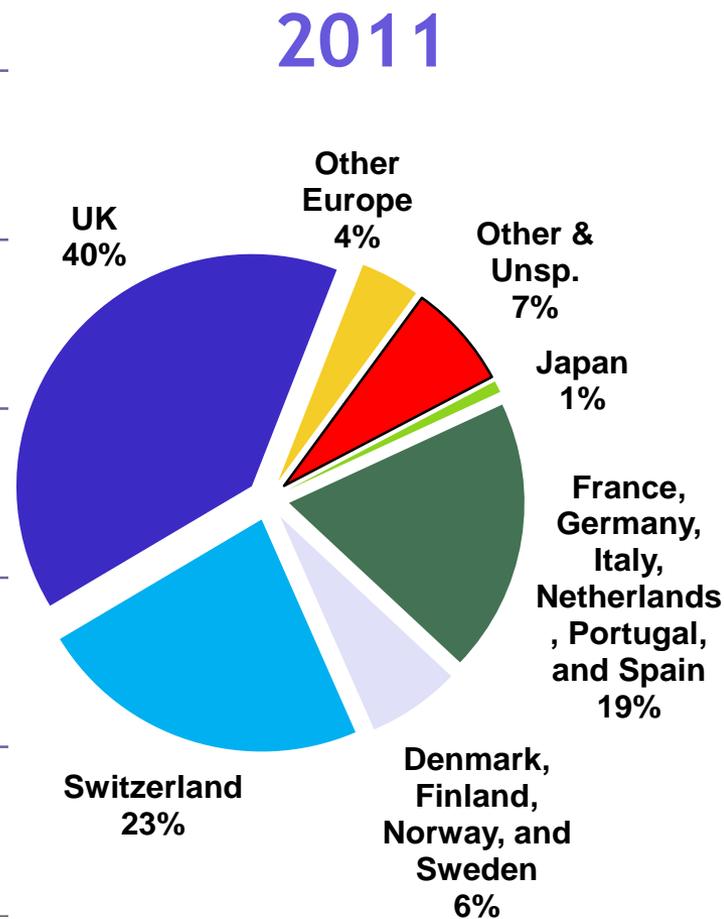
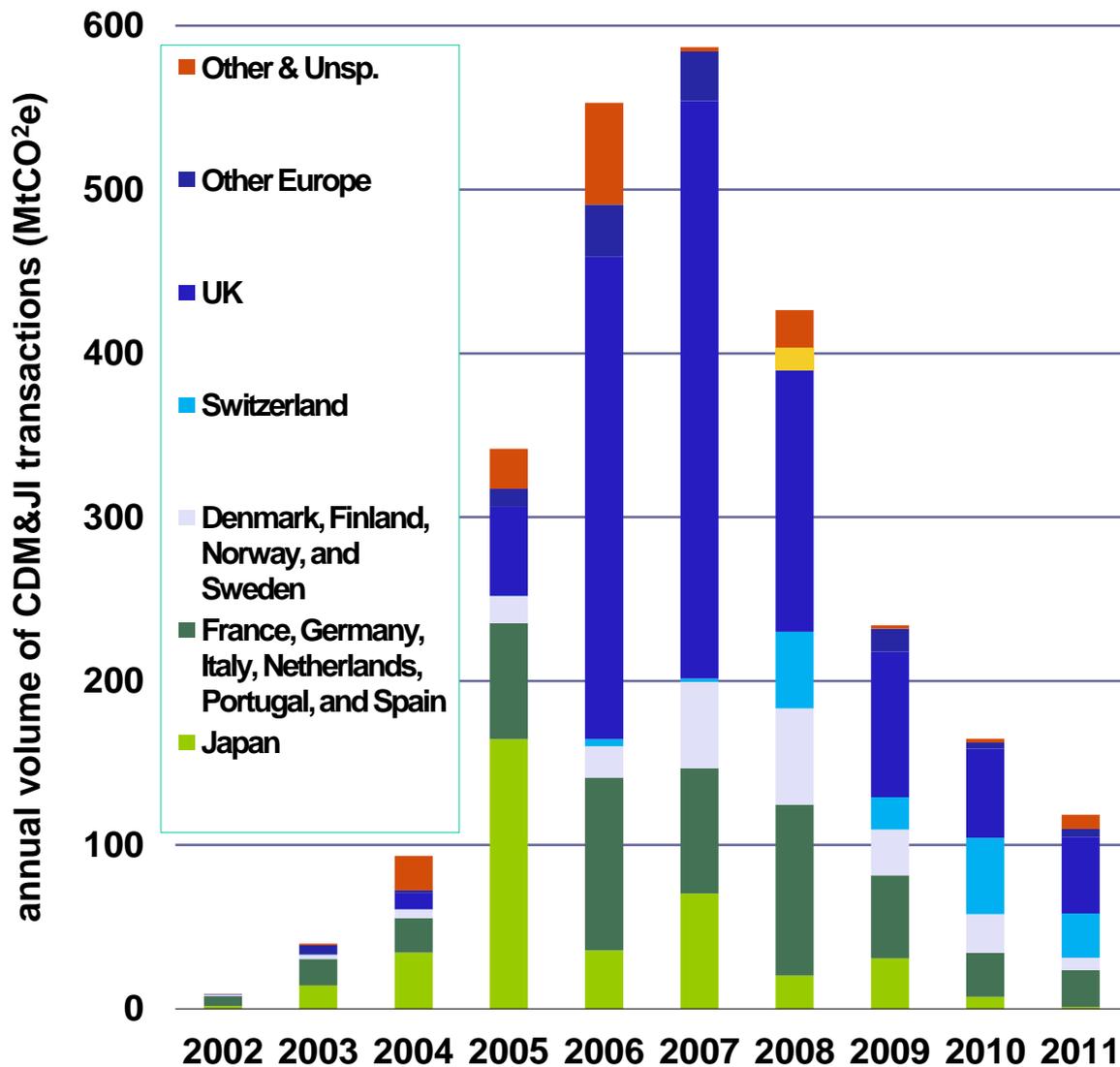


- Pre-2013 market closing and a post-2012 market emerging
- EU ETS oversupply and uncertain non-EU eligibility criteria and volumes lead to weak contractual obligations
  - Provisional safety clauses
  - “Quasi-options”
- More prominent Africa as buyers seek risk management and portfolio diversification

# f(price) = macro-economic scenario & asset risk profile



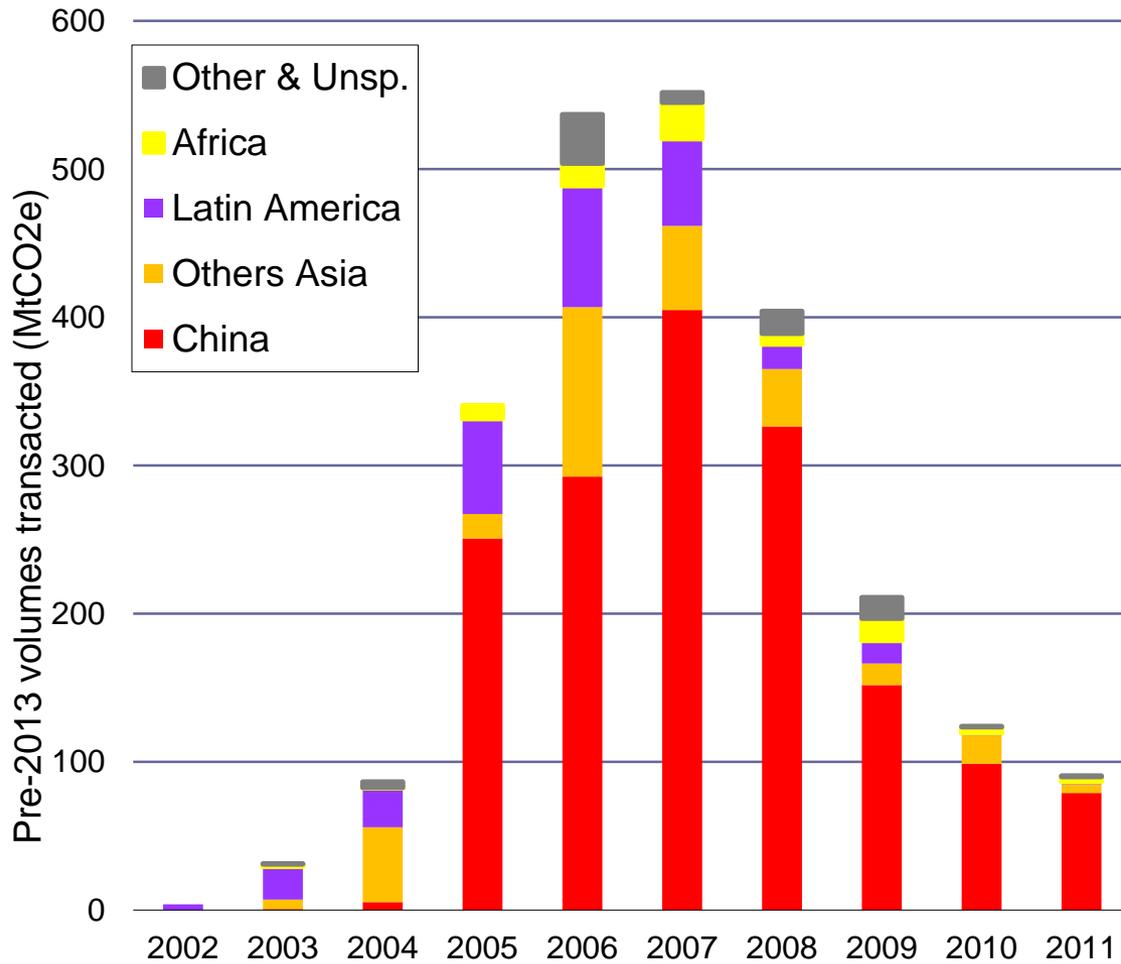
# CDM & JI Buyers (pre-2013)



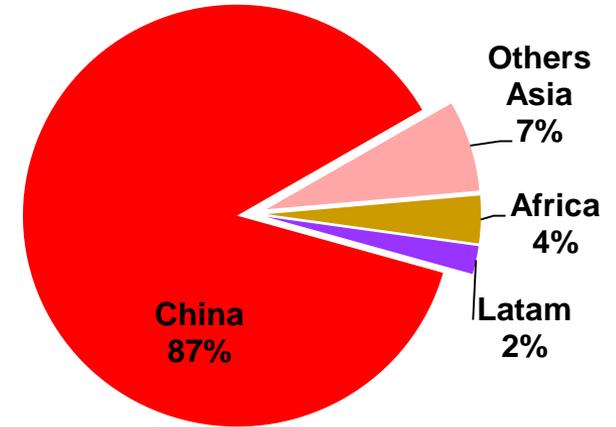
Other Europe includes Ireland, Austria, Belgium, Luxembourg, Iceland and Greece.

Other and Unsp. include s USA, Australia, Canada, New Zealand, Rep. of Korea, and others unspecified.

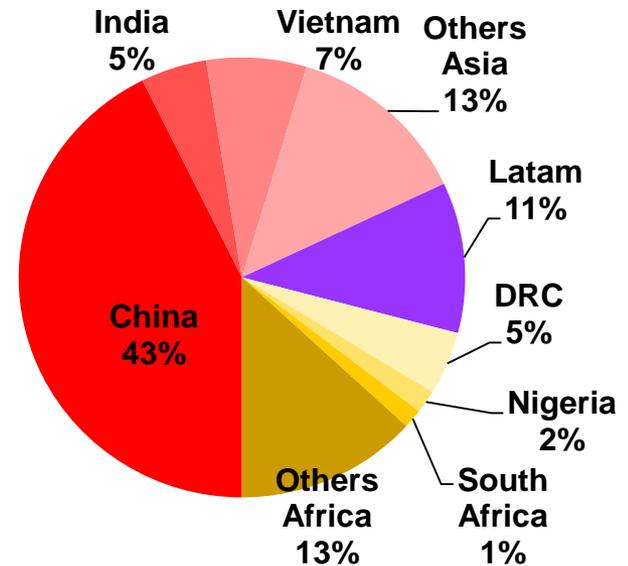
# Who's selling



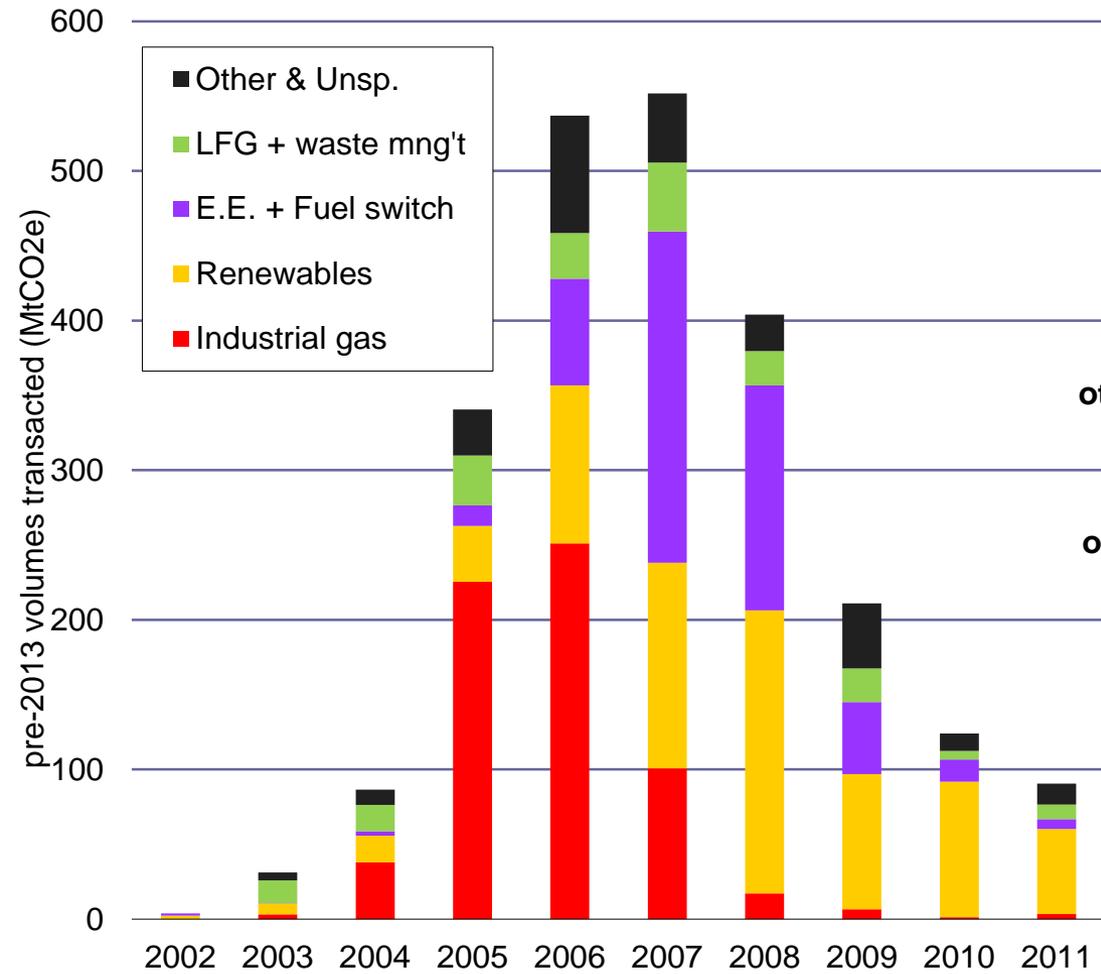
## Pre-2013



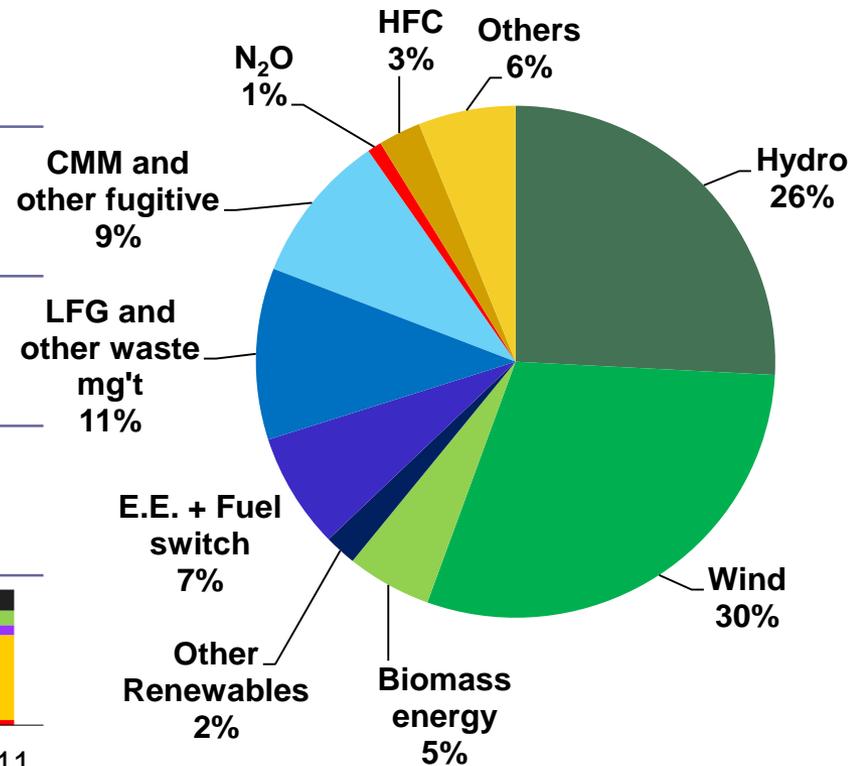
## Post-2012



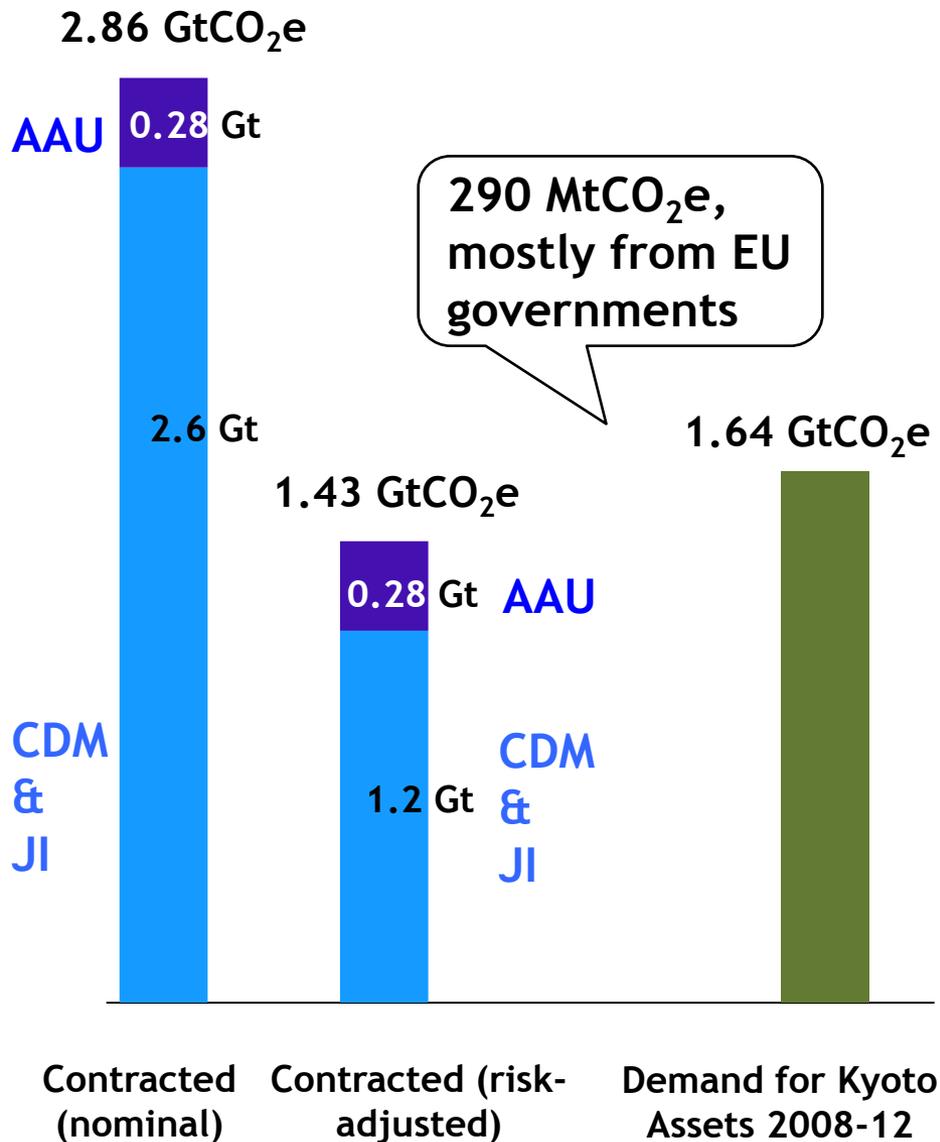
# CDM Sectors pre-2013



2011

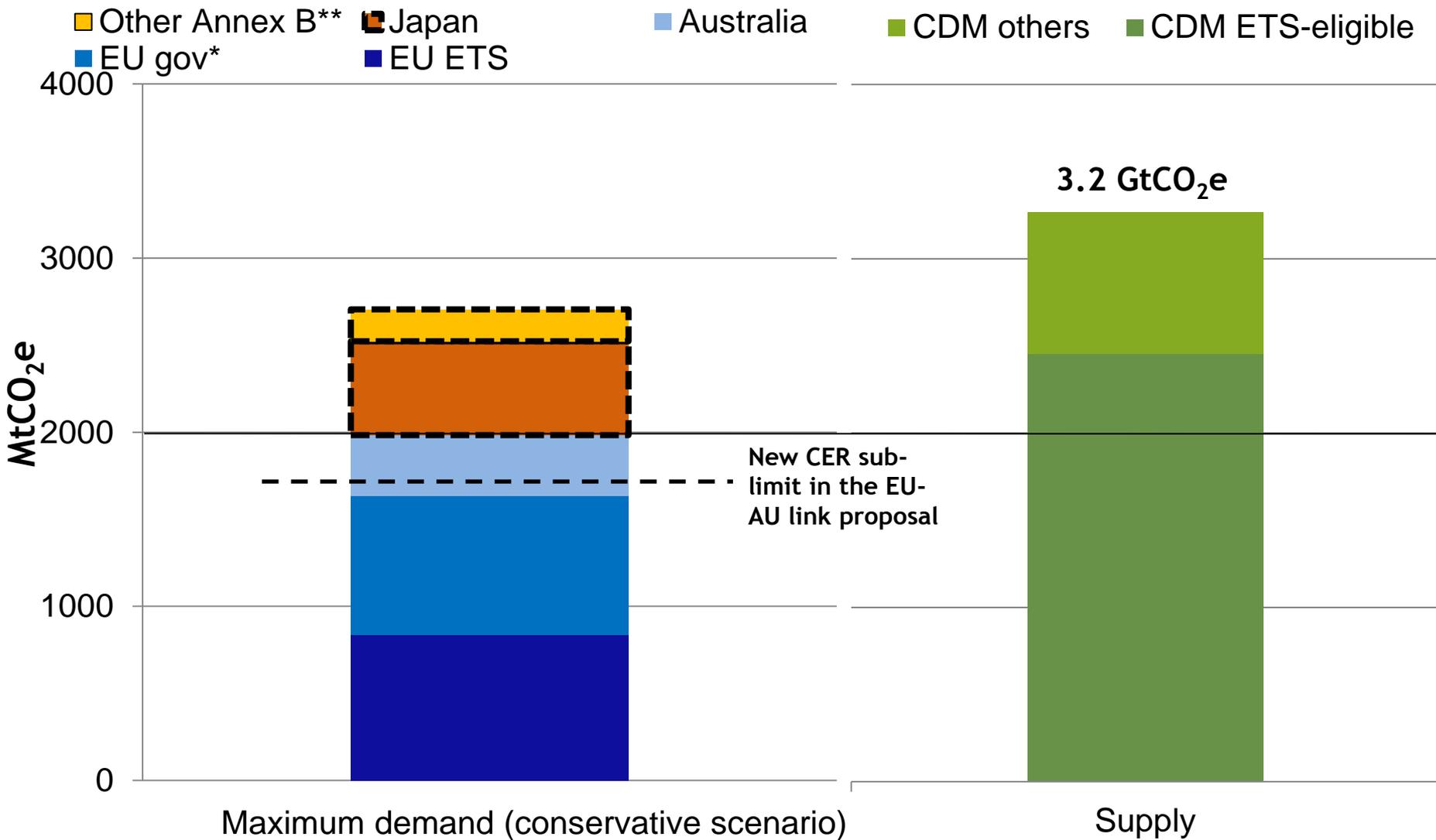


# Virtual demand until 2012



- Demand: 1.64 billion tCO<sub>2</sub>e
- Supply:
  - 2.6 billion CERs & ERUs + 280 million AAUs = 2.86 GtCO<sub>2</sub>e (nominal)
  - 1.15 + 0.28 = 1.43 GtCO<sub>2</sub>e (risk-adjusted)
- Aggregate picture; not all buyers purchased the volume they need
- Residual demand: 290 MtCO<sub>2</sub>e (136 Mt in 2011)

# Market projections indicate constrained demand over 2013-20



\*Including Iceland, Liechtenstein, and Norway

\*\* Including New Zealand, North America, and Switzerland

# Regulatory improvements & new markets popping up worldwide

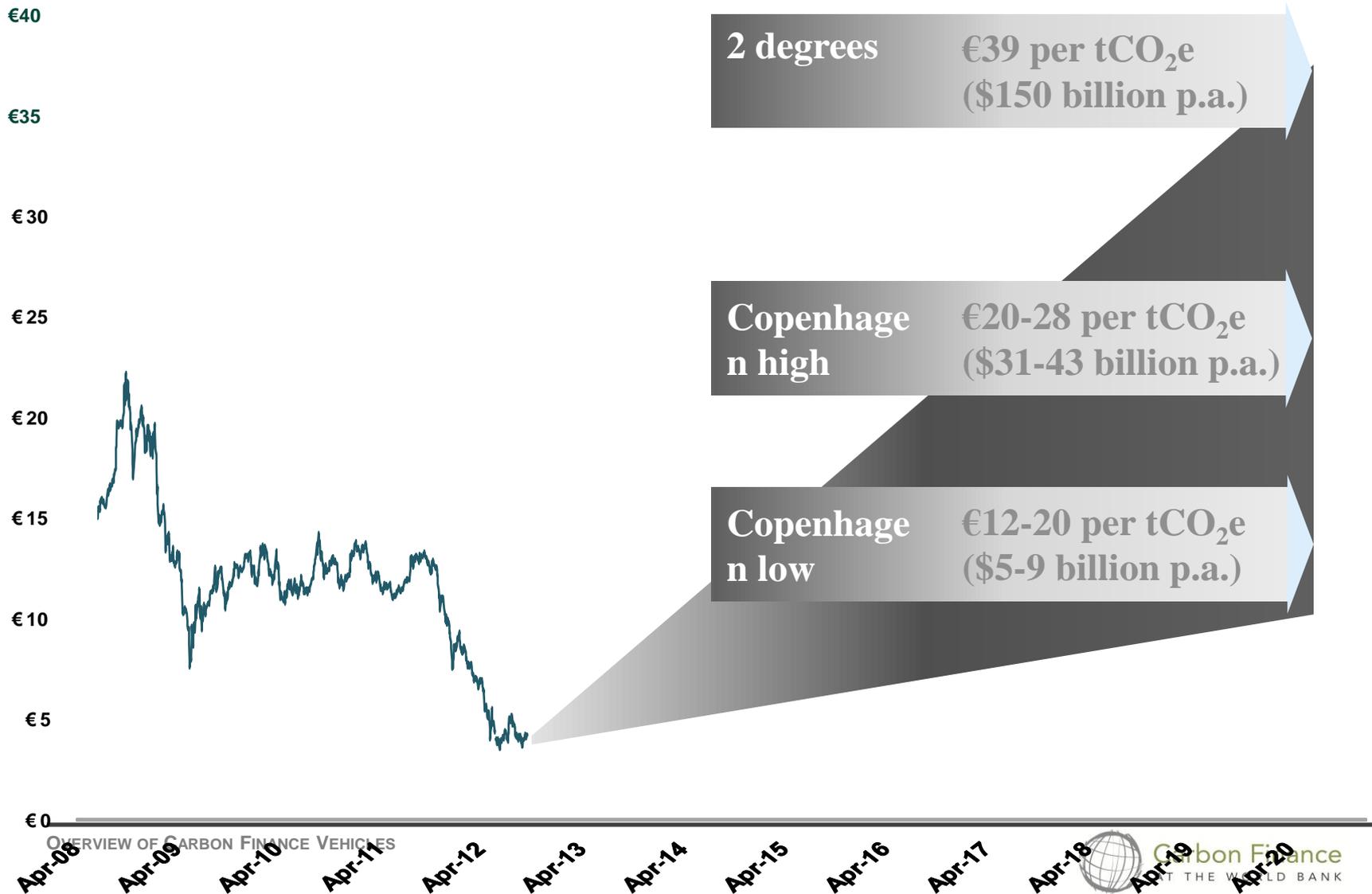


- Durban decisions increased the regulatory clarity on existing market and advanced on new market instruments
- Several jurisdictions passed climate bills, including market initiatives
  - Australia, California, Quebec, Republic of Korea, Mexico
- AU - EU linkage no later than 2018
- New initiatives signal that solutions to climate challenge will emerge.

# What has been done so far

- Cumulative pCERs transacted equals 2.4 bln CERs in 2002-11
  - ... which is larger than the annual EU ETS emissions
  - ... and 80% of Kyoto's total targets (~3 bln tCO<sub>2</sub>e over 2008-12)
- ERPAs reach US\$28 bln (and will support about US\$150 bln in low-carbon investments, mostly from private sector) ...
  - ... vs. all clean energy investments to developing countries of about US\$80 bln annually in 2010 and 2011
- ... at long-term average price of \$10-\$15 per ton ...
  - ... which is much lower than the marginal abatement cost for developed countries (reduce emissions through domestic measures)

# Where Next for Carbon Markets ?



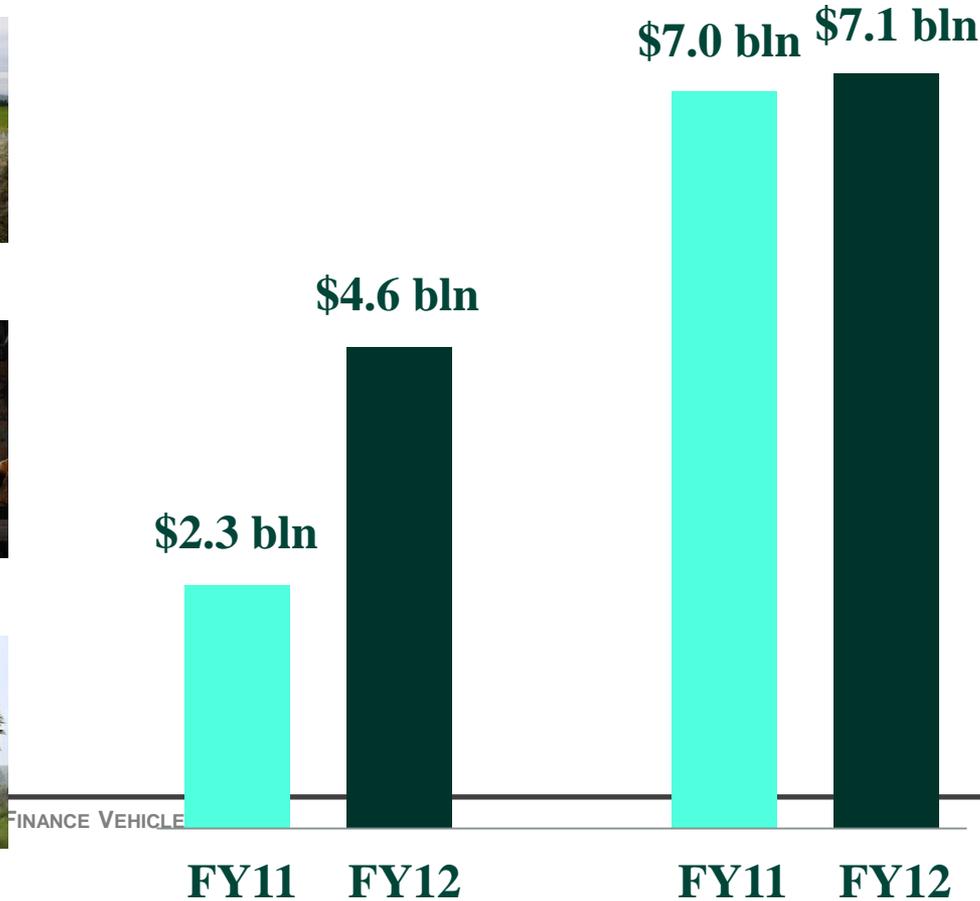
# A Growing Menu of Climate Finance Instruments to Catalyze and Leverage



# WB: Climate co-benefits in IBRD/IDA lending

## Adaptation

## Mitigation

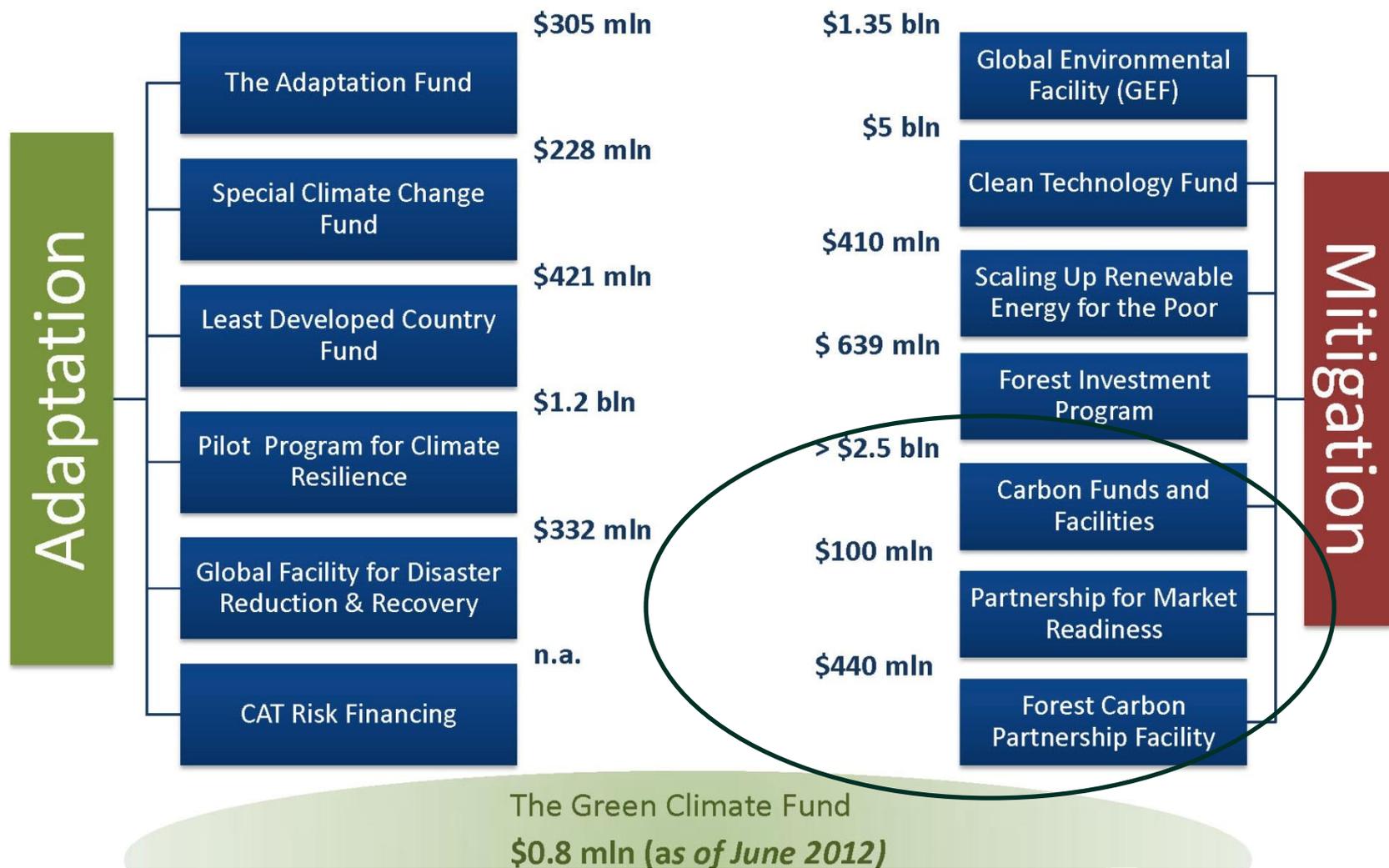


FINANCE VEHICLE



CLIMATE FINANCE  
AT THE WORLD BANK

# A Growing Menu of Climate Finance Instruments to Catalyze and Leverage



# The Unit's first generation of carbon funds

<p><b>April 2000</b></p>  <p><b>Prototype Carbon Fund</b></p> <p>World's First Global Carbon Fund</p> <p><b>\$220,000,000</b></p>	<p><b>May 2002</b></p>  <p><b>Netherlands Clean Development Mechanism Facility</b></p> <p>Pioneer purchaser of CDM</p> <p><b>**</b></p>	<p><b>March 2003</b></p>  <p><b>Community Development Carbon Fund</b></p> <p>Poorest country focused</p> <p><b>\$128,600,000</b></p>	<p><b>March 2004</b></p>  <p><b>Italian Carbon Fund</b></p> <p>Government &amp; private sector</p> <p><b>\$155,600,000</b></p>	<p><b>May 2004</b></p>  <p><b>BioCarbon Fund Tranches I &amp; II</b></p> <p>Afforestation, Reforestation, REDD+ &amp; soil carbon</p> <p><b>\$90,400,000</b></p>
<p><b>August 2004</b></p>  <p><b>Netherlands European Carbon Facility</b></p> <p>Purchasing JI</p> <p><b>**</b></p>	<p><b>January 2005</b></p>  <p><b>Danish Carbon Fund</b></p> <p>Government &amp; private sector</p> <p><b>€90,000,000</b></p>	<p><b>March 2005</b></p>  <p><b>Spanish Carbon Fund</b></p> <p>Government &amp; private sector</p> <p><b>€220,000,000</b></p>	<p><b>August 2006</b></p>  <p><b>Umbrella Carbon Facility Tranches I &amp; II</b></p> <p>Adding liquidity to market at key moments</p> <p><b>€904,100,000</b></p>	<p><b>March 2007</b></p>  <p><b>Carbon Fund for Europe</b></p> <p>Governments &amp; private sector</p> <p><b>€50,000,000</b></p>

\*\* Unpublished



# Private Sector Partners

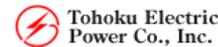
Financials



Oil & Gas



Utilities



Industrials



Others



# Public Sector Partners



AUSTRIA



FINLAND



JAPAN



SPAIN



AUSTRALIA



AGENCE FRANÇAISE  
DE DÉVELOPPEMENT



JAPAN INTERNATIONAL  
COOPERATION AGENCY



SWEDEN



REGIONAL GOVERNMENTS OF  
BRUSSELS-CAPITAL, FLEMISH  
AND WALLOON REGIONS



GERMANY



LUXEMBOURG



SWITZERLAND



NETHERLANDS



DENMARK



IRELAND



NORWAY



THE UNITED KINGDOM



THE EUROPEAN COMMISSION



ITALY



PORTUGAL



THE UNITED STATES

# Responding to the challenges in the market (1 of 2) - preparing for the future with market readiness support

WB Facility	Focus	Resources	Partners	Program
 <p><i>Partnership for Market Readiness</i></p>	<p><b>Capacity building to support market based tools for GHG reduction</b></p>	<p><b>\$100 million*</b></p>	<p><b>25 country participants including 10 donor governments</b></p>	<ul style="list-style-type: none"> <li>◆ Supporting countries' development of readiness component for market instruments</li> <li>◆ Helping developing countries explore, pilot and test emissions trading</li> <li>◆ Building on country priorities for low-carbon growth</li> </ul>
 <p><i>FCPF Readiness Fund</i></p>	<p><b>National &amp; sub-national REDD+ pioneer</b></p>	<p><b>\$240 million</b></p>	<p><b>36 country participants including 13 donor governments</b></p>	<ul style="list-style-type: none"> <li>◆ Guiding readiness and carbon finance for REDD+</li> <li>◆ Forging partnerships between developed and developing countries</li> <li>◆ Enhancing capacity building and technical assistance</li> </ul>

# Responding to the challenges in the market (2 of 2) - pairing readiness with action: carbon credit purchases

WB Facility	Focus	Resources	Partners	Program
 <p>CARBON PARTNERSHIP FACILITY</p>	<p><b>Scaling-up carbon finance</b></p>	<p><b>\$147 million<sup>^</sup></b></p>	<p><b>6 selling country, 3 buying country and 2 donor participants</b></p>	<ul style="list-style-type: none"> <li>◆ Pioneer of PoAs – innovate to broaden reach of CDM</li> <li>◆ Utilize carbon finance to scale up systematic approaches to low carbon growth</li> <li>◆ Testing ground for new mechanism purchases</li> </ul>
 <p><b>FOREST CARBON PARTNERSHIP FACILITY</b></p> <p><i>FCPF Carbon Fund</i></p>	<p><b>Testing purchase of REDD+ credits</b></p>	<p><b>\$220 million</b></p>	<p><b>7 public and 2 private and 1 non-profit participants</b></p>	<ul style="list-style-type: none"> <li>◆ Guiding readiness and carbon finance for REDD+</li> <li>◆ Forging partnerships between developed and developing countries</li> </ul>
 <p><b>BioCarbon Fund</b></p> <p><i>Tranche 3</i></p>	<p><b>Scale up of afforestation &amp; reforestation and soil carbon</b></p>	<p><b>\$90 million in tranches 1&amp;2, \$75 million target for Tranche 3</b></p>	<p><b>Anticipating mix of public and private participants</b></p>	<ul style="list-style-type: none"> <li>◆ Scaling up afforestation and reforestation</li> <li>◆ Piloting soil carbon sequestration including rice paddies, wetlands, grasslands and pastureland mgt.</li> <li>◆ Exploring landscape accounting approach and valuation of ecosystem services</li> </ul>

# Thank you

Carbon Finance  at the World Bank