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# The EU Emission Trading Scheme

## Medium and long term issues

Europlace - 5th July 2007

Climate Task Force

Christian de Perthuis

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# How to convert a half success into a complete success?

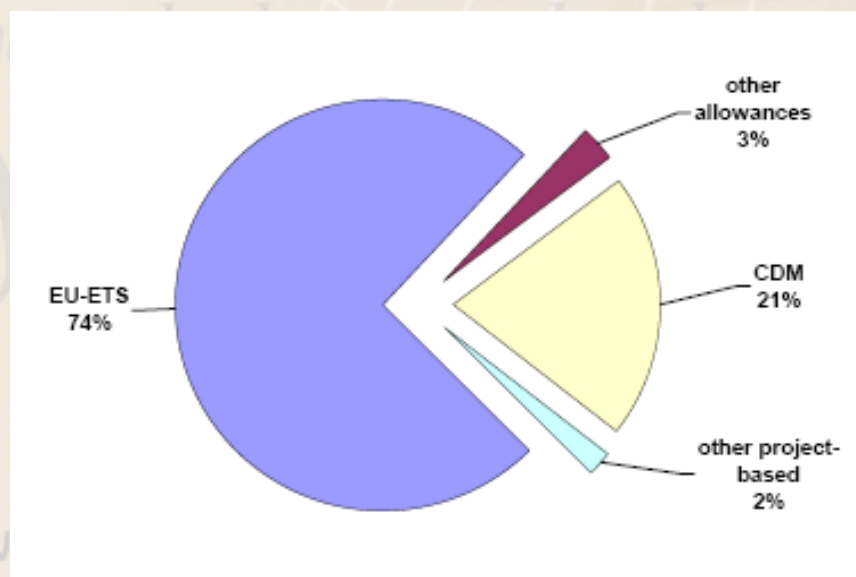
- **The EU Emission Trading Scheme (EU ETS) has become the largest carbon market in the world, sending an effective carbon price signal to European industry**
- **Companies take into account this new price signal in their current operations**
- **EU ETS will achieve complete success when:**
  - ✓ Company investment decisions integrate the carbon price signal
  - ✓ The EU scheme is linked with other schemes – Kyoto credits markets; Norway & Japan markets; and US markets if implemented.
  - ✓ We have a clear vision of Post 2012 period



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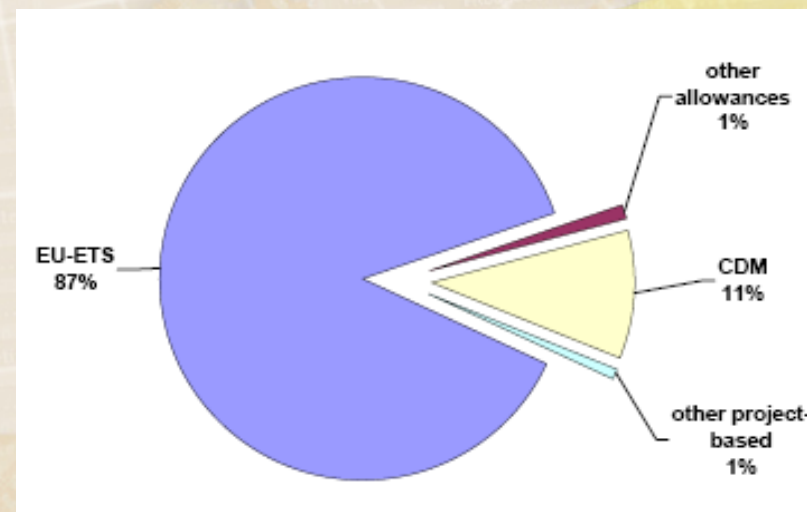
# The EU ETS in the international context

**EU ETS takes all: Share of Volume and Value in the Carbon  
Market – until September 30, 2006**



Volume

Source : World Bank.



Value

Source : World Bank.



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# I - Short and Medium term outlooks

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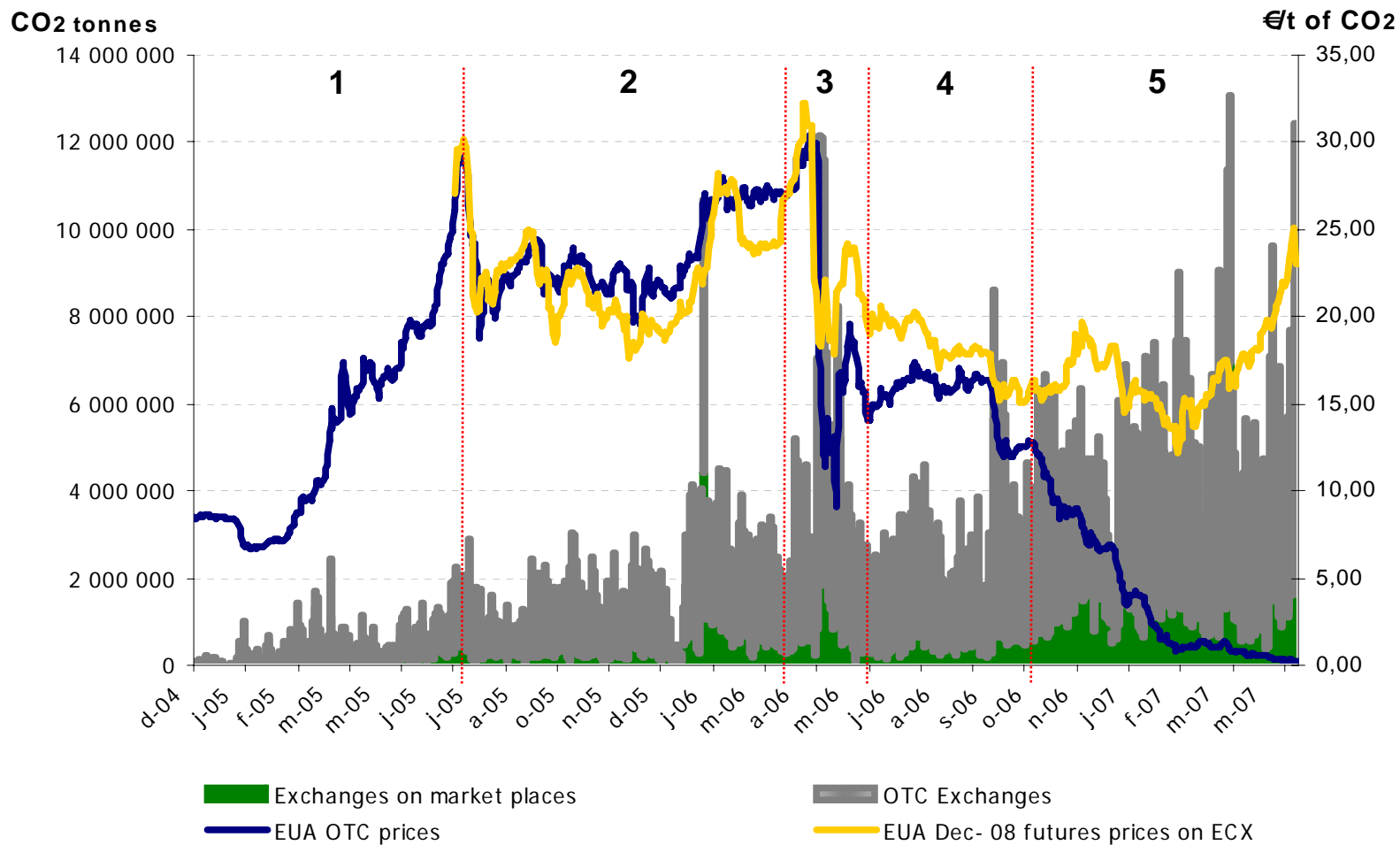
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# The Five Stages of the EU ETS Market

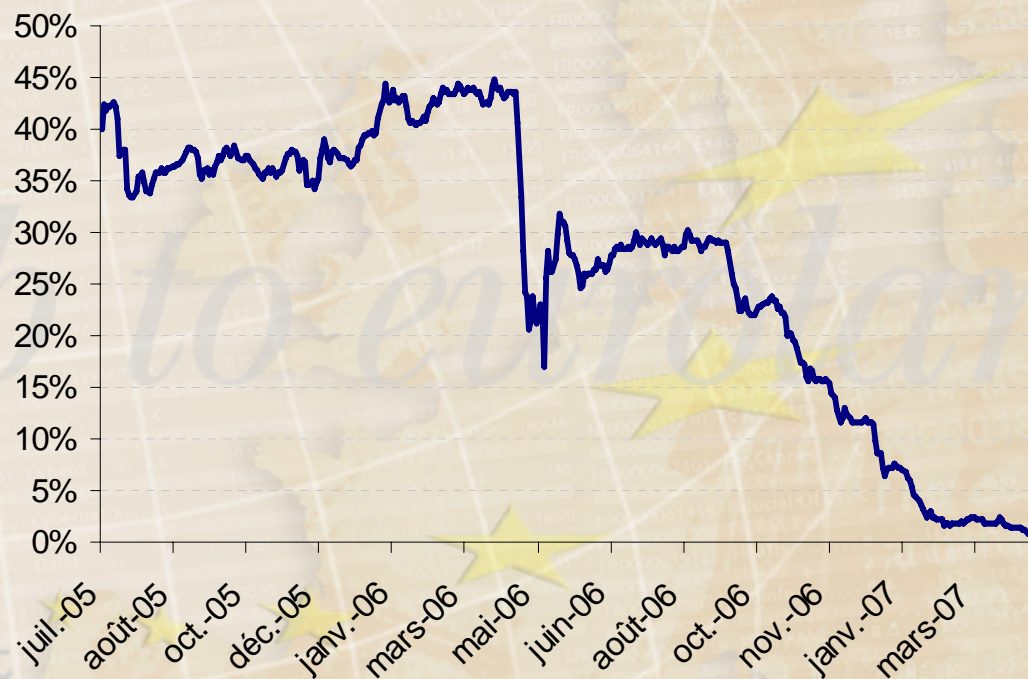




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## The probability of an EUA shortage at the end of the first period

- The ratio between the 1<sup>st</sup> and 2<sup>nd</sup> period prices plus the 40€ of penalty expresses the probability that the market is short at the end of the 1<sup>st</sup> period.
- Before the 1<sup>st</sup> compliance, the probability was estimated at 35-45% but only 1% at the end of April 07.



$$\text{Pr}(\text{shortage}) = \frac{EUA_{0507}}{EUA_{0812} + 40}$$

Source : Climate task force, from the formula of Parsons and Ellerman, MIT 2006.

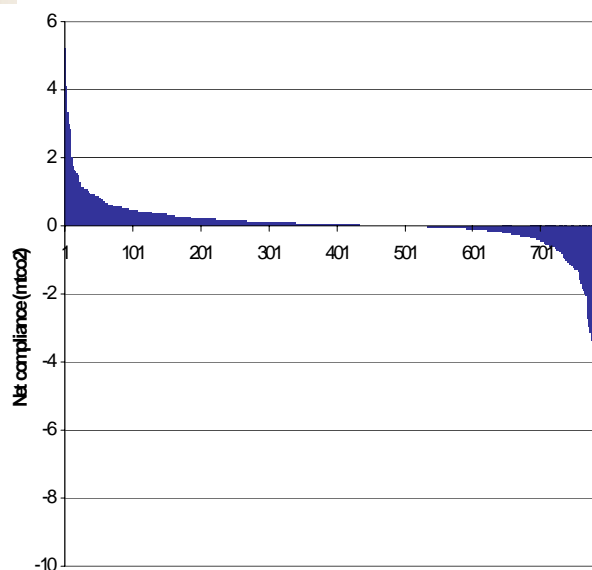


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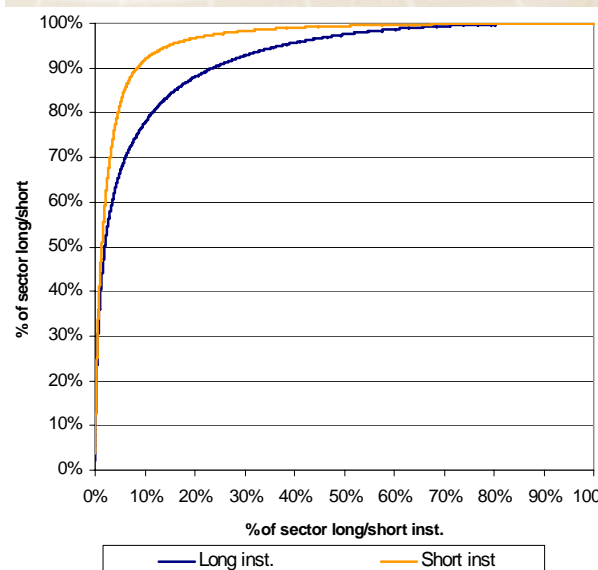
# Supply and demand in EU 25

## EU 25 - installations compliance

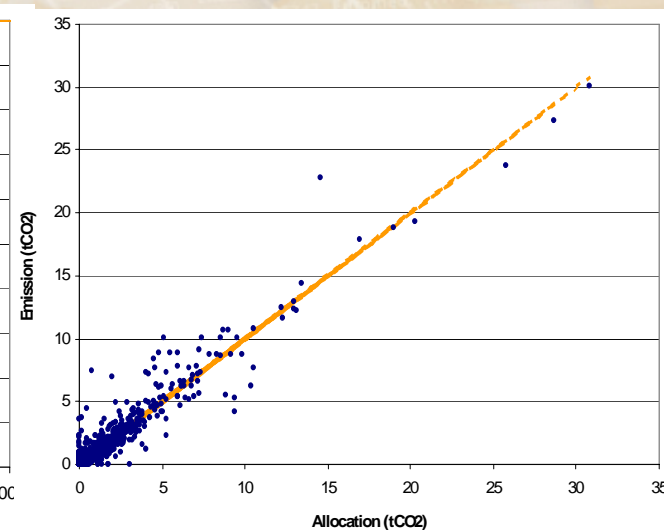
Allowance > 500 000 t



## Long and short installations concentration EU 25



## EU 25 Compliance by installation



Source : Climate Task Force, Caisse des Dépôts, CITL data.

- Among 7 311 installations which are in a long position, 10% represent 77% of the total surplus (254 Mt) and 2% of them represent more than 50%.
- Among 3 134 installations which are in a short position, 10% represent more than 90% of the total deficit (-225 Mt) and 1.5% of them represent 50%.

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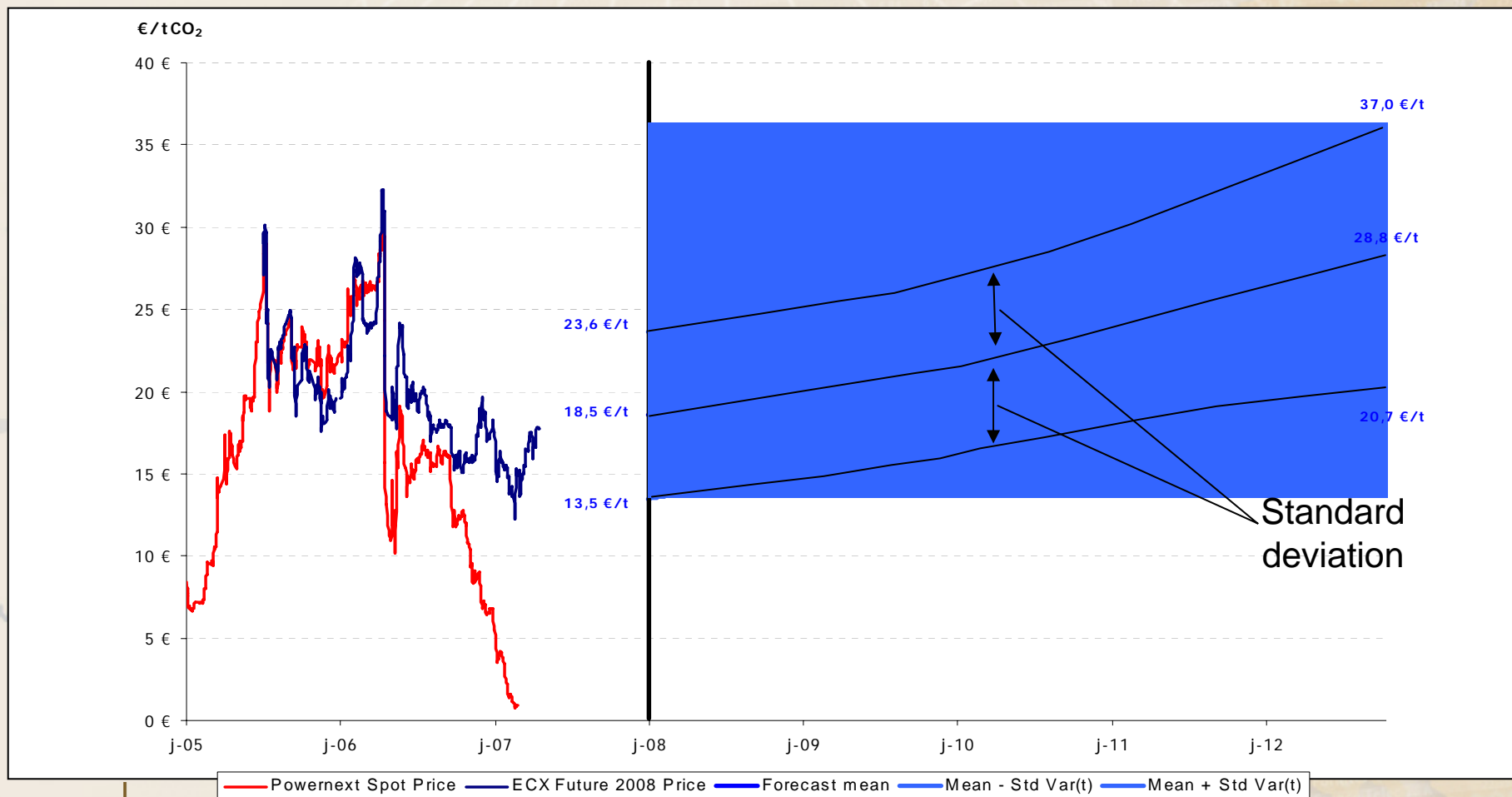
Mission climat

7



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## The mean trend of the second period prices expectations.





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## II - Post 2012 Issues

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# The CDM Assessment

	2000 GHG Emissions (Mt CO2 eq)	% of World total	Gross Capital Formation (current billion \$)	FDI, net inflows (%GCF)	Estimated Annual ET/CDM investment* (in current \$m)	% GCF
China	4963	14,7%	747	2,8%	463	0,062%
India (2003)	1889	5,6%	164	0,8%	119	0,073%
Brazil	850	2,5%	129	3,0%	154	0,120%
Indonesia	505	1,5%	67	0,4%	9	0,013%
Iran	476	1,4%	61	0,3%	0	0,000%

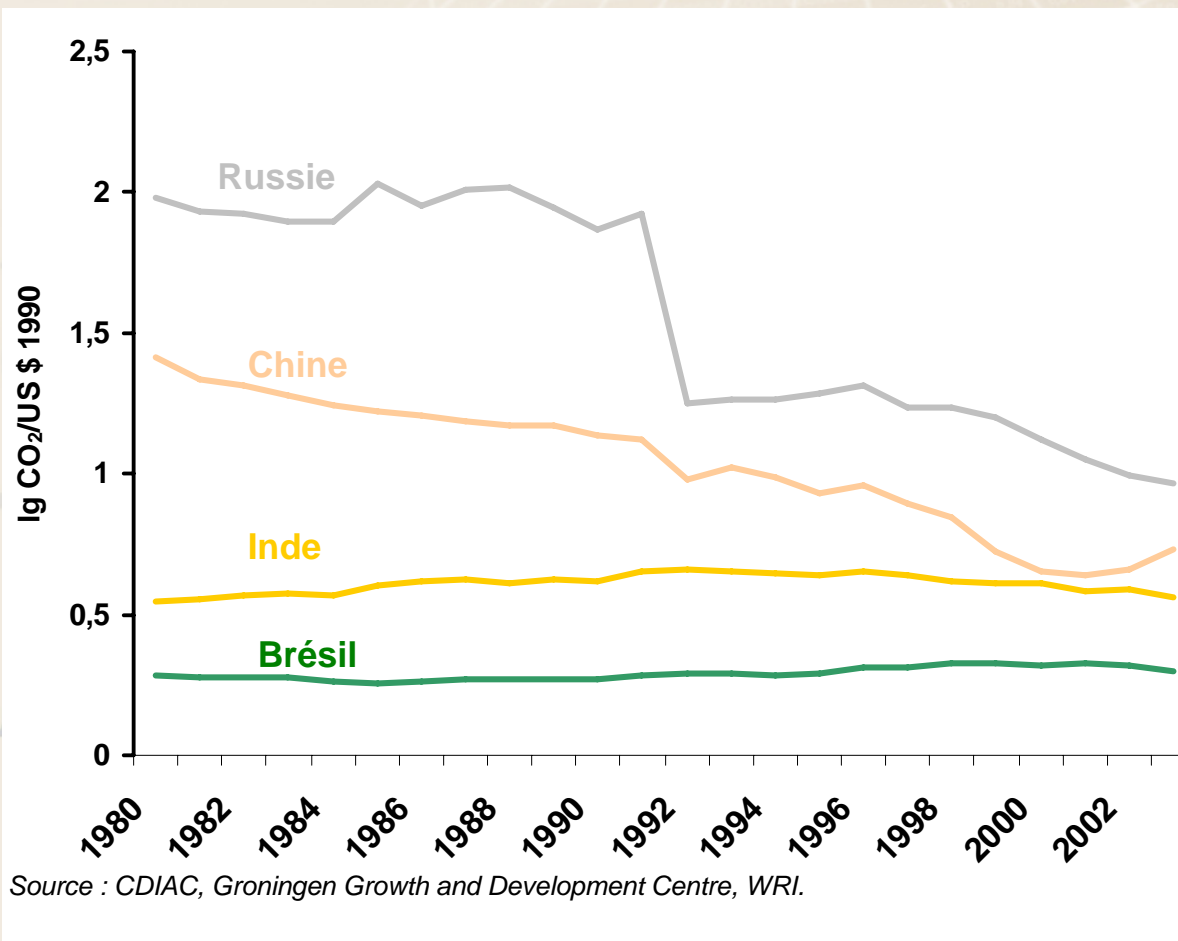
Source : WRI, World Development Indicators2006, UNFCCC. \* according to Carbon Finance March 2007

- CDM Projects are growing quite fast
- Nevertheless, their impact is a symbolic part of total investments in developing countries



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# The Chinese Case

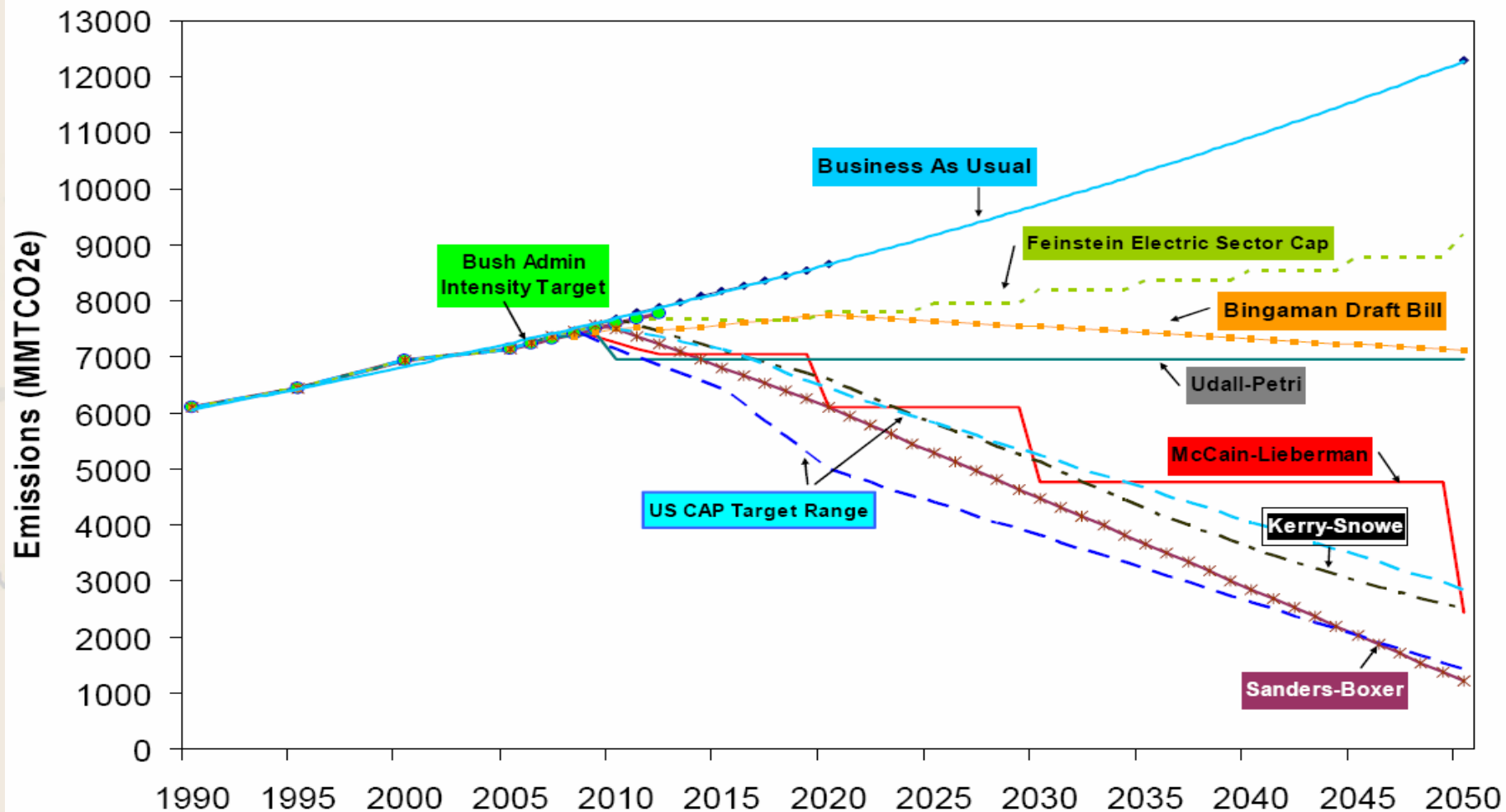


- In most emerging countries, carbon economic intensity has been decreasing since the 1990s.
- China has also followed the trend
- The overheating of the Chinese economy has triggered a new increase in carbon intensity since 2000.



# The US Evolution

CO<sub>2</sub>e Emissions Under Various Proposed Legislation

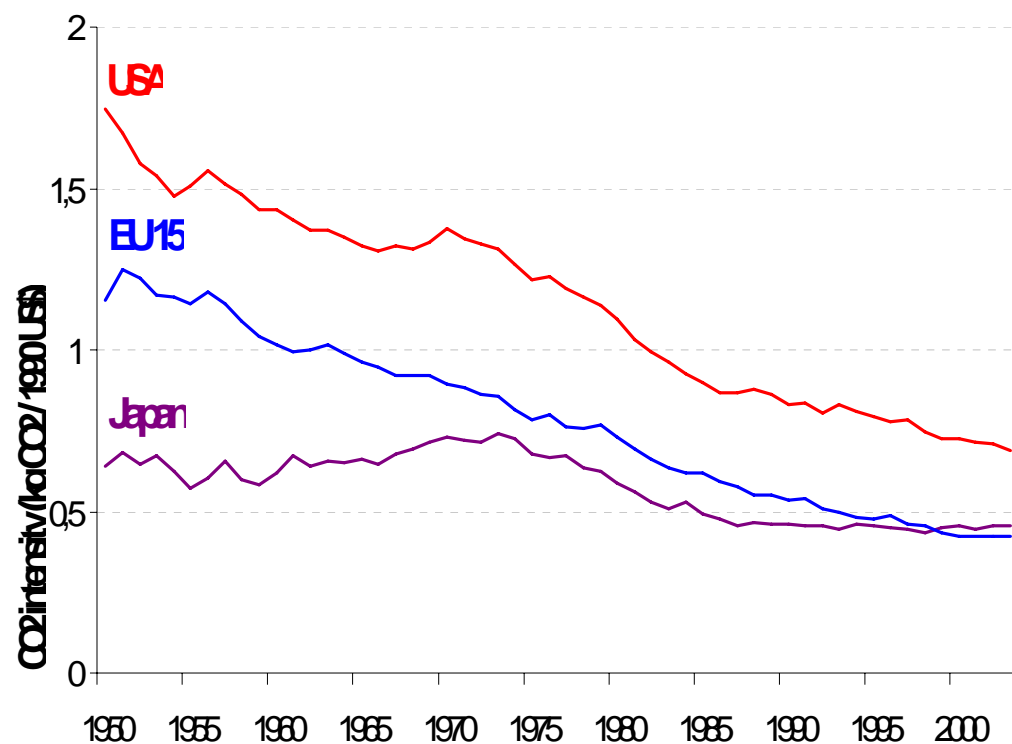




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# A huge carbon emission reduction potential in the US

## Carbon intensity in developed countries



- ✓ For years, Parallel progress in carbon efficiency have been observed in the US and in the EU
- ✓ Today US carbon intensity (CO2 emissions per PIB Unit) is 60% above EU
- ✓ A national cap and trade system in the US would create huge new opportunities of CO2 emission reductions.



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# What will the post-Kyoto world look like ?

- **No return to the free carbon economy prevailing before 2005**
  
- **Three possible scenarios:**
  - ✓ Kyoto agreement is saved: very unlikely
  - ✓ Several carbon markets in the world, without multilateral agreement: possible but not desirable
  - ✓ A new international climate agreement with a strong commitment of industrial countries (US included) and efficient ways to associate emerging countries
  
- **Two important issues:**
  - ✓ Russia harming ability
  - ✓ Difficulty to include the developing countries with grandfathering of allocations



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# How to engage the right transition?

## ■ Two main basis of the world carbon finance in 2012:

- ✓ The EU-ETS
- ✓ The Kyoto international project based credits (JI/CDM)

## ■ What is needed:

- ✓ To make the second period of EU-ETS a success, economically and ecologically
- ✓ Investments in post-2012 carbon assets, especially CERs
  - Too risky for most of private investors
  - Key measure for governments, public and multilateral agencies

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Pavillon d'Armenonville

Thursday July 5 & Friday 6, 2007

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