



# Tackling Climate Change - European Experience

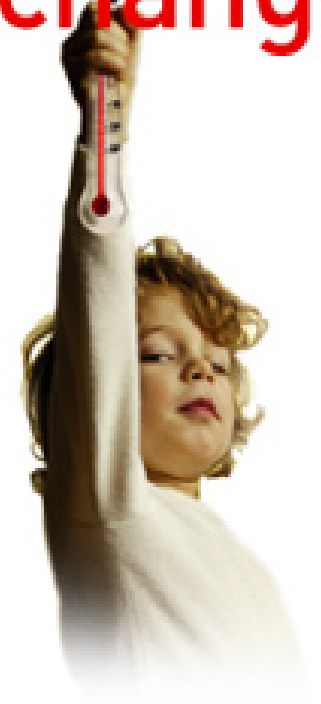
**Vicky Pollard**  
**International Climate Change Unit**  
**Environment Directorate General**  
**European Commission, Brussels**



# Outline

- The global context & where we need to go
- Action now: achieving the EU's Kyoto target in 2008-2012- The broad EU climate policy
- One important tool: EU Emissions Trading Scheme (EU ETS)

get to grips with  
**climate  
change**





# Aim: a comprehensive global agreement post-2012

Outcome of the G8+5, 2 weeks ago:

- A global problem which requires urgent, global solutions
- Commitment to substantial global emissions reductions
- Commitment to deliver a global agreement, including with targets, under the UN.
- Consensus that a global agreement is needed by 2009.
- EU, Japan and Canada targets to cut by greenhouse gas emissions by 50% at least by 2050.

# Projected impacts of climate change

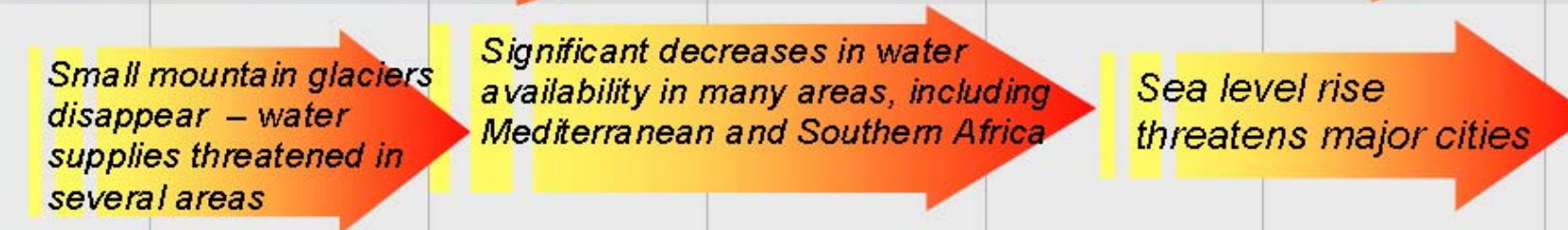
Global temperature change (relative to pre-industrial)

0°C      1°C      2°C      3°C      4°C      5°C

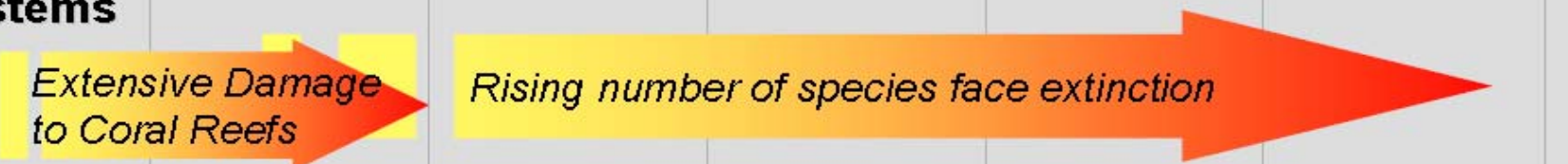
## Food



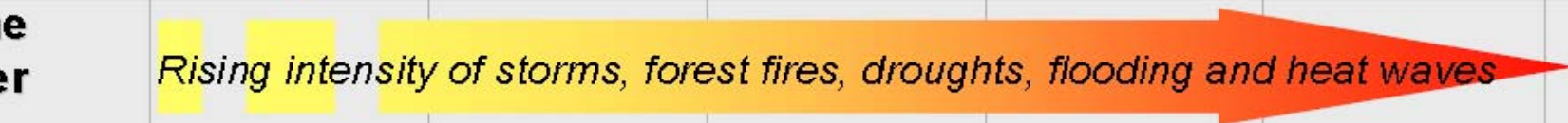
## Water



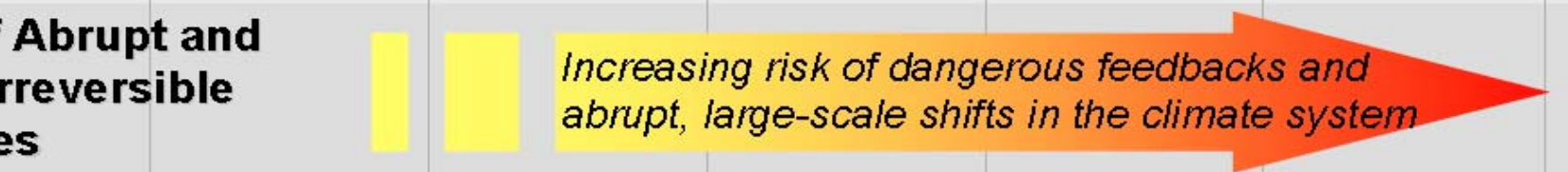
## Ecosystems



## Extreme Weather Events

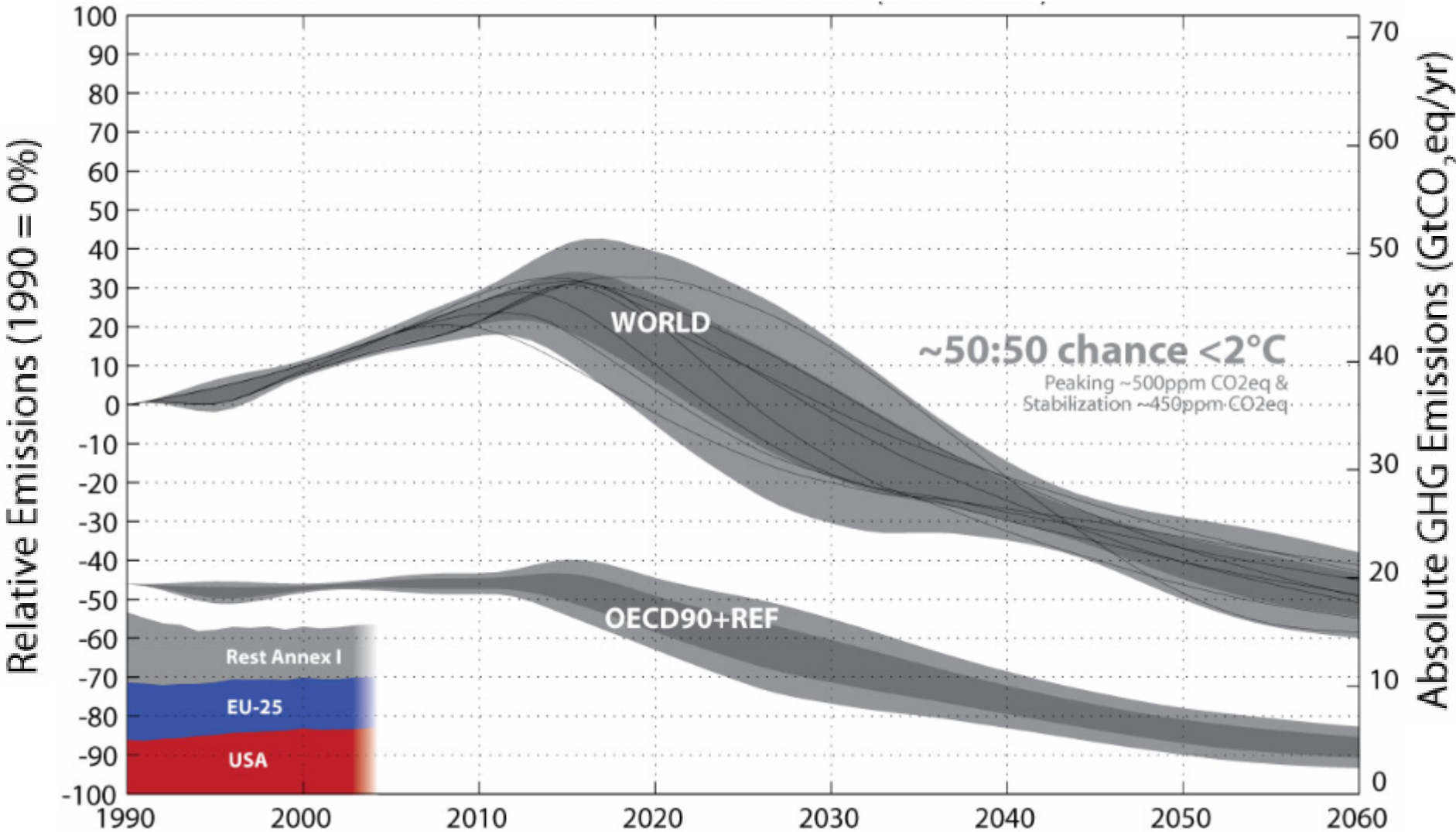


## Risk of Abrupt and Major Irreversible Changes





# Global emissions to peak in 2020 and fall to less than 50% of 1990 if we are to stay within 2 °Celsius



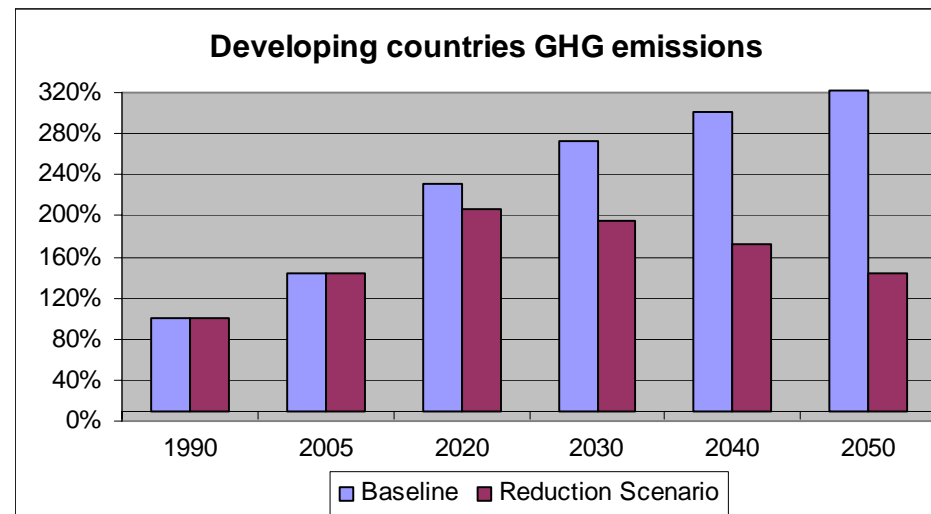
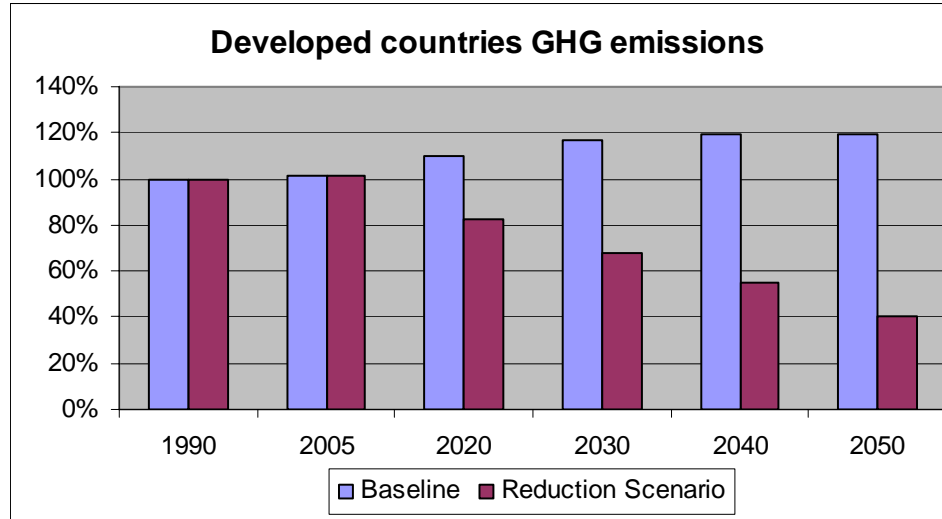
Source: Malte Meinshausen 2006



# EU proposals- future action

## Global Participation

- The 2°C objective:  
Global GHG emissions need to peak around 2020
- EU & Developed countries:  
30% GHG emission reduction target by 2020, compared to 1990 levels
- Developing countries:  
Reduced growth ASAP, absolute reductions after 2020
- Deforestation: halt within two decades and then reverse



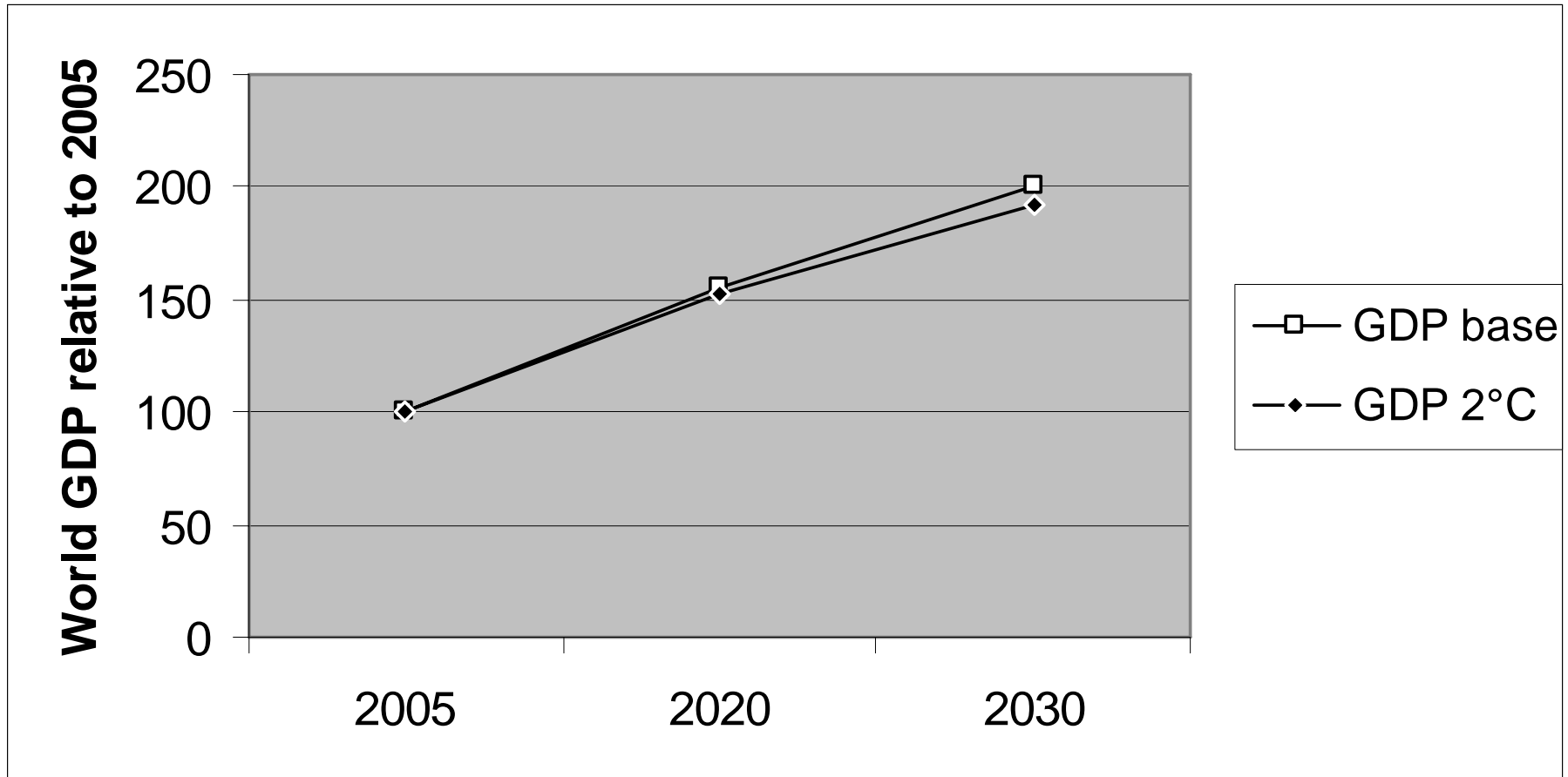


## Proposals backed by tools (bottom up)

- A range of GHG policies including emissions trading
- "An Energy Policy for Europe"- energy efficiency, renewables, CCS
- Development of the Global carbon market



# It is economically affordable





# Benefits and Costs

- “Winning the Battle” & Stern Review: benefits of limiting Climate Change outweigh costs of action
- Costs of inaction: 5-20% of global GDP (Stern Review)
- Costs of global action (2030):
  - Investment costs: 0.5% of global GDP / year
  - Reduce global GDP growth by 0.19% / year  
(Expected global GDP growth of 2.8% / year)
- Co-benefits:
  - Increased energy security
  - Improved competitiveness through innovation
  - Health benefits from reduced air pollution



# Action: meeting the Kyoto target



# EU and the Kyoto Protocol

- EU-15 have a reduction target under the Kyoto Protocol 8%
- “Burden Sharing” agreement: to share the reduction target among the 15 Member States (MS) (Council Decision 2002/358/EC)
- 10 new MS have individual reduction targets of 6- 8% (6% Poland and Hungary, Cyprus and Malta non-Annex I countries)



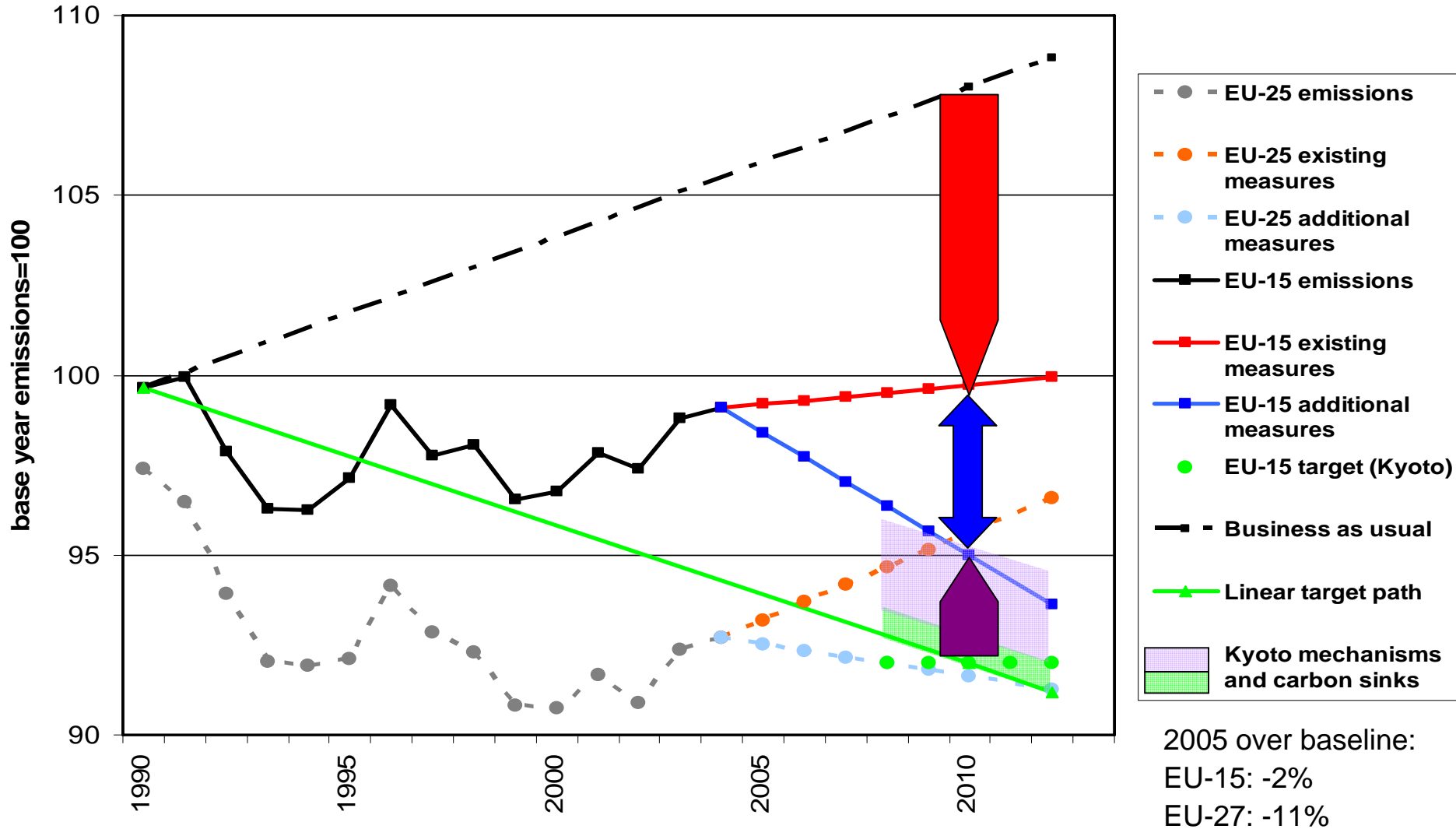
## EU targets under the Kyoto Protocol

### The Bubble:

EU-15 Member State	QELRC commitment (% reduction of base year/period emissions)
Austria	-13
Belgium	-7.5
Denmark	-21
Finland	0
France	0
Germany	-21
Greece	+25
Ireland	+13
Italy	-6.5
Luxembourg	-28
The Netherlands	-6
Portugal	+27
Spain	+15
Sweden	+4
United Kingdom	-12.5
<b>Total EU-15 Commitment: -8%</b>	



# EU progress towards implementing Kyoto





# European Climate Change Programme I

Measures	Reduction potential (Mt CO <sub>2</sub> -eq. p.a.) EU-15, 2010	Entry into force	Starting to deliver
EU emission trading scheme	~ NAP2	2003	2005
Link JI/CDM to emission trading	~ NAP2	2004	2005/2008
F-Gases Regulation and Directive on Mobile Air Conditioning	23	2006	2008
Directive on the promotion of electricity from renewable energy sources	100-125	2001	2003
Directive on the promotion of CHP	65	2004	2006
Directive on energy performance of buildings	35-45	2003	2006
Directive on the promotion of transport bio-fuels	35-40	2003	2005
Directive on the promotion of energy efficiency and energy services	40-55	2003	2006
ACEA voluntary agreement	75-80	1998	1999
Energy labeling directives	20	1992	1993



# European Climate Change Programme - now in 2<sup>nd</sup> Phase & looking beyond

- *ECCP I review*: integration of results in 10 January 2007 Communication “Limiting Global Climate Change to 2°C: The way ahead for 2020 and beyond”
- *Aviation*: Legislative proposal integrating aviation into EU ETS (December 2006)
- *Fuel quality directive*: Legislative proposal (January 2007)
- *CO<sub>2</sub> and Cars*: Communication (February 2007) and legislative proposal (end 2007)

if adopted timely, these proposals will deliver for reaching the EU's Kyoto target

- *Impacts and Adaptation*: Green Paper on Adaptation (May/June 2007)

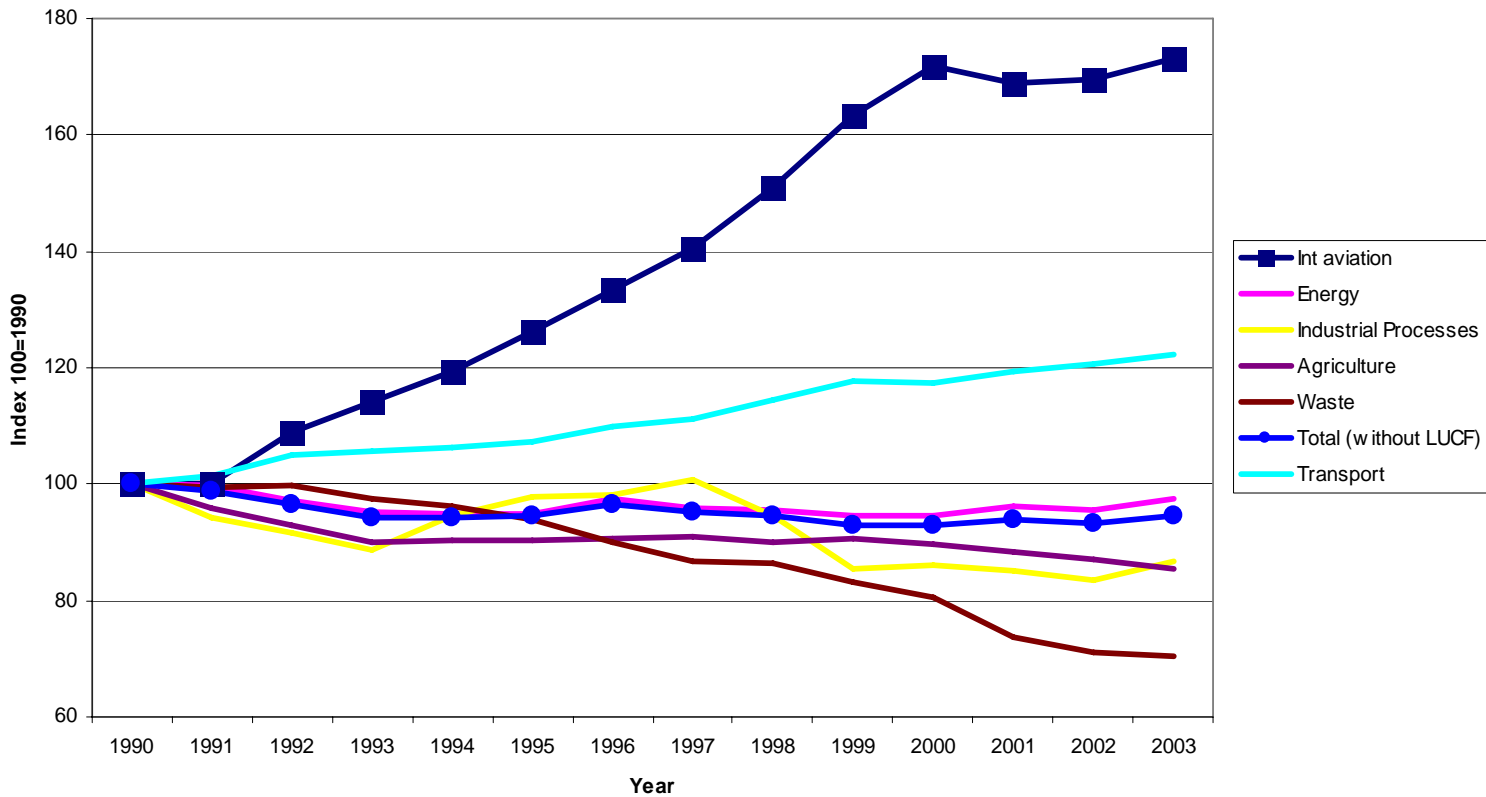
- *Carbon Capture and Geological Storage*: Communication on carbon capture and geological sequestration (2<sup>nd</sup> half 2007)
- *EU ETS review*: Legislative proposal (end 2007)

Post 2012



# Aviation: Rapid growth in GHG emissions

EU GHG emissions by sector as an index of 1990 levels

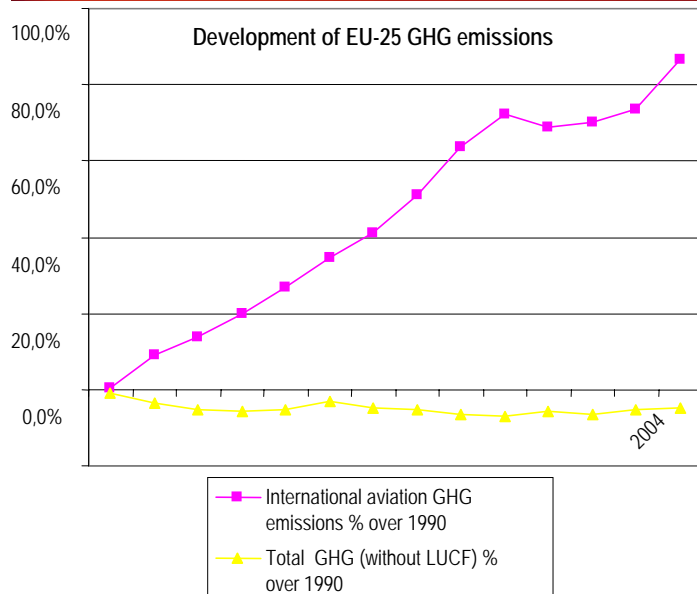




# Proposal: Aviation in the EU ETS



- Fast growing climate change impact
- ICAO endorsement of inclusion in regional emissions trading systems
- Economic efficiency from reductions within sector or elsewhere globally
- Homogenous sector enabling use of benchmarking from outset
- Coverage in EU ETS not to overlap with flights included in other emissions trading systems or equivalent measures





# **EU ETS: Cornerstone of EU Climate Change Policy**



# The Carbon Market: EU ETS

- Applicable since 1 January 2005, for 25 EU countries
- Mandatory caps on absolute emissions from around 10,000 large energy-intensive installations across EU
- Covers around 2 billion tonnes of CO<sub>2</sub>, around 45% of EU's total CO<sub>2</sub> emissions
- A single market for trading allowances. Simple, truly market-based approach for cost-effective emissions reductions
- Credits from emission-reducing projects (JI and CDM) in other countries can be used by companies to meet their requirement
- Linking foreseen with similar emissions trading schemes



# Why is the EU ETS so important?

- **The cornerstone of Europe's strategy to reduce greenhouse gas emissions - cost-effectively**
- **Growth and jobs, better regulation— a market-based instrument for cost-effective environmental policy**
- **Main driver for the global carbon market and engaging others**



# Stages of development of EU ETS

## 2005-7: Start-up period : learning by doing

- Allowances mostly allocated for free (auctioning limited to 5%)
- Robust emissions monitoring and verification
- Efficient electronic registry system
- Good market development
- However, over-allocation, early reductions and oversupply

## 2008-12: First commitment period of Kyoto Protocol

- Auctioning possible up to 10%
- Commission approval given to 22 of 27 national allocation plans by June
- Extension to other GHGs via 'opt-in'
- Linking to Norway and other Kyoto ratifiers
- Harmonised inclusion of aviation

## 2013- Subsequent five-year periods

- No limits on auctioning, common criteria continue to apply
- Review underway: *Building a global carbon market.*

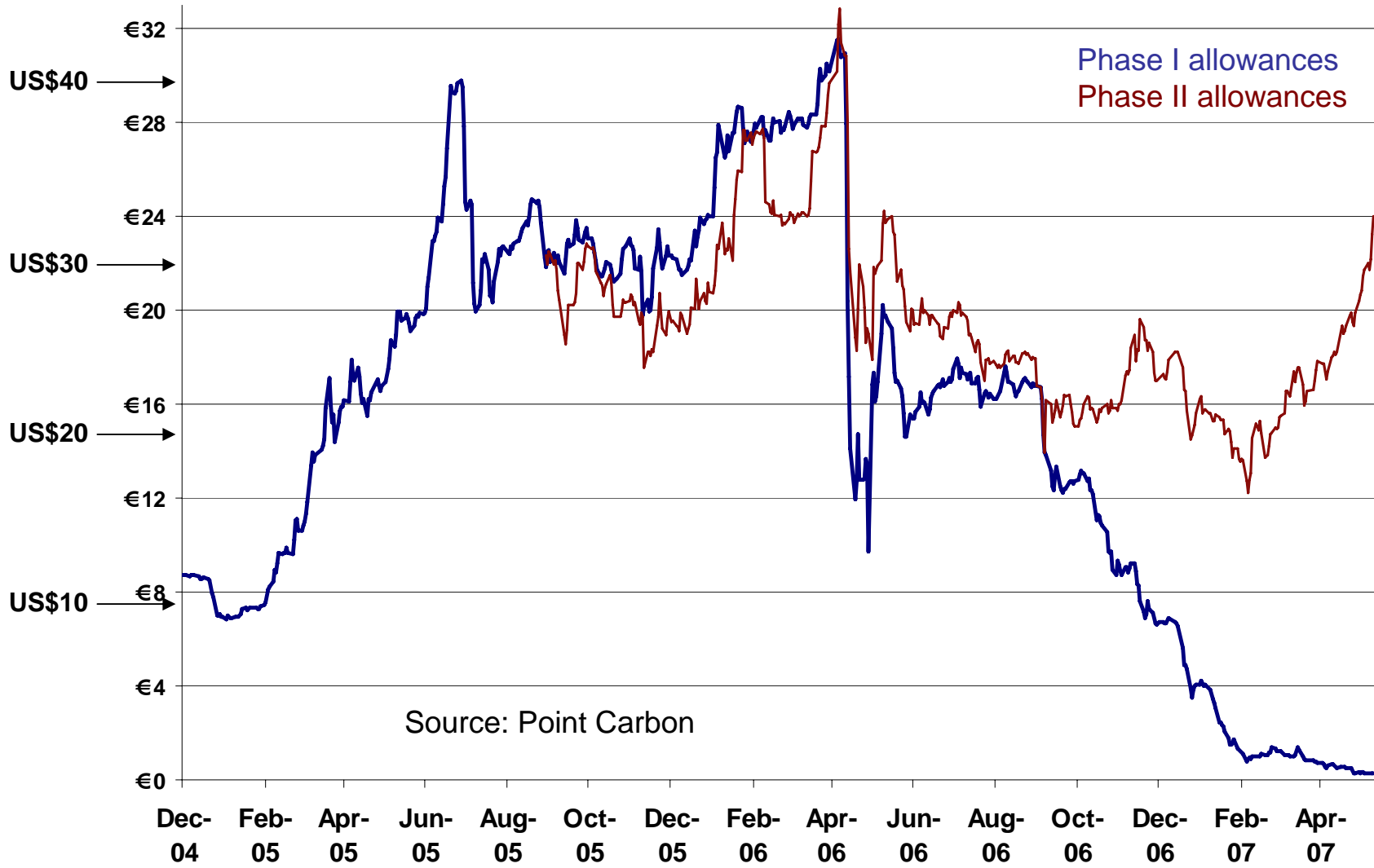


## Start-up period : 2005-7

- Allowances mostly allocated for free (auctioning limited to 5%)
- Robust emissions monitoring and verification
- Well-performing electronic registry system
- Sound market development
- However, insufficiently ambitious levels for emission reductions



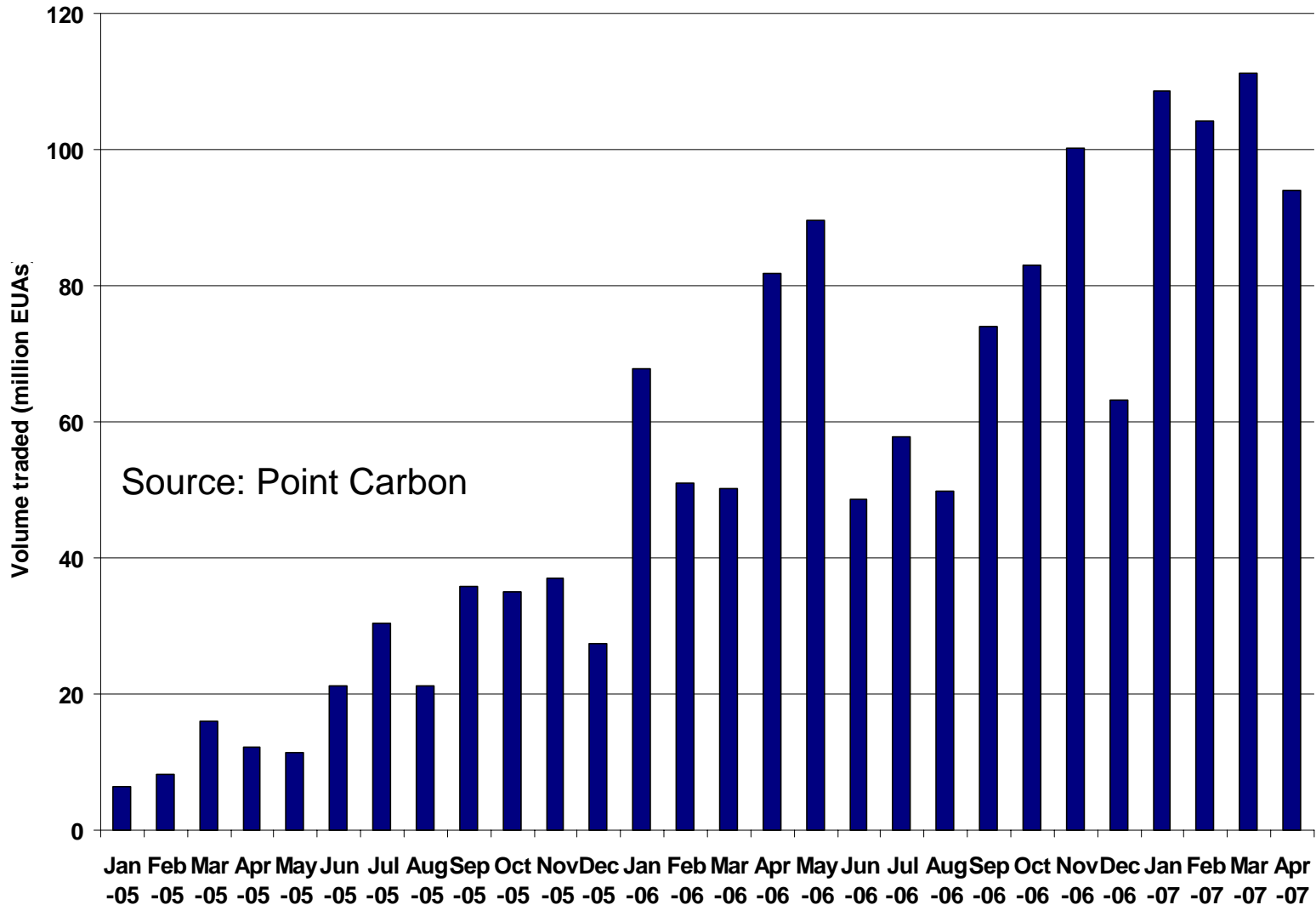
# EU ETS Price Development



Source: Point Carbon



# Volume of allowances traded





## Period 2008-12: differences

- Fewer allowances (21 NAP's)
- More auctioning
- Harmonised scope (combustion installation, chemical crackers)
- Extension of ETS through opt-in (CCS, N<sub>2</sub>O)
- Inclusion of aviation
- Improved handling of market-sensitive data.



# EU ETS - the wider context

- **Europe on track to meet its Kyoto commitments, through EU ETS, other domestic policies, Joint Implementation (JI) and Clean Development Mechanism (CDM)**
- **EU countries investing more than €2.7 billion in JI and CDM in other countries to achieve national GHG reduction commitments**
- **EU ETS providing expected market for JI and CDM of up to 1.3 billion tonnes over 2008-12, in addition to government demand**
- **Emission reductions being made globally and cost-effectively, developing the global carbon market**
- **Demonstrating clean technology in developing countries, supporting sustainable development and engaging developing countries in international action to reduce emissions**



# Member States invest in emission reduction projects abroad, 2008-2012

	Million tonnes of CO <sub>2</sub> eq.
Austria	45.00
Belgium	37.70
Denmark	21.00
Finland	12.00
Ireland	18.03
Italy	95.00
Luxembourg	23.65
Netherlands	101.00
Portugal	29.80
Spain	159.15
Sweden	1.10

> 540 Million tonnes of CO<sub>2</sub>eq  
(2008-2012) ~ €2.7 billion  
excluding demand from  
companies in the EU-ETS

(in red: NAP2 decisions up to 31 January 2007)



# Linking schemes

**38 countries listed in Annex B to Kyoto Protocol**

- **25 already part of EU ETS (+ Cyprus and Malta)**
- **Croatia preparing for participation**
  
- **Norway, Iceland and Liechtenstein - EEA agreement**
  
- **Japan, Canada, Russia, Ukraine, New Zealand, Switzerland, Monaco – linking agreements possible**

**Looking to link to non-Kyoto parties**



# Review of the EU ETS

- Improve the functioning of the scheme based on practical implementation experience
- Changes for post-2012 periods- markets need regulatory stability
- Streamline current design
- Expand coverage – further sectors and gases, beyond aviation
- And linking



# Timeline for ETS review

- Up to June 2007 : Stakeholder consultation
- Autumn 2007: Commission proposal
- 2008/9: Codecision procedure in Council and Parliament
- 1/1/2013: Implementation of reviewed directive



# Timetable

- Intensive stakeholder dialogue launched- reporting July 2007
- Proposals for legislation by end 2007
- Codecision procedure in Council and Parliament 2008/ 2009
- Implementation of reviewed directive: 1<sup>st</sup> January 2003

for full details:

[ec.europa.eu/environment/climat/emission/review\\_en.htm](http://ec.europa.eu/environment/climat/emission/review_en.htm)



# Highlights in the ETS review

- Harmonise cap-setting: EU-wide cap or stricter rules for national caps
- Harmonise allocation: increased (mandatory) use of auctioning, benchmarking in some sectors
- Harmonise new entrants: establishment of an EU-wide reserve or no reserve
- Extended periods for cap-setting and allocation (2020?)
- Harmonised expanded coverage: N<sub>2</sub>O, CH<sub>4</sub>, CCS
- Linking to emerging schemes



# Looking at the lessons from the EU ETS

- Keep overall objective in mind - tackling global climate change
  - Emissions trading schemes should link up for maximum global effectiveness
  - Consideration should be given to ensure compatibility of systems
  - Significant reductions in emissions are needed through mandatory legislative action
  - Focus should be on direct, absolute emissions from across economy
- Keep emissions trading simple
  - Let the market develop without interference (e.g. no safety valves/ price caps)
  - Use private sector for verification
- No need to re-invent the wheel
  - Use of verified data as basis for any free allocation
  - Existing monitoring and reporting guidelines
  - Sound electronic registry software in place for emissions trading
  - EU ETS review and other proposals: evolving design experience



# 2007: an important year

- **G8+5 in Germany, June**
  - **APEC summit, September**
  - **Meeting of major emitters in US**
  - **UN climate conference in Indonesia, December**
- **Aim to launch negotiations on a comprehensive agreement- to be concluded by 2009**

# YOU CONTROL CLIMATE CHANGE.



TURN DOWN. SWITCH OFF. RECYCLE. WALK. **CHANGE**

More info on EU climate policy:

[http://europa.eu.int/comm/environment/climat/home\\_en.htm](http://europa.eu.int/comm/environment/climat/home_en.htm)

Background literature on EU ETS: <http://www.claeys-casteels.com>