



get to grips with
**climate
change**



The EU ETS as a tool of EU climate policy

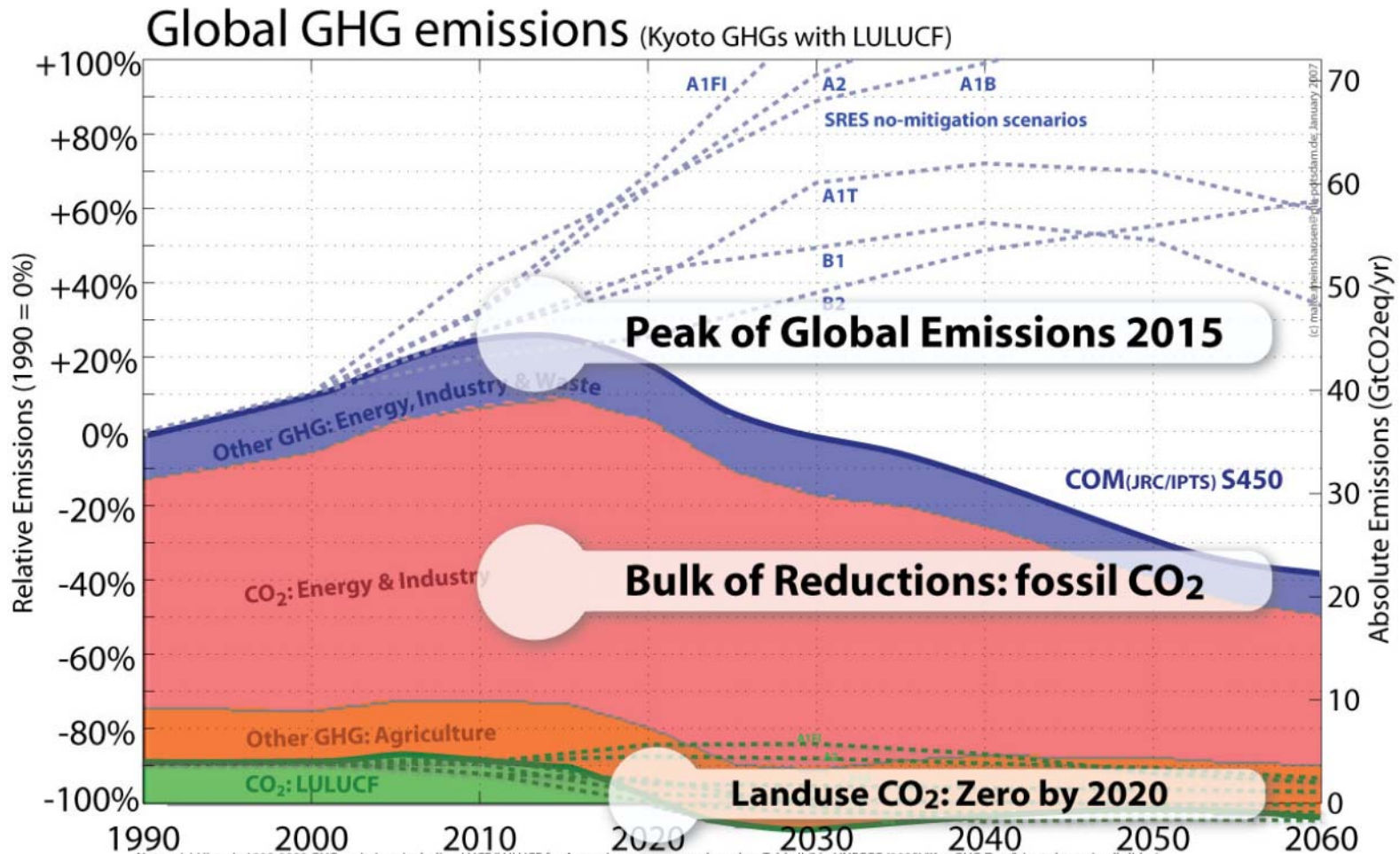
EEAC Annual Conference 2007

12 October 2007, Evora

Marzena Chodor
Market Based Instruments Including
Greenhouse Gas Emission Trading
European Commission
Directorate-General Environment



How global emissions need to develop until 2060?



Notes: (a) Historic 1990-2003 GHG emissions including LUCF/LULUCF for Annex I country groups based on Table II-7 in UNFCCC (2005) "Key GHG Data"; (not shown in all slides)
(b) Shown are various multi-gas FAIR-SIMCaP (den Elzen & Meinshausen, 2006) and EQW pathways (Meinshausen et al. 2006) relative to 1990 for peaking at approximately 500 ppm and stabilizing at 450ppm CO₂eq (grey pathways) and peaking at 475 with subsequent stabilization at 400ppm CO₂eq (green pathways).
(c) Shown are as well SRES scenarios (Nakicenovic and Swart, 2000), emission pathways used in the STERN review (2006), and the scenario presented by EU Commission COM(2007)2, Fig 11, 10th January 2007.
(d) The here shown pathways comprise the SRES country groups OECD90 and REF (Economies in Transition). Note that the absolute GHG emission data is (~15%) higher compared to absolute Annex I emissions reported to the UNFCCC, partially due to non-reported sources, as landuse related emissions, and slight differences in countries (Turkey, some REF).
(e) The probabilities are given to stay below 2°C global-mean warming relative to preindustrial levels, assuming an IPCC consistent climate sensitivity pdf with a 90% confidence that climate sensitivity lies between 1.5°C and 4.5°C (for details see Chapter 28 in Schellnhuber et al. "Avoiding Dangerous Climate Change", 2006)
(f) The light and dark patches show the mean plus / minus one and two standard deviations, respectively, for the set of analysed FAIR-SIMCaP and EQW pathways.
(g) The calculations imply default MAGICC carbon cycle feedbacks, comparable to approximately the mean across the C4MIP studies (Friedlingstein et al. 2005).



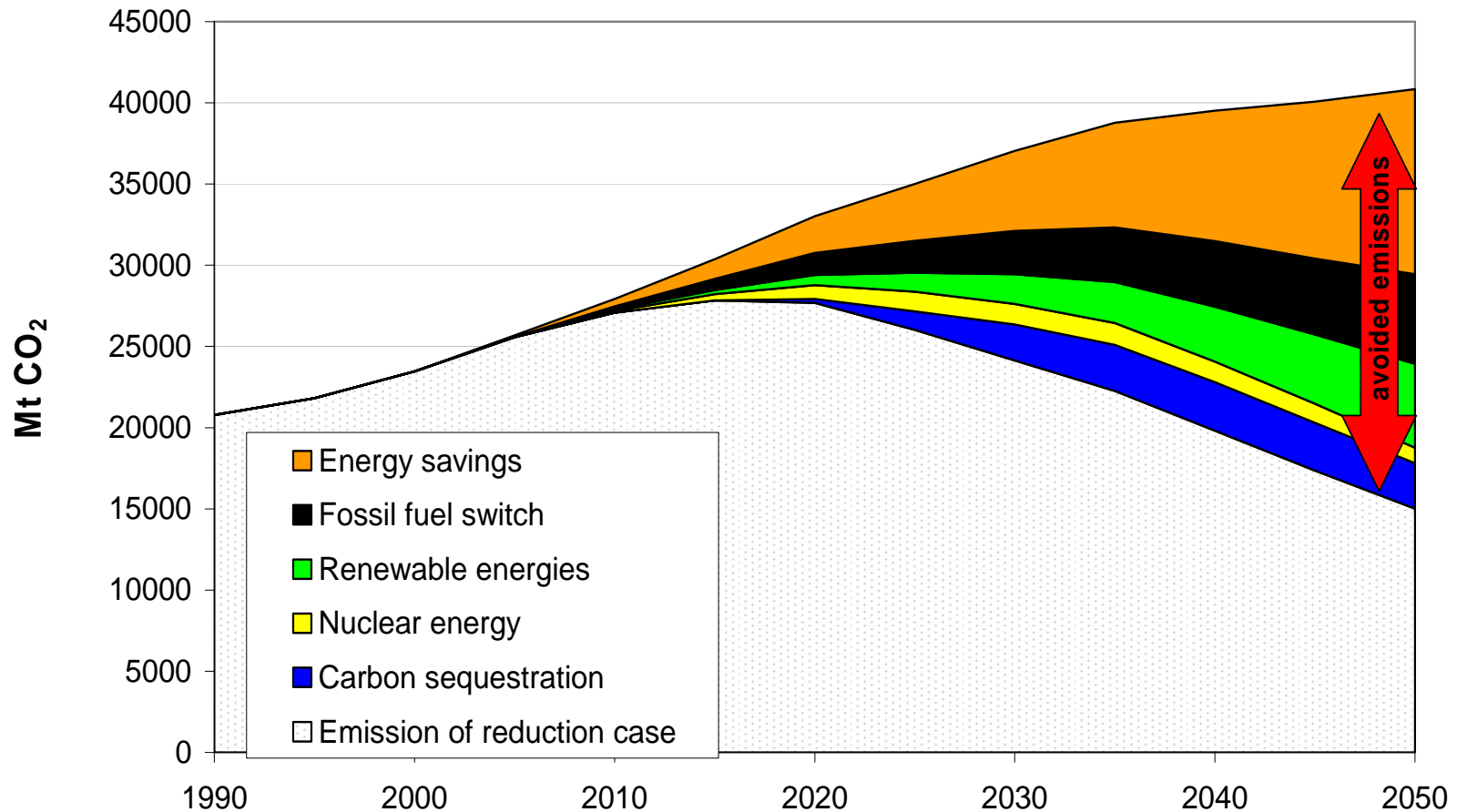
Overall climate change objectives

- Meeting the 2°C objective:
 - G8 commitment to give serious consideration to at least halving global GHG emissions by 2050
 - In international negotiations, GHG reduction target of 30% by 2020 for developed countries (vs. 1990).
 - A firm, independent commitment to achieve 20% GHG reduction by 2020 for EU-27 (vs. 1990)
- Perspective of Kyoto Protocol:
 - 2012 -8% (EU-15)
 - Today -5% (EU-27)
 -1,9% (EU-15)



The EU 2 degrees vision is technically feasible

Technologies that can reduce global CO2 emissions from energy combustion





The EU 2 degrees vision is economically affordable

World GDP
relative to 2005

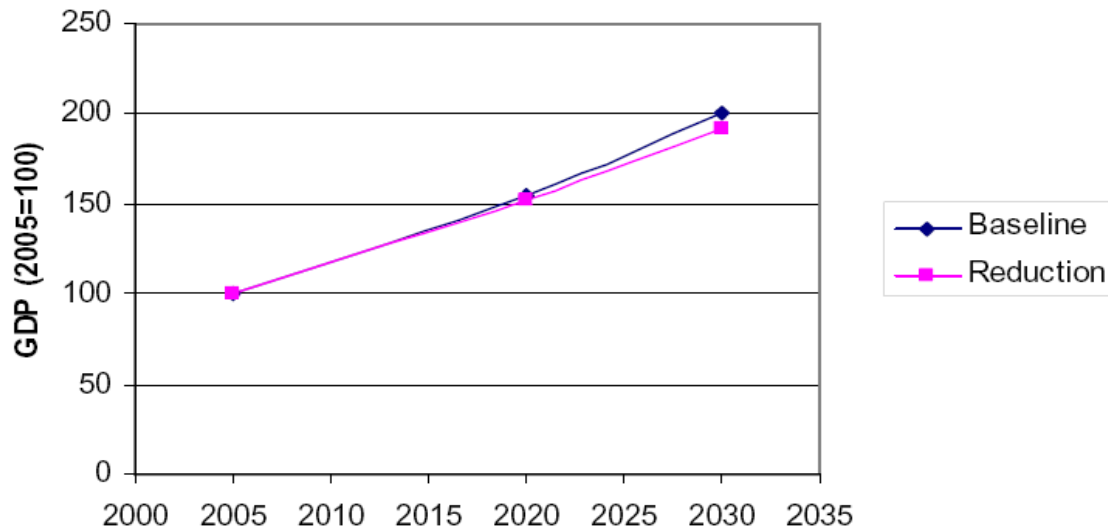


Table SPM.4: Estimated global macro-economic costs in 2030¹⁶ for least-cost trajectories towards different long-term stabilization levels.^{17, 18}

Stabilization levels (ppm CO ₂ -eq)	Median GDP reduction ¹⁹ (%)	Range of GDP reduction ^{19, 20} (%)	Reduction of average annual GDP growth rates (percentage points) ^{19, 21}
590-710	0.2	-0.6 – 1.2	< 0.06
535-590	0.6	0.2 – 2.5	<0.1
445-535 ²²	Not available	< 3	< 0.12



What is needed:

- integrated policies and measures for RE, ETS, energy efficiency
- coordinated effort sharing
- flexibility in national fulfilment of targets
- revised & stronger ETS



A range of instruments available

Demand pull instruments (EU directives setting targets and minimum requirements, performance regulations, pricing policies (EU ETS), energy labelling, standards policy, voluntary agreements of industry, feed-in tariffs, quotas, obligations, green and white certificates, public procurement policies, trade agreements etc.)

Technology push instruments (EU Research Framework Programme, European Technology Platforms, Structural Funds for innovation, national research programmes etc.)

Integrated innovation instruments (Competitiveness and Innovation Programme, in particular the Intelligent Energy Europe programme)



**EU Emissions Trading Scheme has
a crucial role to play in the EU
integrated climate change and
energy strategy**



EU ETS

- An essential instrument to promote reductions of GHGs emissions in **a cost-effective and economically efficient manner.**
- It has ability to send clear and strong signals in the form of incentives **to stimulate investments in low-carbon technologies.**
- The EU is committed **to a global carbon market** as a key instrument for tackling climate change.



EU ETS – stages of development

- **2005-7: Start-up period (25 countries)**
 - Mandatory cap on absolute emissions across more than 10 000 large energy-intensive installations
 - It covers around 2 billion tones of CO₂ emissions (half of EU's total emissions)
 - Market volume in 2006: 18 bn Euro
 - Allowances mostly allocated for free (auctioning limited to 5%)
 - Robust emissions monitoring and verification and well-performing electronic registry system
 - Sound market development
 - However, insufficiently ambitious levels for emission reductions



EU ETS architecture 2008-12

- Commission (conditional) approval given to most national allocation plans
- Fair and equal approach taken to all MSs
- Fine-tuning and improvement of the infrastructure:
 - increased harmonisation of the coverage of combustion installations (e.g. chemical crackers)
 - revised and improved monitoring and reporting rules
 - revised registry regulation
- Opt-in of additional areas before 2012:
 - France and Netherlands applying to include installations in the fertiliser industry in respect of their N₂O emissions
 - UK applying to include carbon capture and storage
- Aviation to be integrated into the EU ETS from 2011 – Commission proposal of December 2006



EU ETS review

- The review process is the opportunity to decide on the future strategic direction for the EU ETS
- **Commission Communication COM(2006)676: *Building a global carbon market***
- **Improving the functioning of the scheme from 2013 onwards, based on practical implementation and experience**
- **Streamlining the design of the EU ETS**
 - More harmonised approach to cap-setting and allocation
 - More predictability and certainty
 - Harmonisation of accreditation and verification
 - Expanding coverage in a harmonised manner
- **Expanding coverage – further sectors and gases**
- **Maintaining simplicity** - vital for the EU ETS to fulfil its promise and provide blueprint for other systems



EU ETS review process:

- Four two-day meetings with the European Climate Change Programme (ECCP) group on emission trading
- Stakeholders invited to submit their views and share their practical experience with the Commission
- Impact assessment
- Draft proposal by 5 December 2007



Review of the scope

- **More consistent application of current scope:**

- Clarity on specific types of combustion installations
- Cost-effective contribution from small installations

- **Expansion of the scope:**

- Inclusion of other greenhouse gases
- Inclusion of sectors, e.g.: coal mining, aluminium production, fertilisers and ammonia production, production of adipic acid, petrochemical processes, gypsum production, stone wool production
- Inclusion of road transport, land use, forestry, maritime?
- Harmonised unilateral inclusion of additional activities (opt-in)
- Carbon dioxide capture and geological storage
- Community-level emission reduction projects



Robust compliance and enforcement

- **Monitoring and reporting:**
 - **Rules to be set out in a Regulation?**
 - **Means to ensure EU-wide minimum standards of application in practice of monitoring and reporting**
- **Verification**
 - **Ensure improved stringency and oversight of verification and accreditation process in Member States, including possible Community-level accreditation**
 - **Internal market aspects**
 - **EU-wide Regulation for verification and accreditation?**
- **Compliance provisions**
 - **Enforcement of verification process**
 - **Harmonisation of existing compliance provisions**



Further harmonisation and increased predictability

- **Cap setting**
 - **EU wide cap in line with overall commitment to at least 20% reduction by 2020**
 - **Extension of allocation certainty to 2020 and beyond**
- **Allocation of allowances to sectors and installations**
 - **Harmonised allocation methodologies**
 - **Increased auctioning, benchmarking**
 - **Sector specific allocation rules?**
 - **Pass-through of allowance prices**
- **New entrants and closures**
 - **Harmonised approach**



Linking up globally to tackle climate change

- **Relationship of EU ETS to third country schemes**
 - **Enable linking EU ETS with all mandatory third country emission trading systems capping absolute emissions**
 - **Extension to similar arrangements with regions in third countries**
- **Involvement of developing countries and countries in economic transition in emissions abatement efforts**
 - **Further harmonisation of qualitative and quantitative provisions for the use of JI/CDM credits**
 - **Appropriate provisions for continued recognition post 2012 of JI/CDM credits from pre-2012 projects**
 - **Community-level arrangements for authorisation of projects**
 - **Maintaining flexibility to accommodate future developments internationally**



EU ETS concluding thoughts

- The EU and the world have entered a new energy era and “business as usual” is no longer an option.
- Creating the framework conditions and incentives for the development and take-up of energy technologies is a matter of public policy and a whole range of instruments is available.
- Europe leads the way in turning the concept of market-based climate policy into reality and a continent-wide carbon price signal has emerged
- The EU ETS is a key step in an evolution to a global carbon market



More on how to...



<http://ec.europa.eu/environment>