



Climate Change: Activities to date, Relations with 3rd countries, Challenges ahead

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Outline

- **EU Climate Change Policy**
 - European Climate Change Programme (ECCP)
 - EU progress thus far
 - The EU Emissions Trading Scheme
- **Relations with 3rd countries**
- **Challenges ahead**



EU Climate Policy



ECCP I: progress so far

(European Climate Change Programme)

Measure	Reduction potential (Mt CO ₂ -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



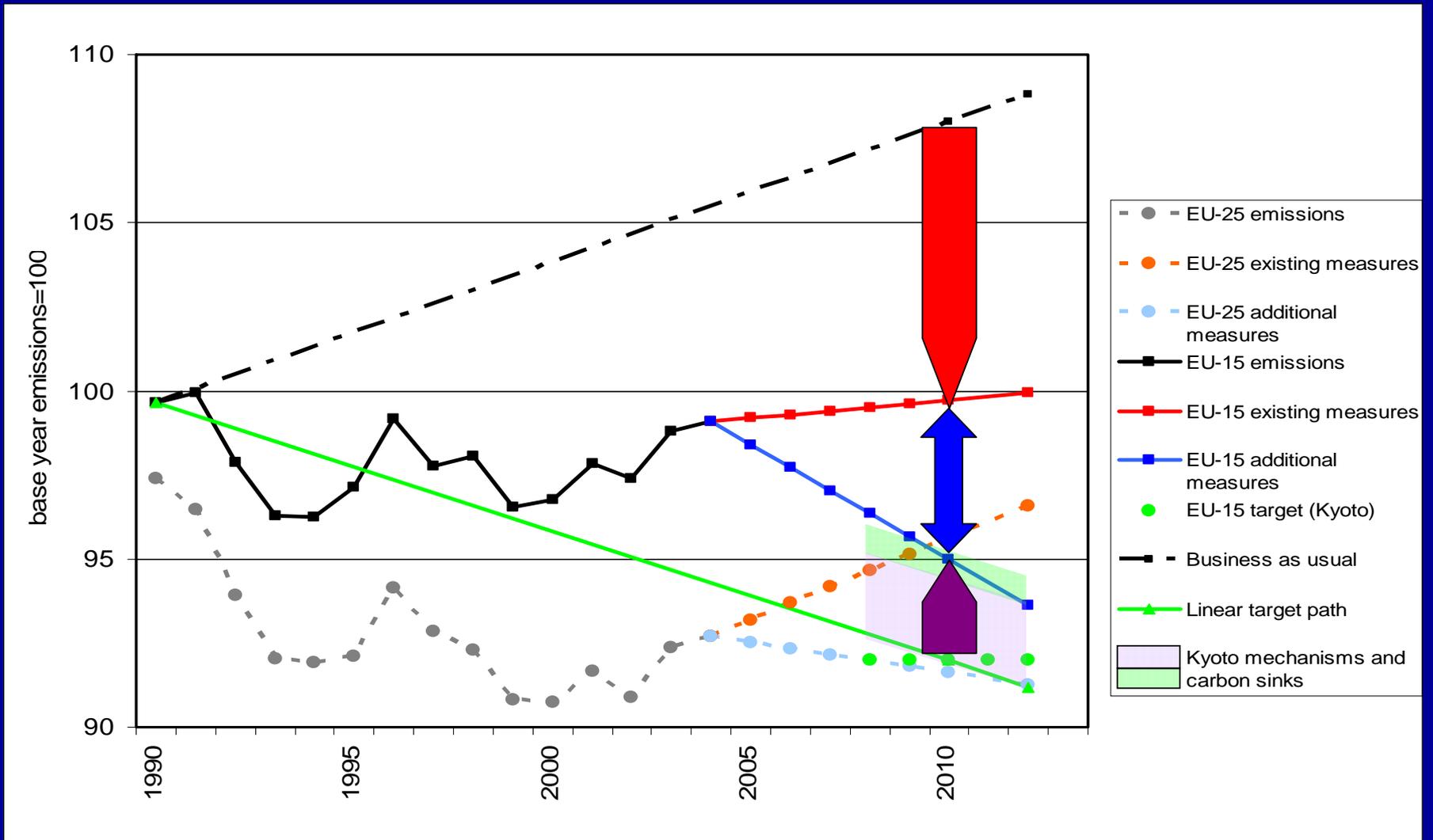
ECCP II: deliverables

(European Climate Change Programme)

- ***ECCP I review: integration of results in follow-up to the “Winning the Battle” Communication (end 2006)***
- ***Impacts and Adaptation: Green Paper on Adaptation (early 2002)***
- ***Carbon Capture and Geological Storage: Communication on carbon capture and geological sequestration (2nd half 2007)***
- ***Aviation: Legislative proposal integrating aviation into EU ETS (December 2006)***
- ***CO2 and Cars: Communication (early 2007)***



Kyoto Protocol: EU Progress





Use of Kyoto Mechanisms: Planned purchases by Member States (in addition to company use! – NAPII figures in RED)

	Million tonnes of CO ₂ eq.
Austria	35.00
Belgium	42.00
Denmark	22.50
Finland	At least 3.0
Ireland	18.035
Italy	198.00
Luxembourg	23.65
Netherlands	100.00
Spain	100.00
Sweden	At least 5.0

Almost 520 Million tonnes of CO₂eq (2008-2012)
Allocated resources thus far: 2.7 billion €



EU Emissions Trading Scheme (EU ETS)

- **>10,000 installations monitoring & reporting CO2 emissions in 25 (soon 27) EU Member States**
- **Climate Change leads to Culture change**
- **Least cost solution - promoting energy efficiency/operational changes, take-up and improvement of clean technologies**
- **Contributes towards Kyoto targets**
- **World's largest emissions trading scheme & nucleus of international carbon market**



Next steps within EU ETS

- **Assessment of National Allocation Plans for second period (2008-12)**

(10 plans assessed, 7 submitted)

http://ec.europa.eu/environment/climat/2nd_phase_ep.htm

- **Aviation into the EU ETS (Dec 06)**

- **EU ETS Review under ECCP**

- **Carbon Capture and Storage**

- **Amendment of the EU ETS (2nd half 2007), to enter into force before 2012**

Volumes & Values 2005:

- Total: 799 Mt, €9.4 billion
- EU ETS: 362 Mt, €7.2 billion
- CDM: 397 Mt, €1.9 billion
- JI & other: 36 Mt, €147 million

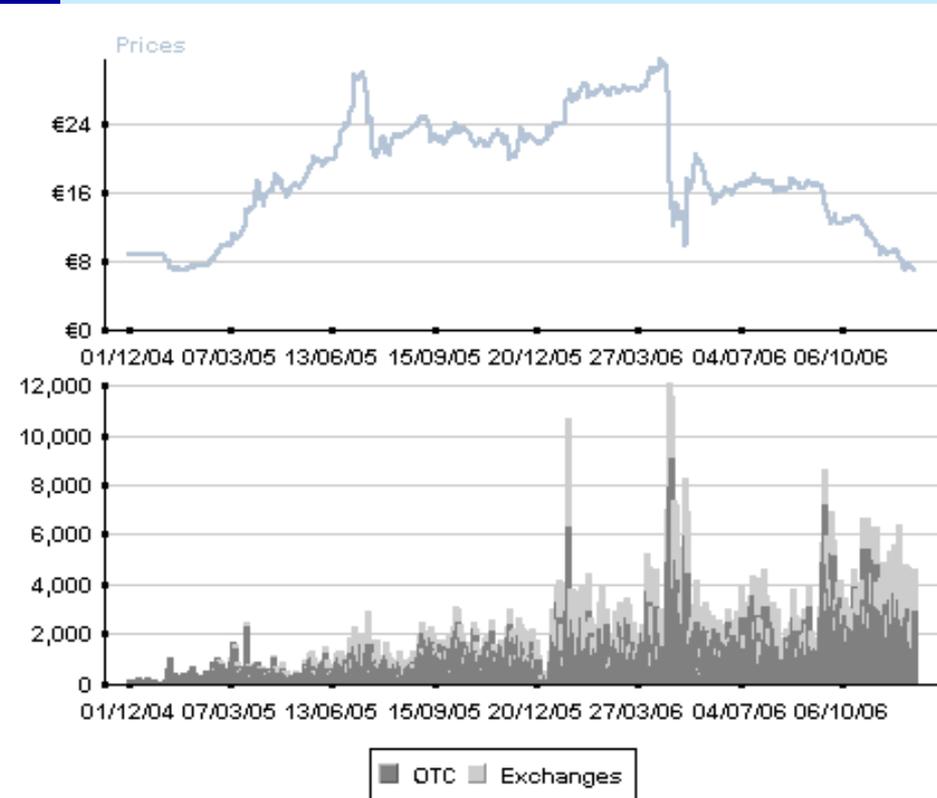


Volumes & Values 1st half 06:

- Total: 684 Mt, €12 billion
- EU ETS: 440 Mt, €9.9 billion
- CDM: 193 Mt, €1.5 billion
- JI & other: 48 Mt, €304 million

Source: Point Carbon

Global Carbon Market and the EU ETS Volumes and Values





The Global Carbon Market

EU ETS value:

2.2 billion tonnes *

€7/tonne

= €15.4 Billion/year

CDM Market Value:

106 million tonnes *

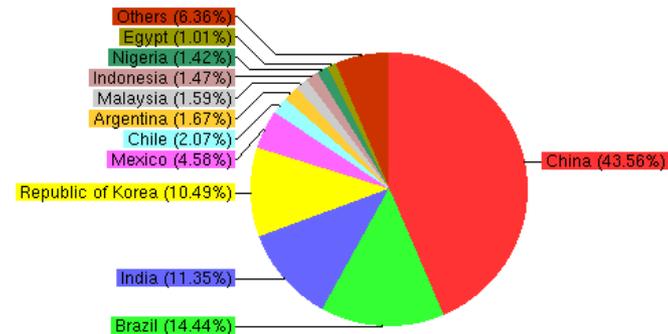
€10/tonne

= €1.06 Billion/year

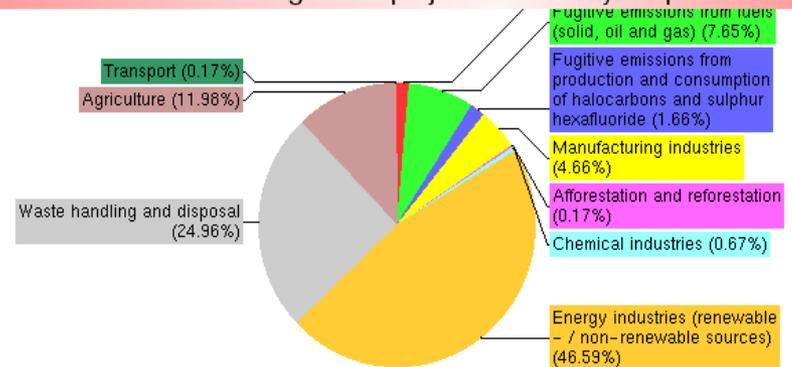
Adaptation Fund:

2% * CDM = €21.2 Million/year

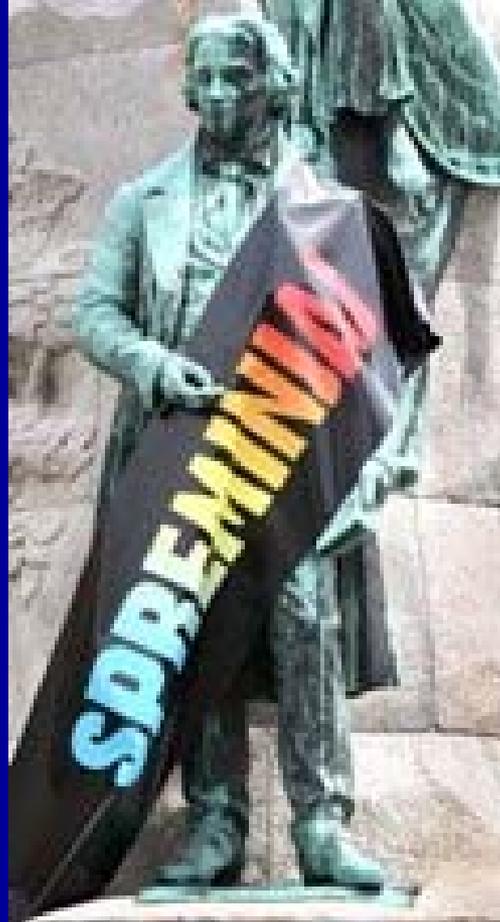
Expected average annual CERs from registered projects by host party. Total: 105,694,958



Distribution of registered project activities by scope



<http://cdm.unfccc.int> (c) 11.12.2006 18:50

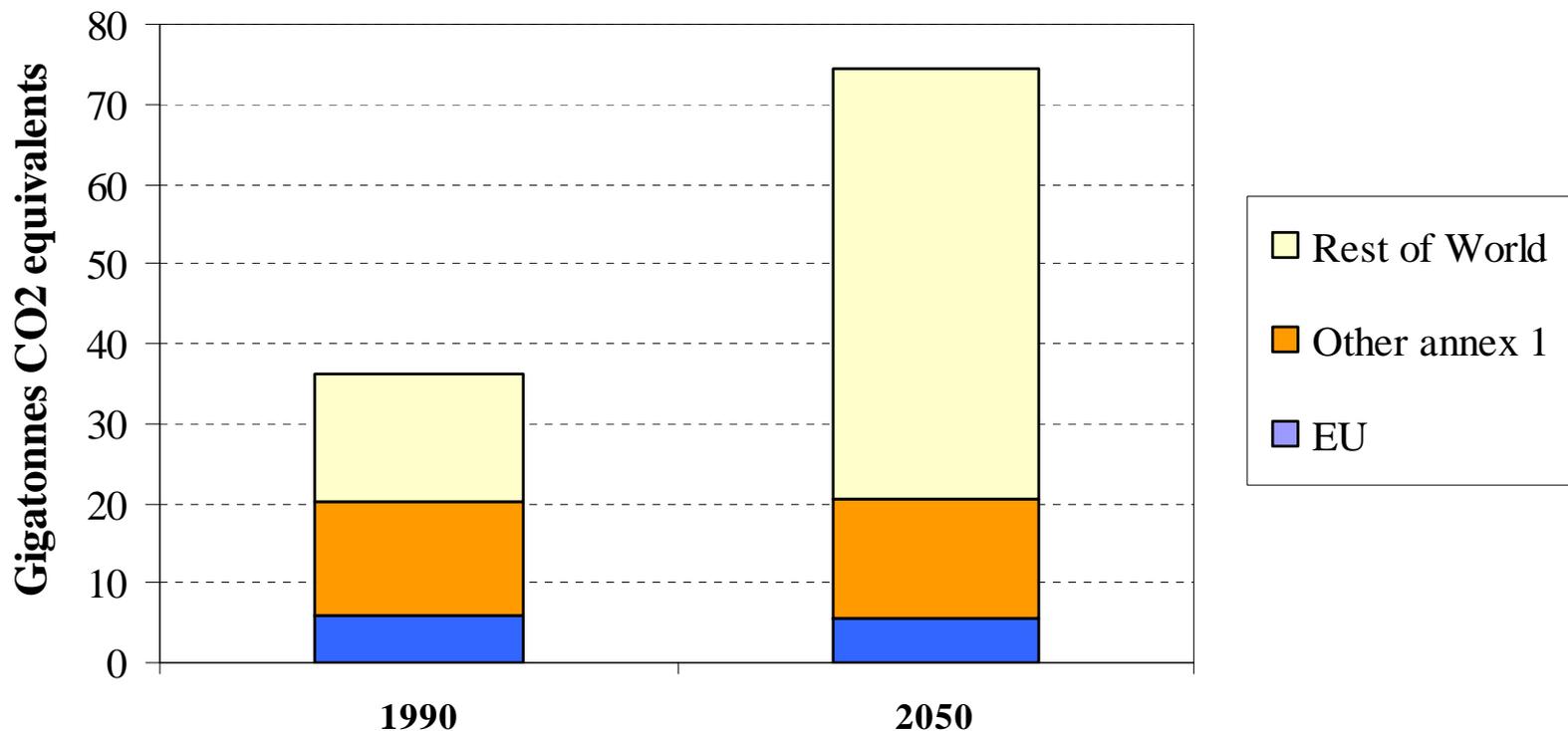


Cooperation with 3rd countries



The EU cannot do it alone

Figure 1: Projected development of greenhouse gas emissions in different regions of the world



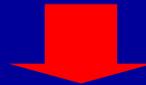
Source: Greenhouse gas reduction pathways in the UNFCCC process up to 2025, CNRS/LEPII-EPE, RIVM/MNP, ICCS-NTUA, CES-KUL (2003).



Winning the Battle Against Global Climate Change.... Concrete steps:

- **Commission Communication “Winning the Battle Against Global Climate Change”, February 2005**
- **Eur. Council Dec 2005 & Env. Council March 2006**

Stronger co-operation with 3rd countries



Focus so far on:

Russia, India, China

Regional (ACP, ASEM, ASEAN, LAC, OPEC, GCC)

Preparations for South Africa, Brazil, Korea and US



Climate Change in the EU's development portfolio

- **EU is the world's largest donor:**
 - Almost half of global ODA, > €30 billion in 2003
- **EU Sustainable Development Strategy (June 06):**
 - Double volume of aid to 0.7% of GNI in 2015 (intermediate target of 0.56% in 2010)
- **EU Action Plan for climate change in the context of development cooperation**
- **EU contribution to Bonn Commitment to deliver US\$ 410 million/year in climate change funding by 2005**

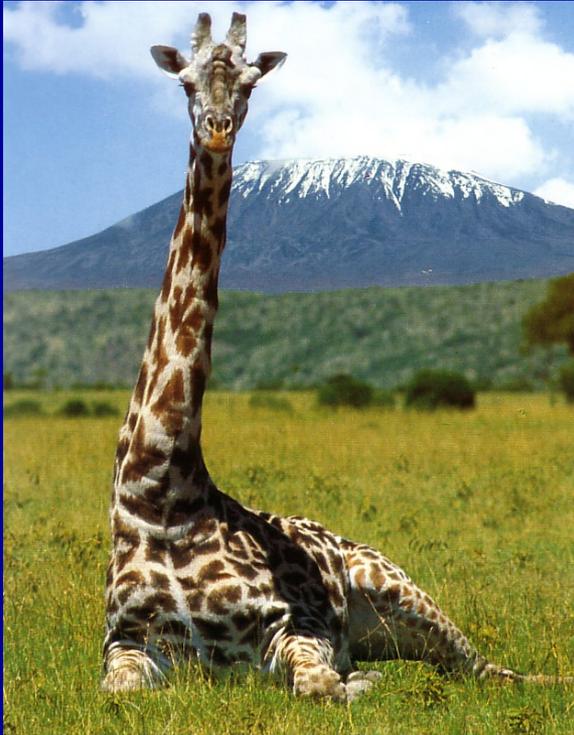


Climate Change in the EU's research portfolio

- **7th Framework Programme for Research**
- **Third country participation encouraged:**
 - **Total FP-7 budget: €32.37 billion**
 - **Energy: €2.30 billion**
 - **Environment (incl. climate change): €1.90 billion**
 - **Transport: €4.18 billion**



Complementing carbon finance: The Global Energy Efficiency and Renewable Energy Fund (GEEREF)



- **Launched in early Oct 2006**
- **EU initial contribution of € 80 million over 4 years risk capital for local private sector**
- **Mobilise between € 300 million – € 1 billion commercial capital**
- **Potential to complement carbon finance**



EU & 3rd Countries: Cooperation Initiatives

Ongoing initiatives

- Green Diplomacy Network – Demarche before every major climate change conference
- Asia Pro Eco (2002-2007)
- JREC (Johannesburg Renewable Energy Coalition) (2002-) → GEEREF
- REEEP (Renewable Energy and Energy Efficiency Partnership)
- EU-Russia
- EU-India Initiative on Clean Development and Climate Change (Sept 2005)
- EU-China Partnership on Climate Change (Sept 2005)
- European Commission member Carbon Sequestration Leadership Forum (CSLF) and International Partnership for a Hydrogen Economy (IPHE)

New developments:

- EU - Latin America (May 2006)
- EU - African Caribbean & Pacific (ACP) (June 2006)
- EU - OPEC & EU-GCC
- EU - Brazil
- EU - US high level dialogue
- EU - South Korea: policy dialogue on climate change (8 Sept 06)
- ASEM 6: cooperation on climate change (10-11 Sept 06)



EU - African, Caribbean and Pacific Group of States

- **ACP- EU Energy Facility (June 2006)**
 - €220 million ACP - EU energy facility, call opened in June 2006 (financing delivery of modern energy services to rural areas of Sub-Saharan Africa, energy efficiency and renewable energy in Caribbean and Pacific Island States)
- **ACP-EU Council of Ministers (June 2006):**
 - Declaration on Climate Change and Development
 - Agreement on 10th European Development Fund (€24 billion, 2008-2013)



India-EU Strategic Partnership (Sept 05)

● **EU-India Initiative on Climate Change**

- **Focus on: clean technology cooperation, CDM, adaptation and policy dialogue**
- **Framework, steering specific cooperation activities of Commission and Member States**
 - EU-India Workshop on the CDM, November 2005
 - EU-India Workshop on Vulnerability and Adaptation to Climate Variability and Change, December 2006

● **EU-India Energy Cooperation**

- **1st EU-India Industrial Conference On Energy, New Delhi, Apr 2006**
- **Energy Panel with working groups:**
 - Energy efficiency and renewable energies
 - Coal and clean coal conversion technologies
 - Fusion energy including India's membership in ITER.



Cooperation with China

- **EU-China Energy Conference (since 1996)**
- **EU-China High Level Working Group on Energy**
 - **EU-China Action Plan on Clean Coal Technologies (March 2005)**
 - **EU-China Action Plan on Energy Efficiency and Renewable Energies (March 2005)**
- **EU-China High Level Dialogue on Energy and Transport Strategies (2005)**
- **EU-China Partnership on Climate Change (2005)**



EU-China Partnership on Climate Change (Sept 05)

Partnership on climate change:

- Policy dialogue
- Low-carbon technologies
- Adaptation
 - EU-China Workshop on Vulnerability and Adaptation (Sept 06)
- Market-based mechanisms
 - Asia Carbon Expo, Beijing (Oct 06)

Key results:

- EIB-funded €500 million financing facility: investment projects in China that mitigate climate change in support of the Climate Change Partnership (under development)
- “Near Zero Emissions Coal”, construct plant by 2014
 - Phase 1: ~ € 10M, MoUs signed, kick-off conference (July 06)



EU-OPEC & EU-Gulf Cooperation Council

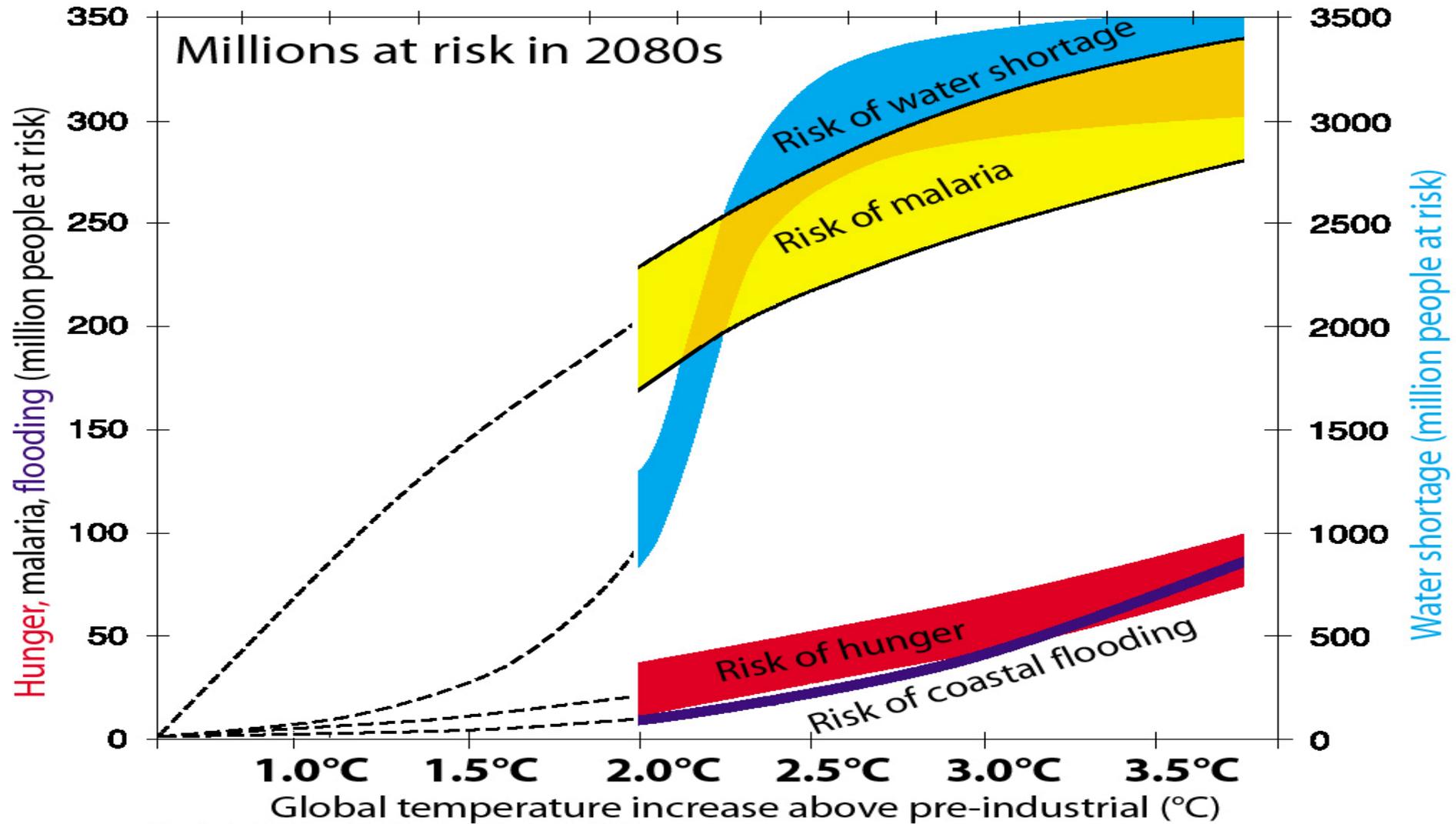
- **EU-OPEC Energy Dialogue (since 2005)**
 - Establish EU-OPEC Energy Technology Centre?
 - Joint Conference on Carbon Capture and Storage (Sept 06)
 - Round Table on Energy Policies (Nov 2006)(focussing on policies adopted or envisaged relating to energy, environment and energy transportation)
- **EU-GCC working group on environment**
 - Expert meeting on climate change (22 Jan 07)



Challenges Ahead



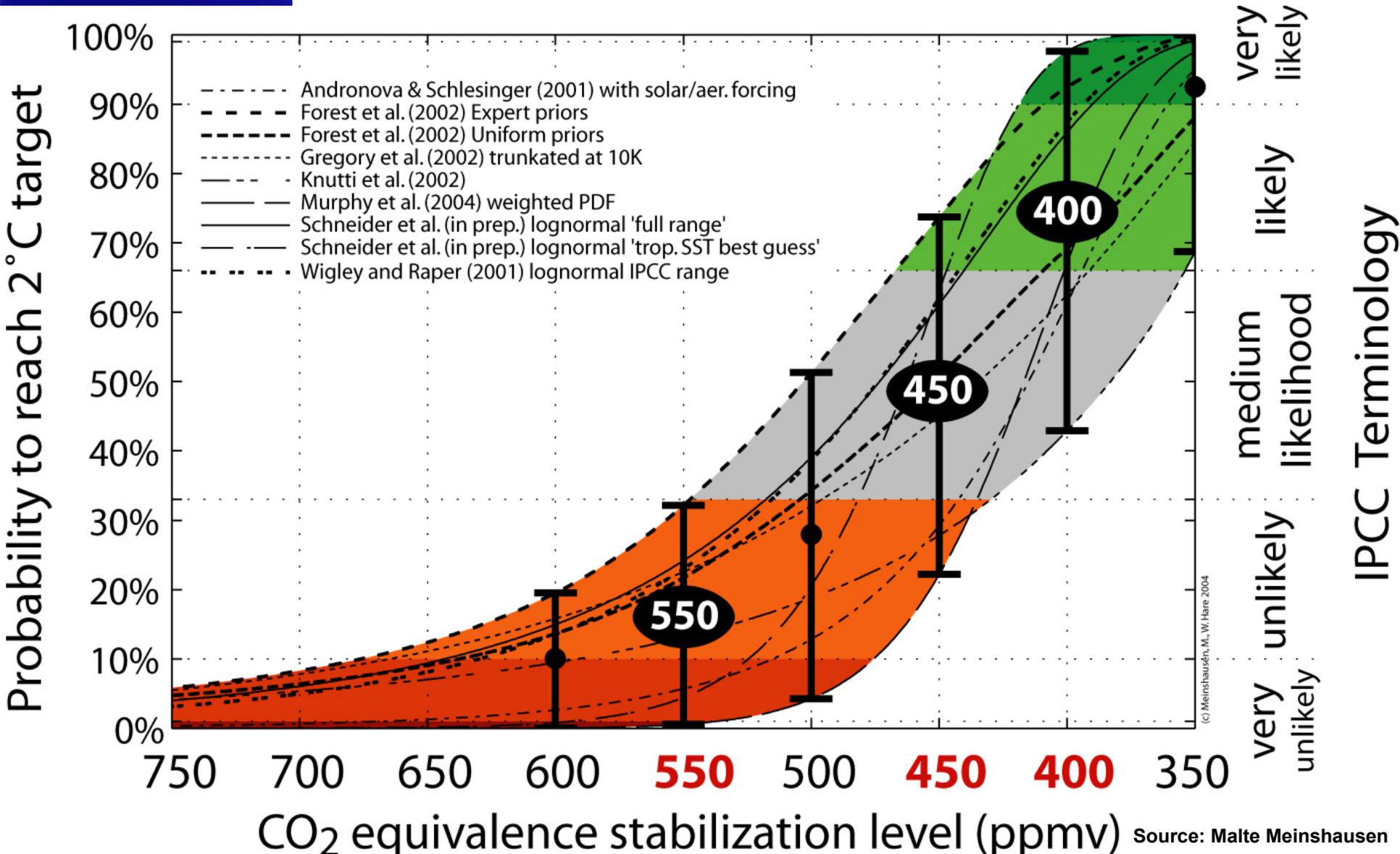
Millions at risk...

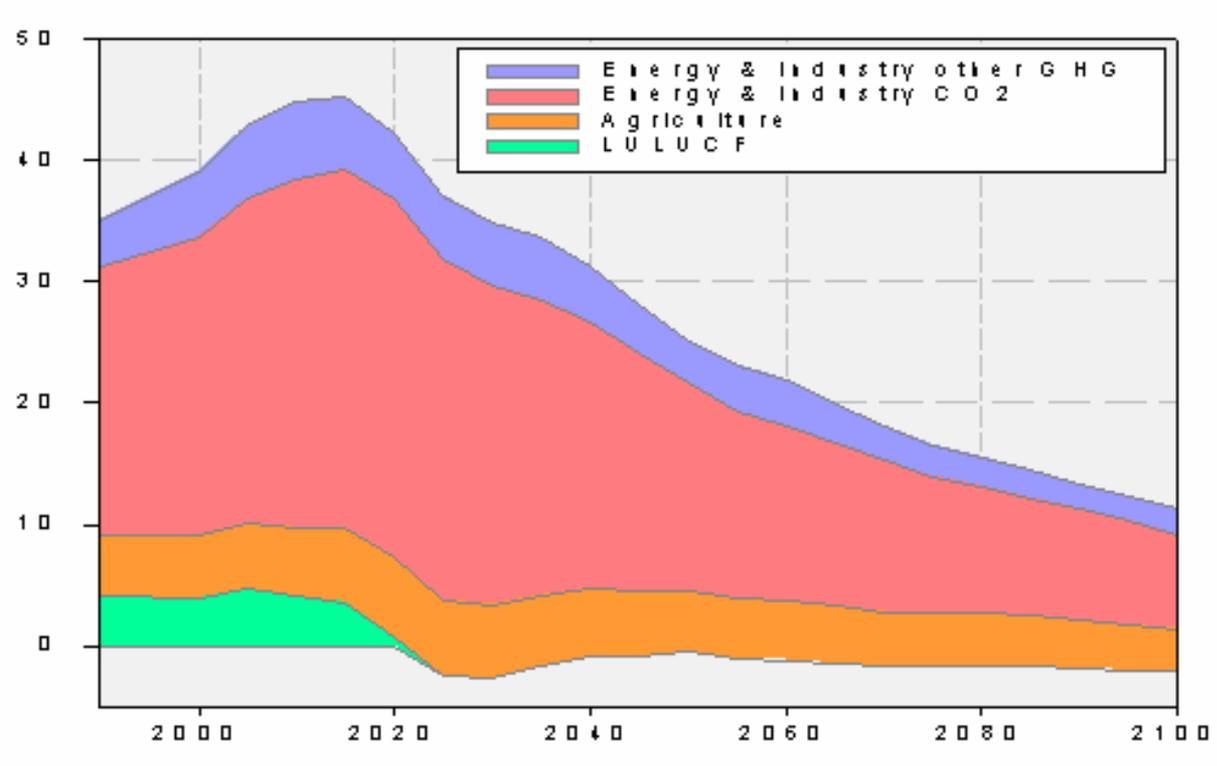


Source: Parry et al. (2001) "Millions at Risk" Glob. Env. Change. Graph adapted by M. Meinshausen
Note: The original graph presented temperature levels above 1990, not above pre-industrial. Thus, a 0.6°C temperature difference has been added.
Furthermore, the original graph presented temperature levels in 2080 for different CO₂ equivalence (E) stabilization scenarios.
For a climate sensitivity of 2.5°C (as underlying the work of Parry et al.), the 2080 temperature level for the S550 CO₂eq emission path has been about 1.4°C above 1990 (2°C above pre-industrial).



Reaching the 2°C target





Meeting the 2°C objective

- **Meeting the 2°C objective means:**
 - **Global GHG emissions must peak before 2020, reduce by at least -30% by 2050 compared to 1990**
 - **Energy & industry reduce -25% by 2050 compared to 1990**
 - **Agriculture emissions stable over the coming decades**
 - **Deforestation reverses in 2 decades**

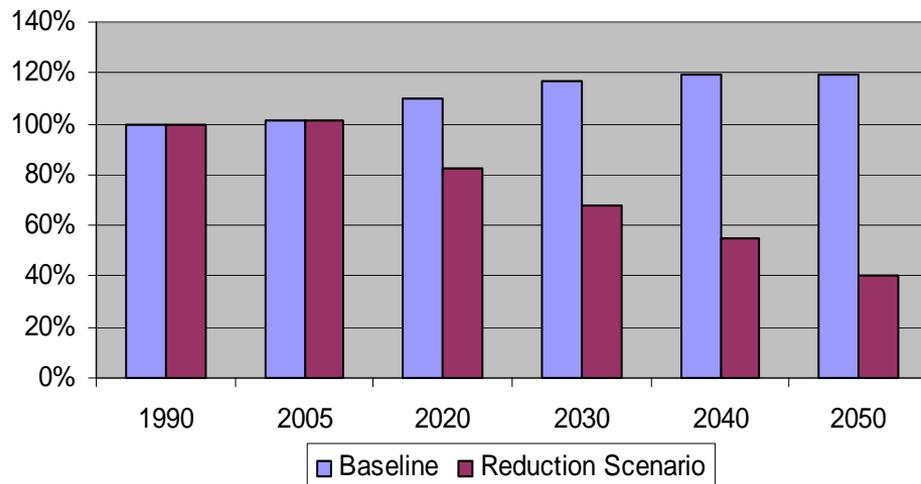


Broader participation: required reductions

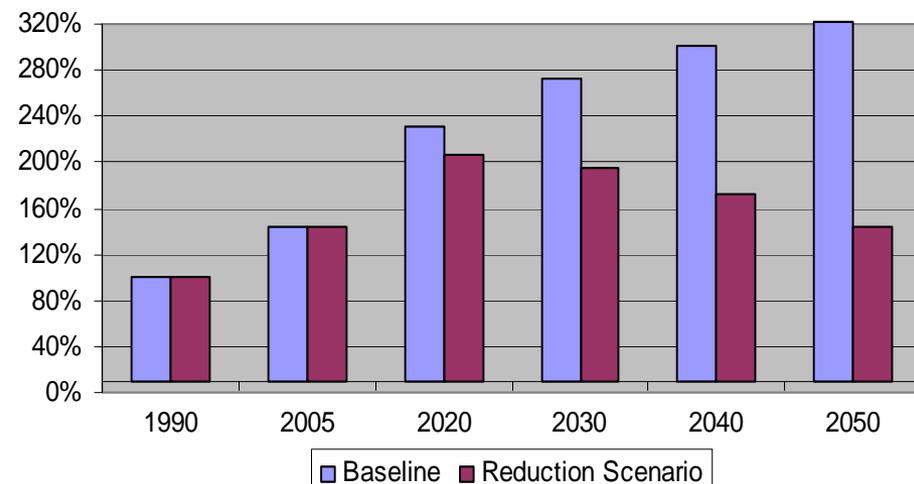
- **Developed countries: -20% by 2020, -60% by 2050**
- **Developing countries: peak between 2020 and 2025 (2x 1990 levels), +40% by 2050**

(N.B.: required reductions \neq target!)

Developed countries GHG emissions



Developing countries GHG emissions





The Needs (an illustration) *Incremental Finance in the Energy Sector*

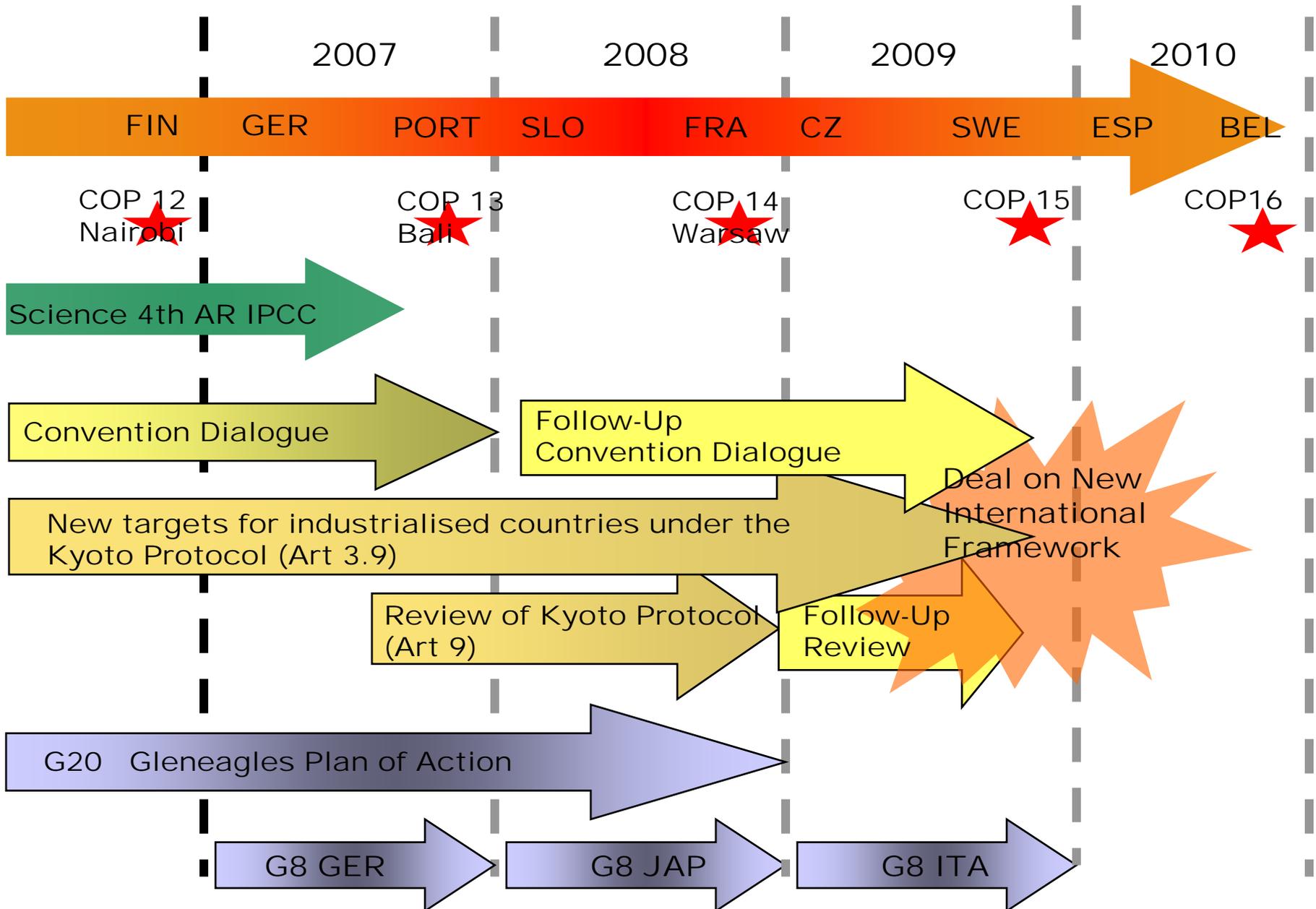
- **Total BAU investment: US\$ 17 trillion incl. Universal Access to Electricity until 2030**
- **Price tag for climate-friendly: + 15 % = US\$ 2.55 trillion in 25 years (~ 0.3 % of global annual GDP)**
- **Approximately US\$ 100 billion per year of which ~ 50 % in developing countries (IBRD: US\$ 20–120 billion)**
- **Annual Official Development Assistance (ODA) = US\$ 100 billion (- but only US\$ 6.2 billion for the energy sector)**
- **Global Environment Facility = US\$ 1.7 billion over 14 years**
- **CDM: US\$ 1.3 billion/year**



The processes

- **UNFCCC**
 - “Dialogue on long-term cooperative action to address climate change by enhancing the implementation of the Convention” (Convention Dialogue)
- **Kyoto Protocol**
 - “Ad-hoc Working Group to consider further commitments for Parties included in Annex I for the period beyond 2012” (AWG)
 - Review of the Kyoto Protocol 2007-2008
- **G-8 and Gleneagles Process**
- **Other bilateral and multilateral partnerships**

The timetable?





Climate & the foreign policy agenda

- **EU leadership: tackling climate change compatible with economic growth**
- **Climate change is a risk:**
 - Sustainable development: economic, social and environmental
 - Security
- **Climate change is also an opportunity:**
 - Innovation
 - Competitiveness
 - Energy security
 - Health...
- **Top the foreign policy agenda:**
 - Partnership and dialogues with third countries
 - Funding mechanisms (existing and new)



**YOU CONTROL
CLIMATE CHANGE.**



TURN DOWN. SWITCH OFF. RECYCLE. WALK. CHANGE

More information on EU climate policy:

http://ec.europa.eu/comm/environment/climat/home_en.htm