



# Battling global climate change - the EU's perspective (Part I)

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**European Union**



# 1. The scientific case for action



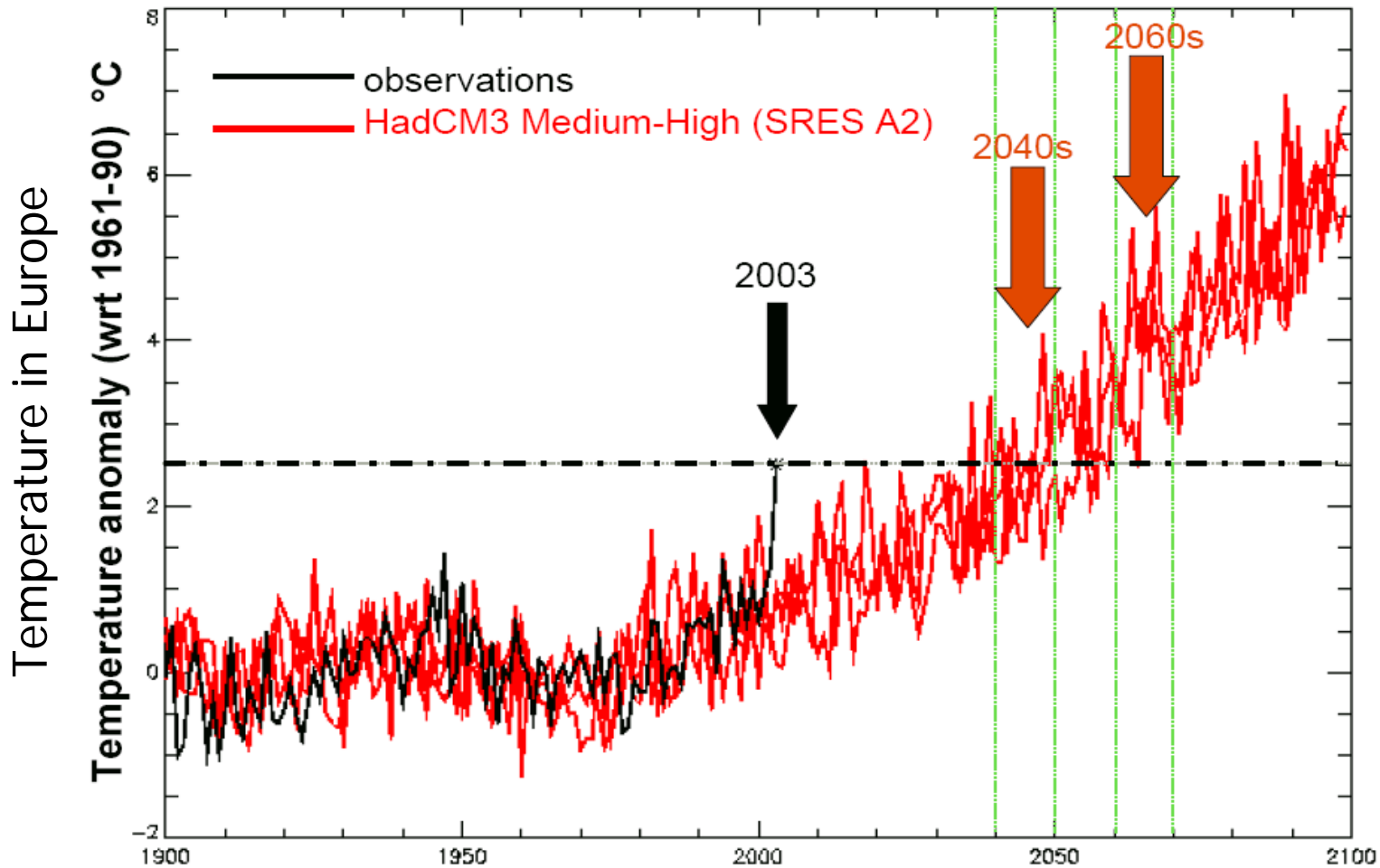
# Europeans are also feeling the 'heat'

- Europe has warmed more than the global average, with a 0.95 °C increase since 1900.
- Temperatures in winter have increased more than in summer.
- The warming has been greatest in the most northern latitudes and the Iberian Peninsula.
- From 1990 to 2100, the global average temperature is projected to increase by 1.4–5.8 °C and 2–6.3 °C for Europe.





# Climate Change is happening and accelerating



Source: Stott et al. 2004



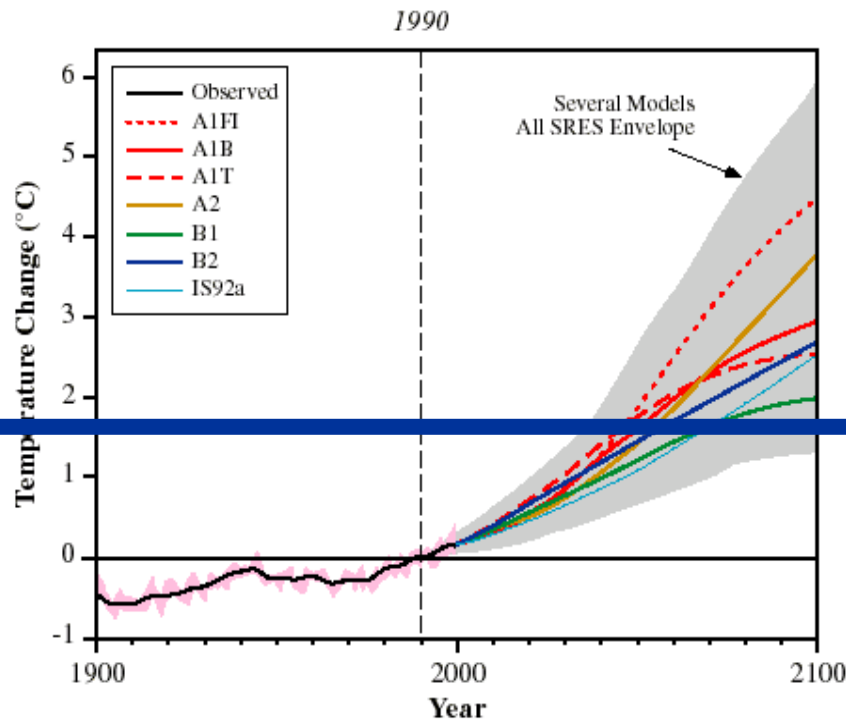
# Significant economic losses today

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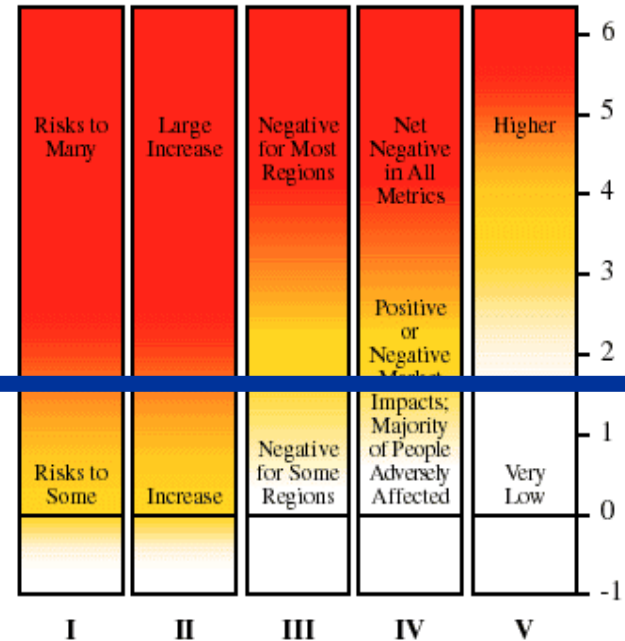
- Flooding in Europe caused around €15 billion of economic damages in 2002
- Between €10 to €17 billion economic cost of heat wave in Europe 2003 plus around 35.000 premature deaths
- Heatwave in India 2002 took more than 1000 lives, rainfall deficit of 19% caused drop in GDP by 3%
- Hurricanes Katrina, Rita and Wilma (all in 2005) more than €150 billion
- Australia drought in 2002 cut farm output by 30% and shaved 1.6% off GDP



# The EU's level of aspiration



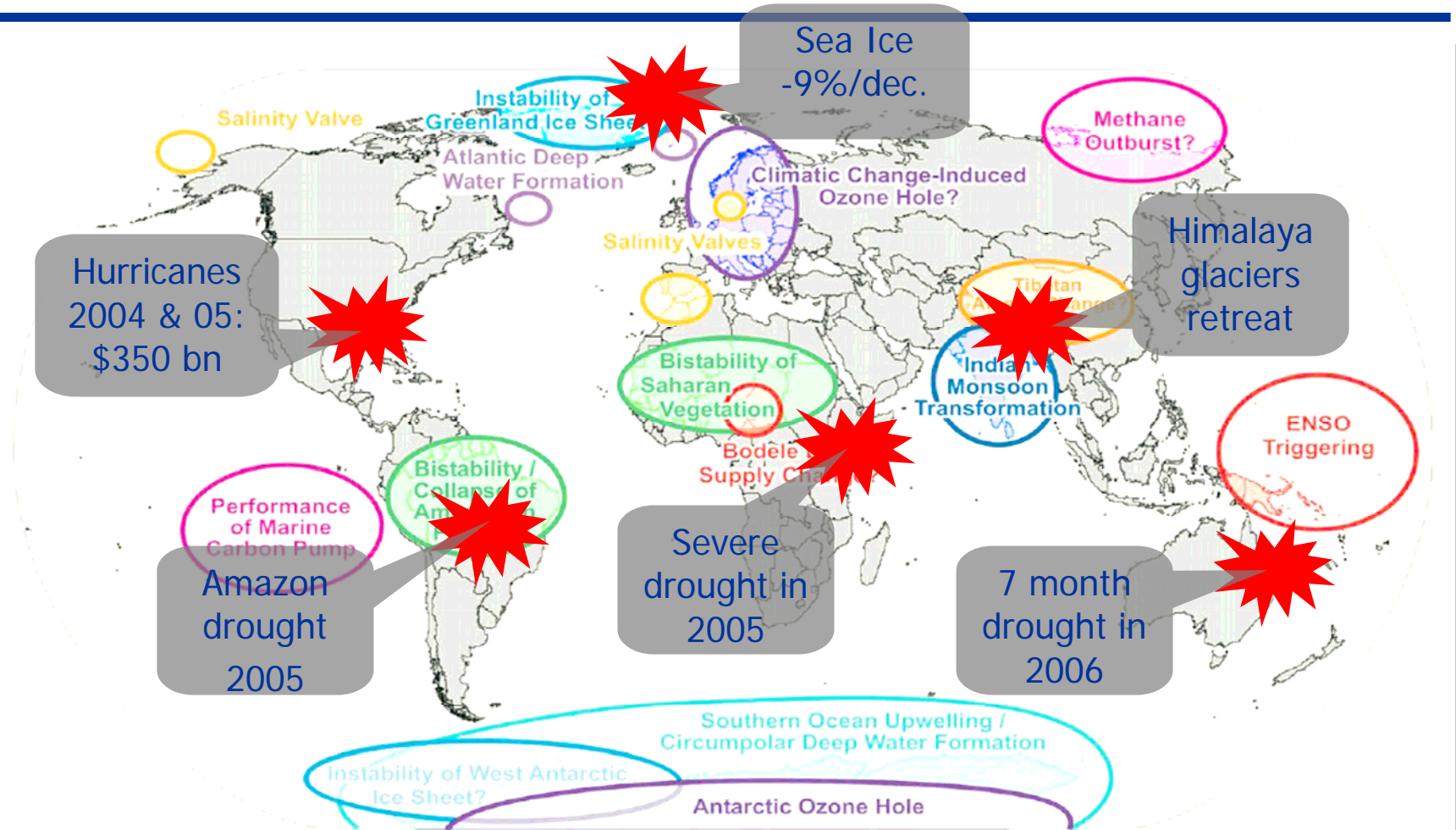
*Reasons for Concern*



- I Risks to Unique and Threatened Systems
- II Risks from Extreme Climate Events
- III Distribution of Impacts
- IV Aggregate Impacts
- V Risks from Future Large-Scale Discontinuities



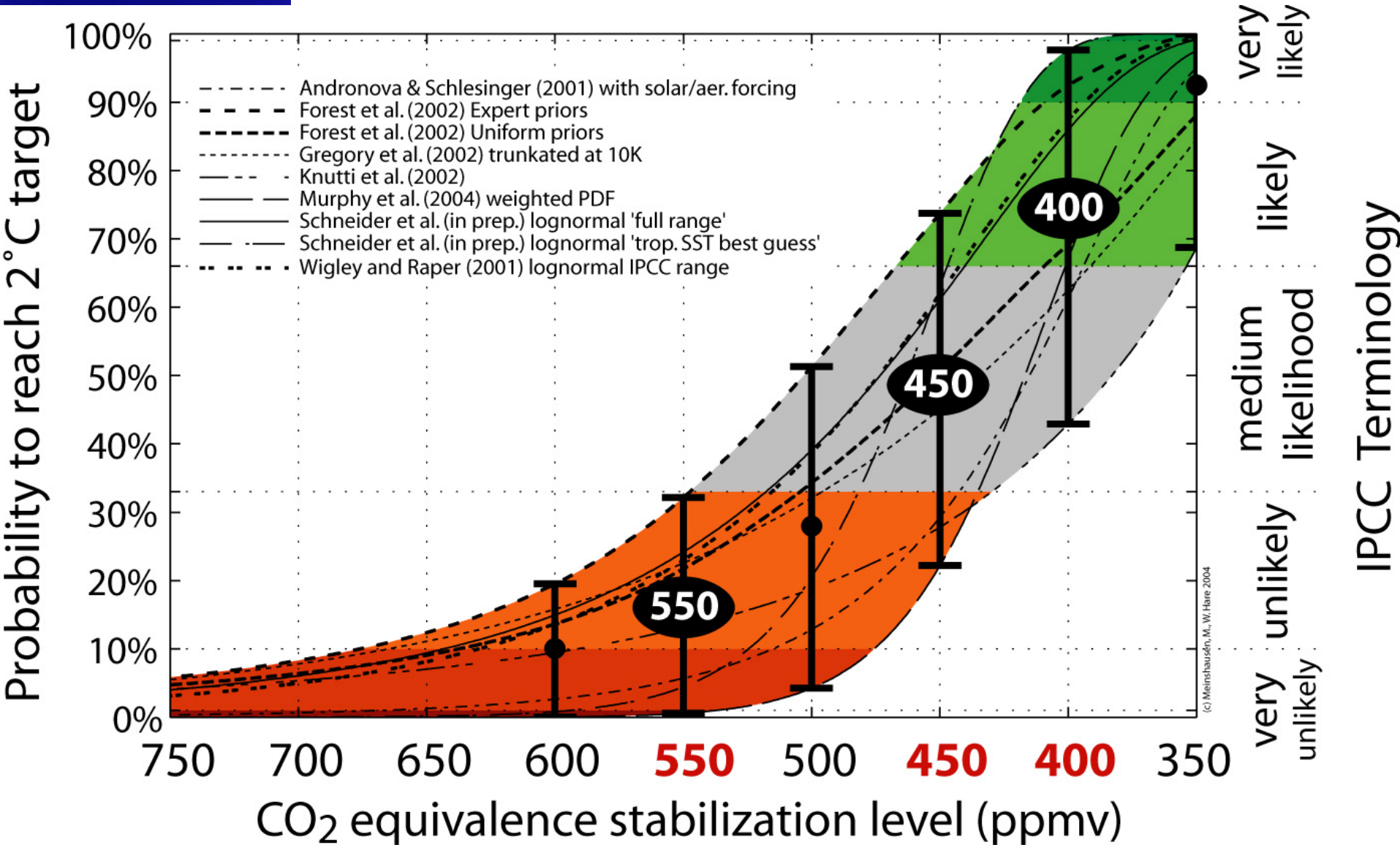
# Reasons for concern for everybody



Source: Potsdam Institute for Climate Impact Research



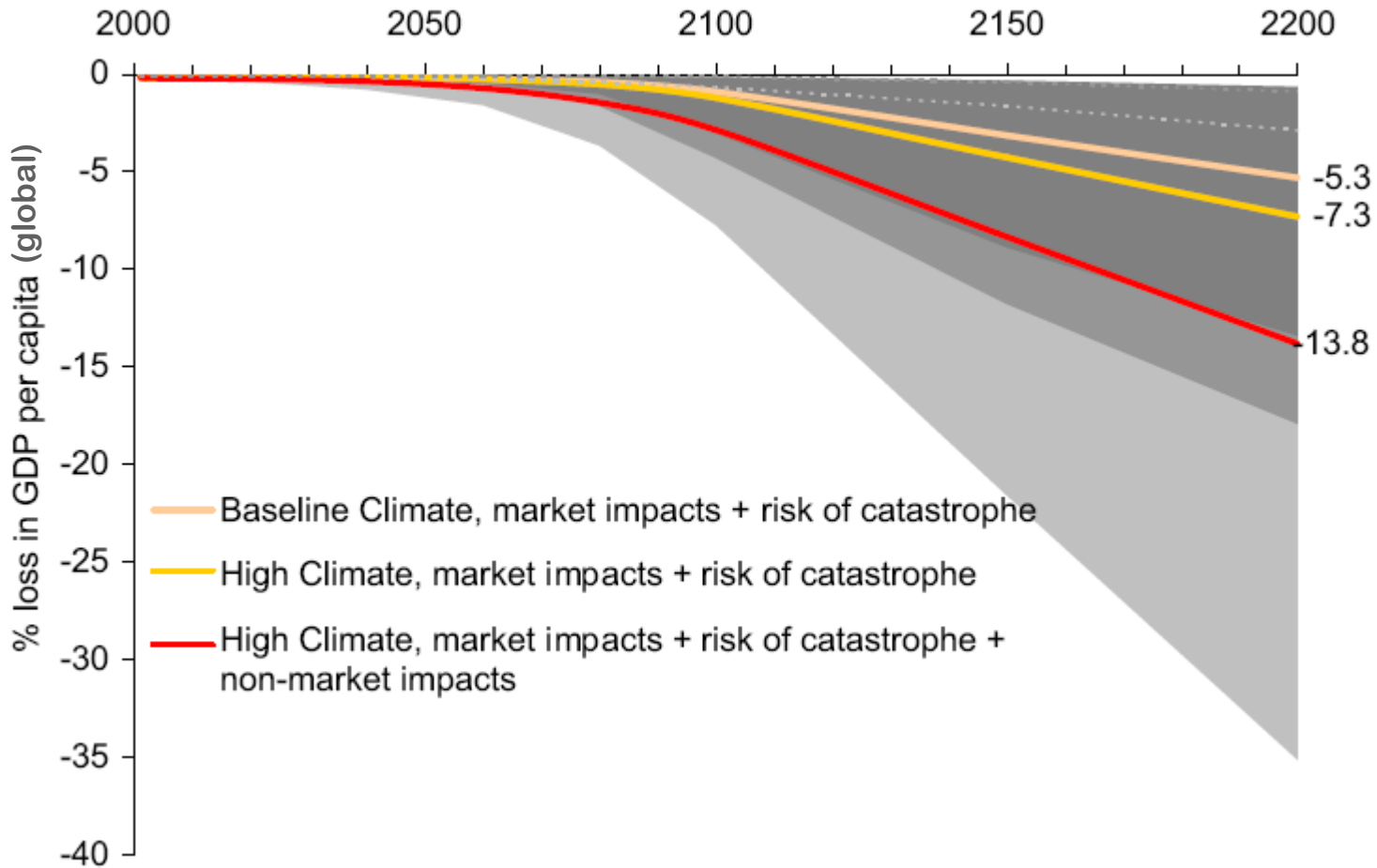
# The probability to reach the 2°C target







# Cost of Inaction will be overwhelming



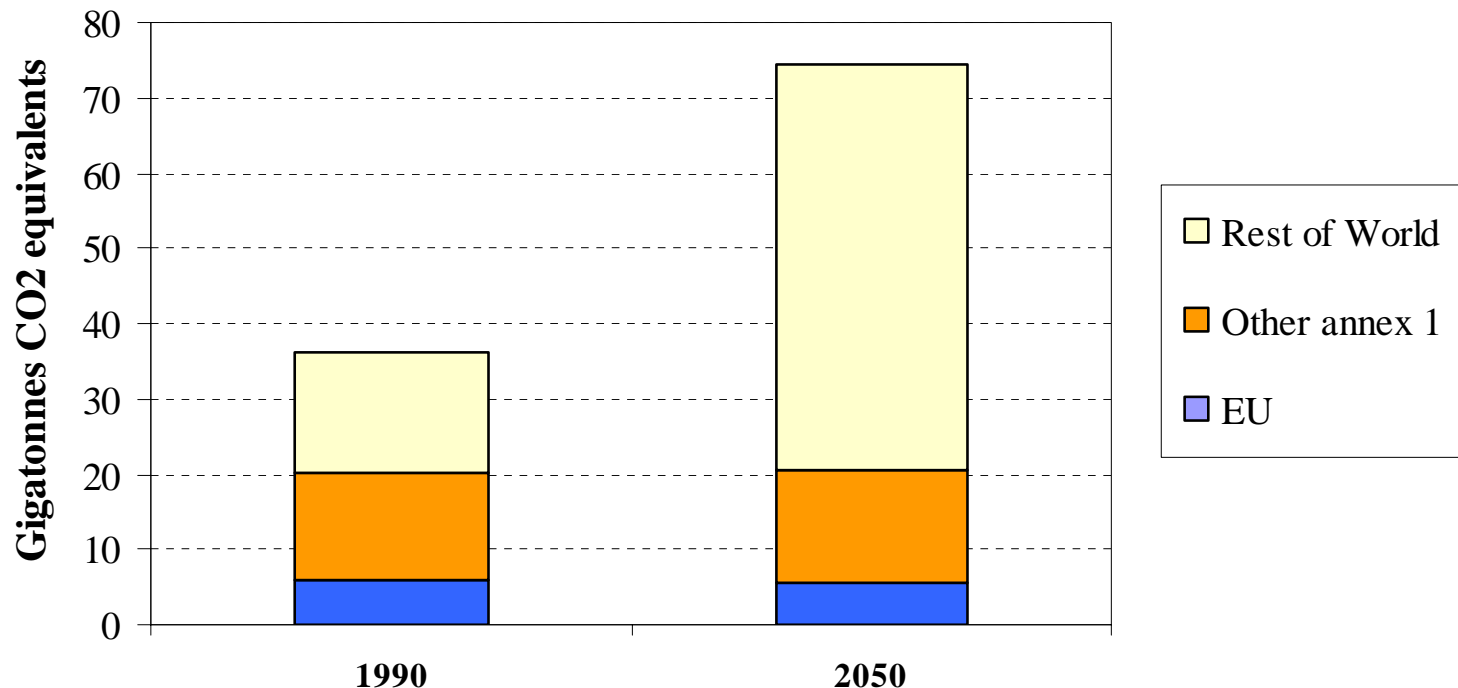


## 2. What global emission reductions are required?



# The EUs share of global emissions

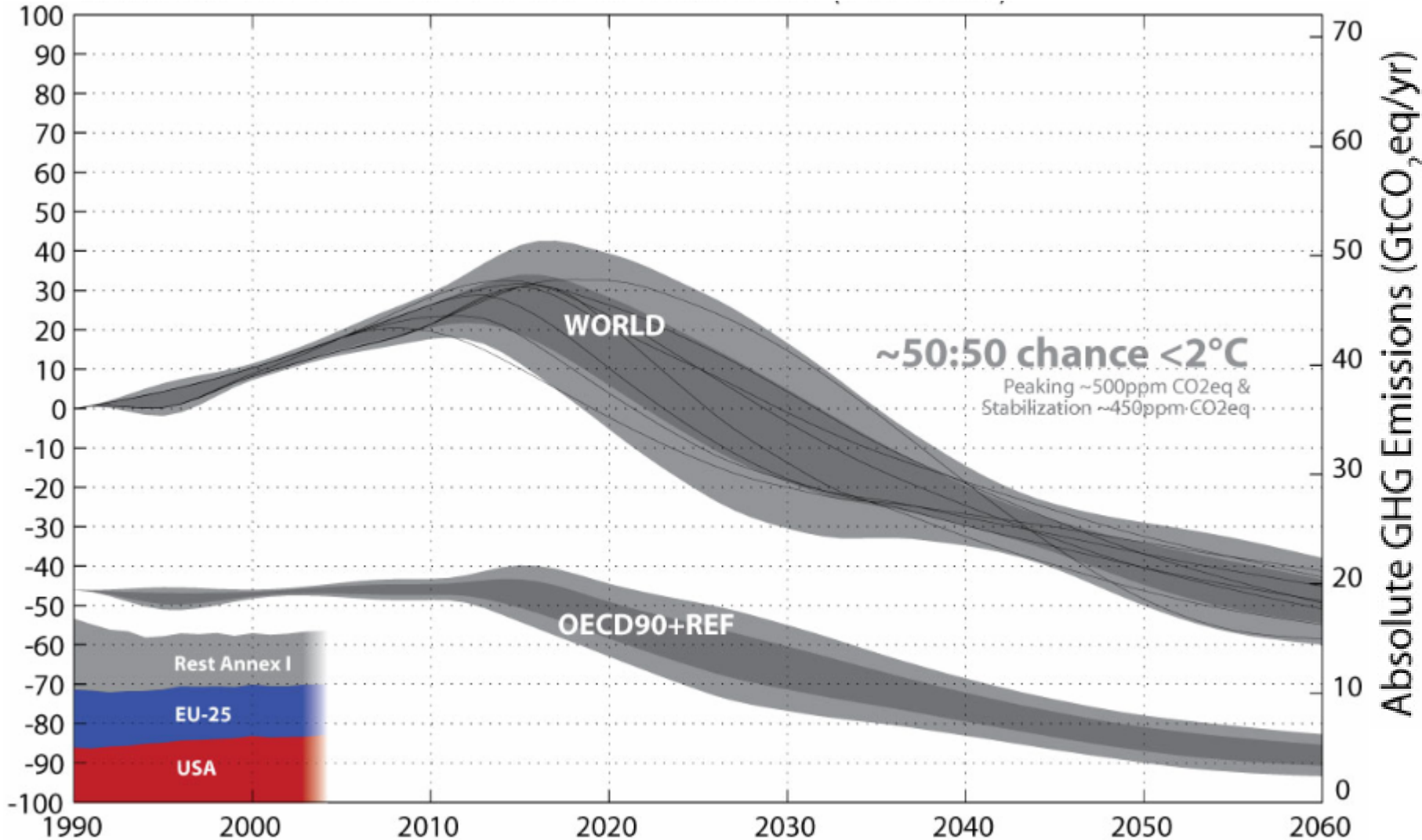
**Figure 1: Projected development of greenhouse gas emissions in different regions of the world**



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



# Global & Annex I GHG emissions



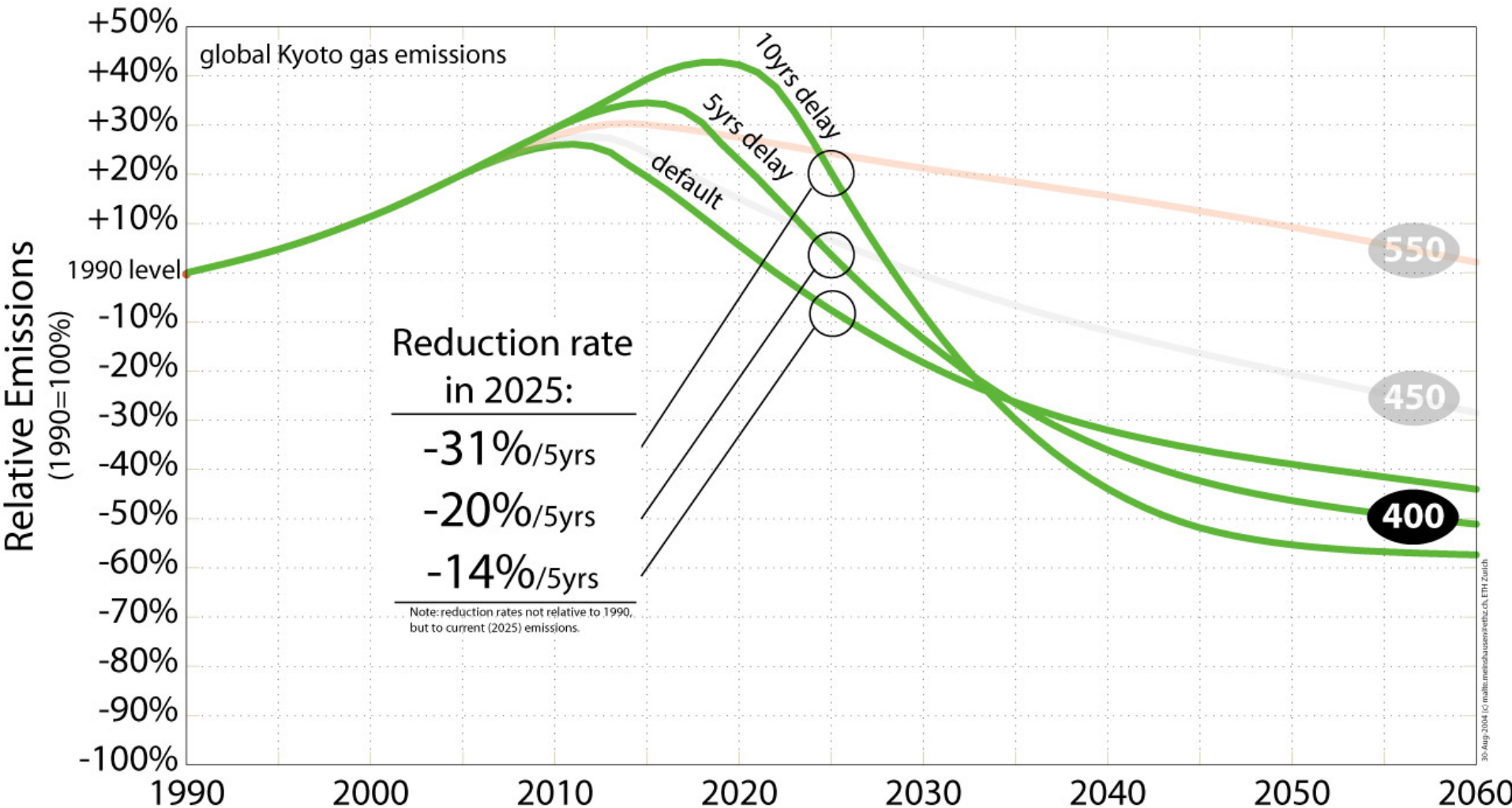
Source: Malte Meinshausen 2006

Ad Hoc Working Group on Article 3.9 of the Kyoto Protocol



# Any Delay increases future reductions

*“Delaying action for a decade, or even just years, is not a serious option”* Sir David King (Science, 9 January 2004)



Source: Malte Meinshausen 2006



# The Scale of the Challenge

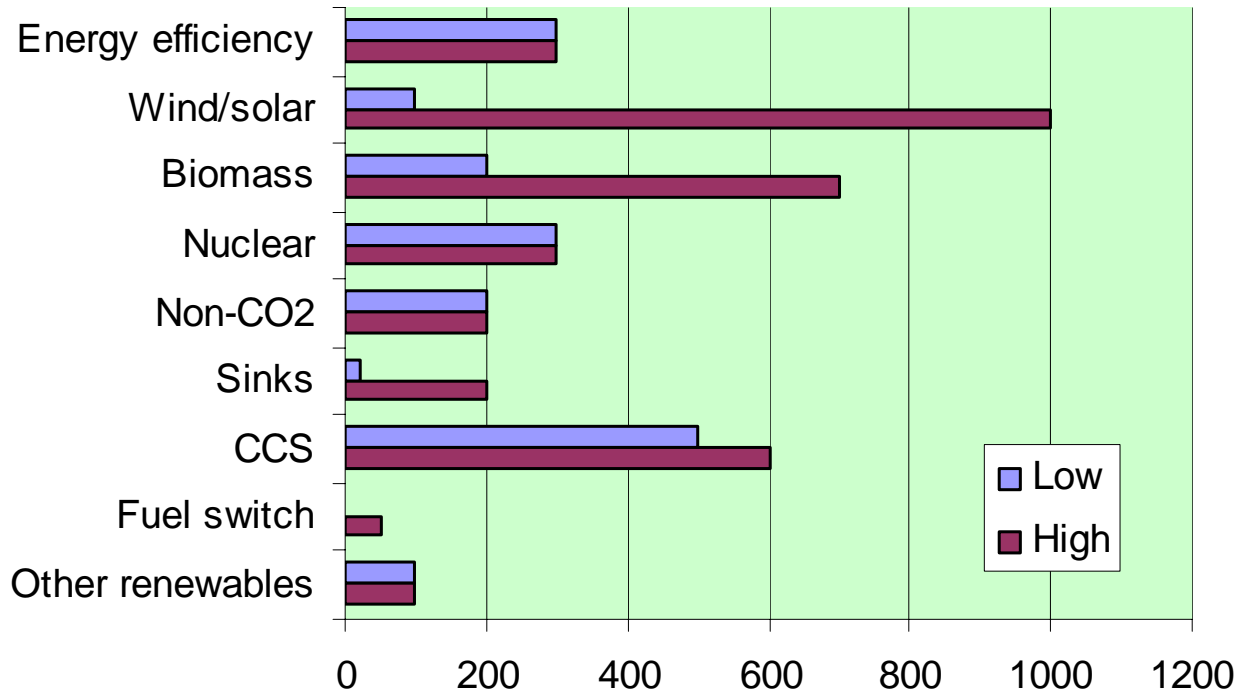
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- Global emissions should peak within the next two decades.
- Delays increase reduction rates dramatically afterwards
- Global emissions have to decline between 15 and 50% compared to 1990 by 2050:
  - At the high end (around 50% reduction) this gives us a good chance of reaching the 2°C objective
  - At the low end (15% to 25% reduction) this gives a low to moderate chance of reaching the 2°C objective
  - Land use and forestry CO<sub>2</sub> emissions need to decrease sharply, the required Kyoto-gas reductions by 2050 increase with 10% if they do not



# It can be done ...

## Cumulative global reduction potentials by 2100

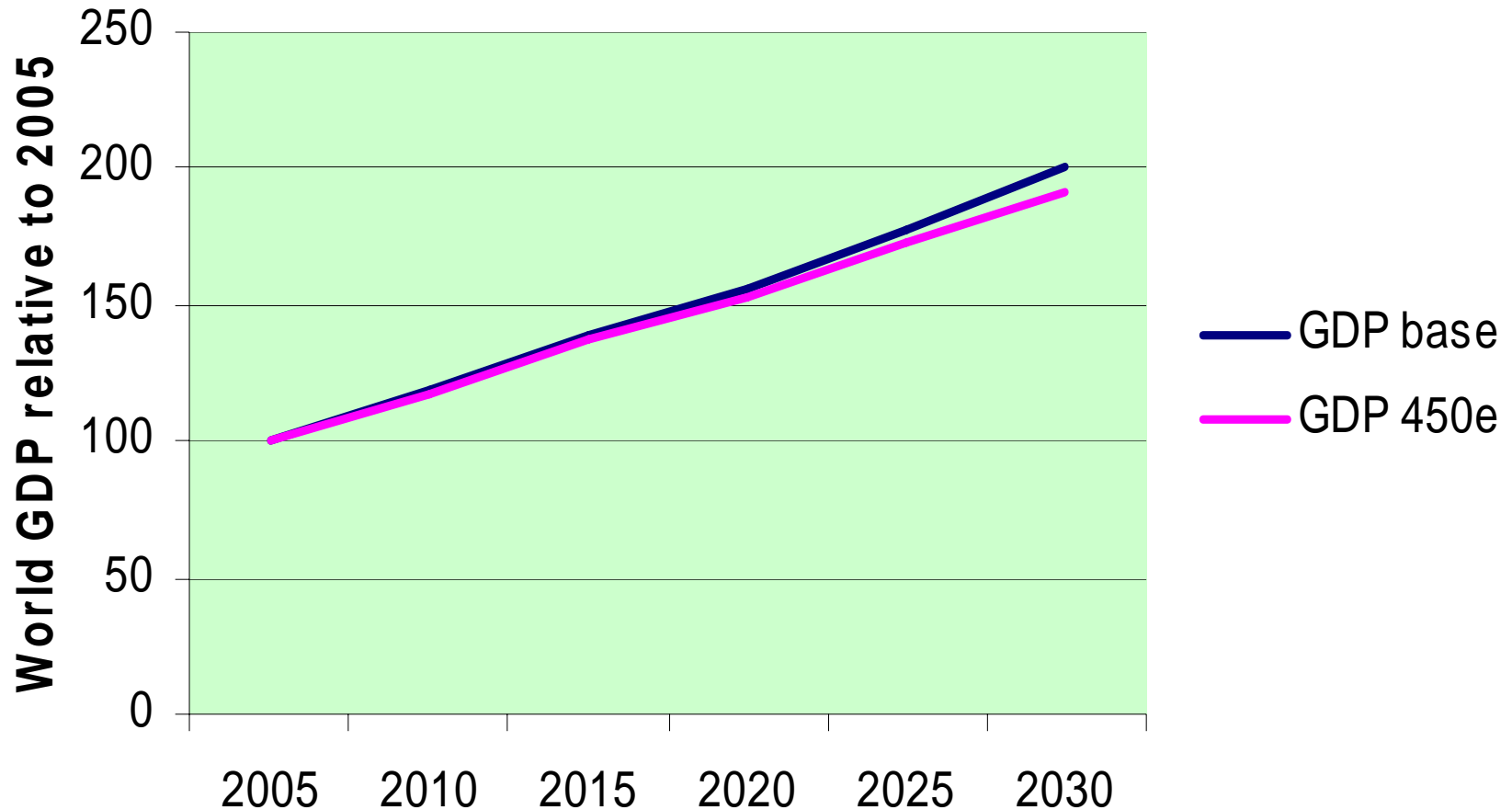


Total  
around  
1700-3500  
GtC

Compare: total required around 1200 GtC  
(for stabilisation at 450 ppm CO<sub>2</sub> eq.)



# Strong emission reduction policy can be consistent with economic growth and development (450 CO<sub>2</sub> eq. path)



Source: European Commission





# Conclusions

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- Climate Change is real and accelerating – impacts are already felt all over the world
- Dangerous large scale impacts beyond 2°C
- Urgent need for joint global efforts to reduce GHG emissions in all major economies
- Broad portfolio of reduction potentials exists and can be realised already today
- Ambitious actions are compatible with economic and social development – inaction is not



# More information on EU climate change policy

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get to grips with  
**climate change**

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

