

Climate Policy in the Industrialised Countries: the United Kingdom

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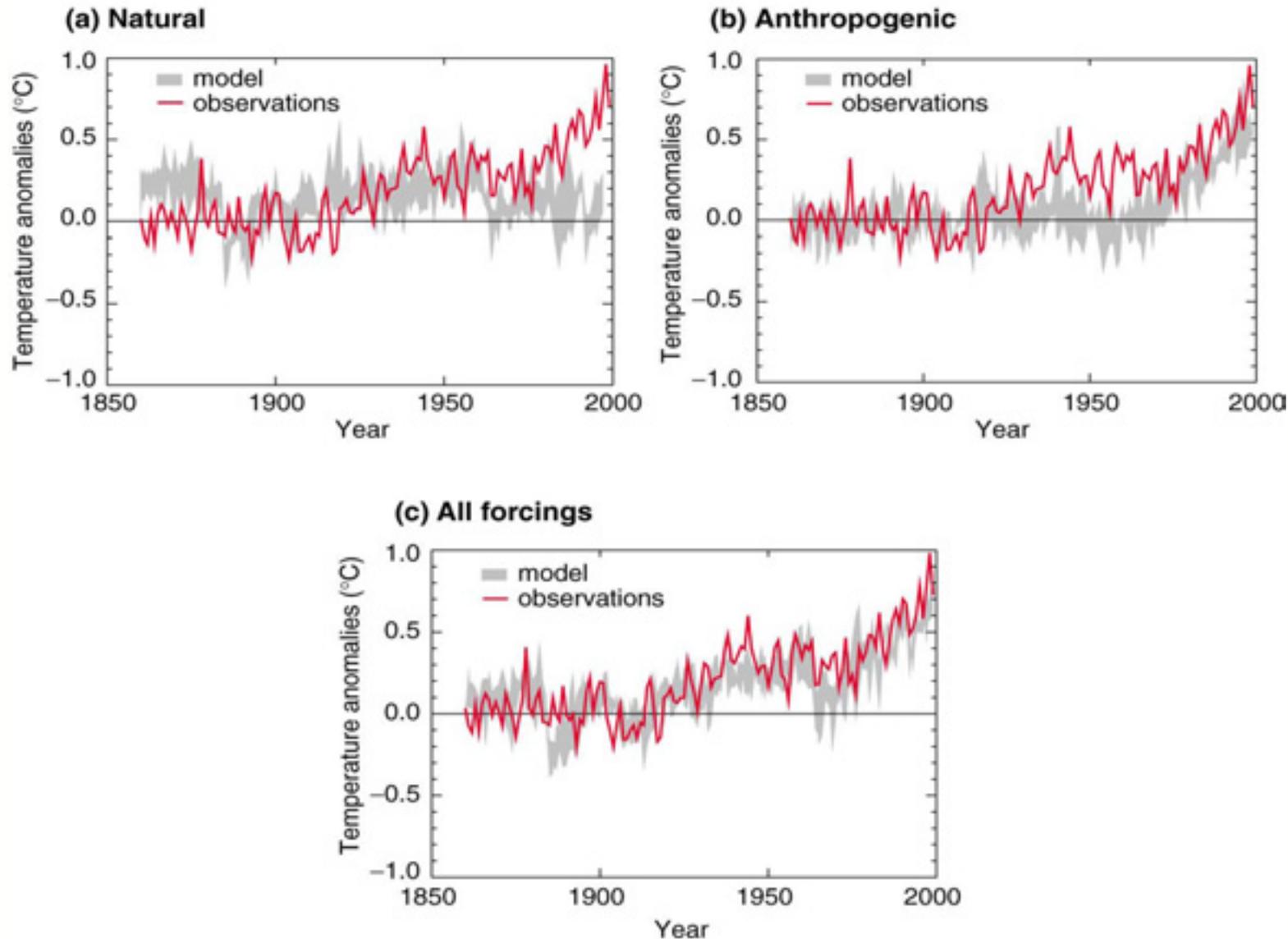
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22 October 2005

Overview

- Introduction
- Evidence based policy
- Rationale for Action
- The UK's G8 Presidency
- The UK's Long term goals
- The UK Climate Change Programme
- Emissions Trading
- Adaptation

Models and observations show recent temperature increase due to human greenhouse gas influence (HC)



Recent impacts apparently due to human induced climate change

- Hot summer of 2003 – Risk of such a summer 2-4 times greater with greenhouse gases.
- Extent of droughts and intensity of rainfall increasing since 1970s
- Widespread melting of glaciers
- Increased river flow into the Arctic
- Earlier spring activity – plants and animals
- Loss of Arctic sea ice and melting permafrost
- Rising sea levels
- Jury still out on hurricanes – but recent events and studies should ring alarm bells

Exeter conference addressed 3 questions

- For different levels of climate change what are the key impacts, for different regions and sectors and for the world as a whole?
- What would such levels of climate change imply in terms of greenhouse gas stabilisation concentrations and emission pathways required to achieve such levels?
- What options are there for achieving stabilisation of greenhouse gases at different stabilisation concentrations in the atmosphere, taking into account costs and uncertainties?

Papers at www.stabilisation2005.com

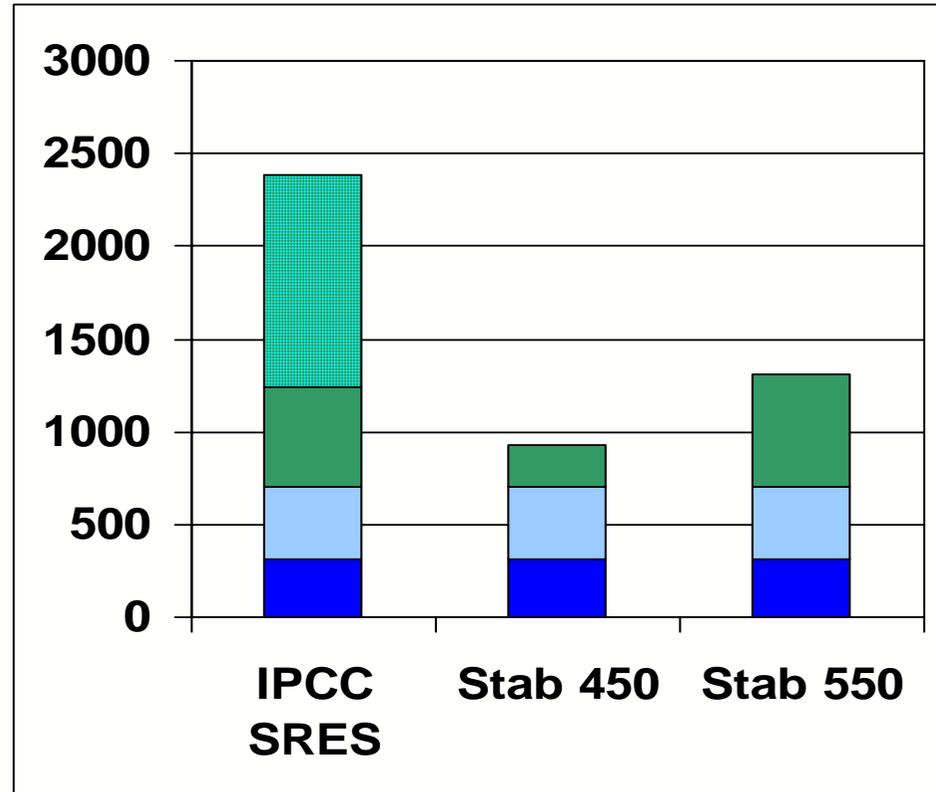
How much is too much?

1-2 C Above pre-industrial	Major impacts on ecosystems and species; wide ranging impacts on society
1.5 C?	Greenland ice-cap starts to melt (7 m)
2-3 C	Major loss of coral reef ecosystem; considerable species loss; large impacts on agriculture; water resources; health; economies.
	General increase in droughts and extreme rainfalls as temperature increases. Up to 88cm sea level rise in next 100 years.
2-3 C ?	Terrestrial carbon sink becomes a source.
1-4 C ?	North Atlantic circulation collapses
2-4.5 C ?	West Antarctic ice sheet collapses (5 m)

What does it mean for CO₂ emissions limitations over the next 100 years?

Cumulative CO₂ emissions (GtC)

-  IPCC High Scenario 2030 to 2100
-  IPCC Low Scenario and stabilisation scenarios 2030 to 2100
-  IEA projection 2000 to 2030
-  Historic 1750 - 2000



Energy needs and emissions

- In the next 25 years 70% increase in energy demand predicted by IEA
- To be on track to meet a 2°C target EU suggests global emissions need to be reduced by at least 15% by 2050 and maybe as much as 40%
- Delay now requires greater reductions later
- **Challenge is to meet the growing demand for energy whilst reducing emissions to prevent significant damage from climate change**

3. What are the options for achieving stabilisation of greenhouse gases?

Technological options already exist

- Energy efficiency
- Renewable sources – wind, tidal, biomass, solar
- Hydrogen
- Nuclear
- Carbon capture and storage

Costs look like being smaller than considered previously – importance of induced technological change

UK G8 Presidency

- **2 Priorities** - Climate Change and Africa
- Exeter science conference to set the scene – how much is too much? How do we avoid such levels?
- **G8 Summit conclusion** – human actions cause climate change - a major threat requiring urgent action
- **Outcome** on Climate Change:
 - **Plan** of Action
 - **Dialogue** on Climate Change, Clean Energy and Sustainable Development – 1 November conference.
 - **Engage** World bank and the IEA

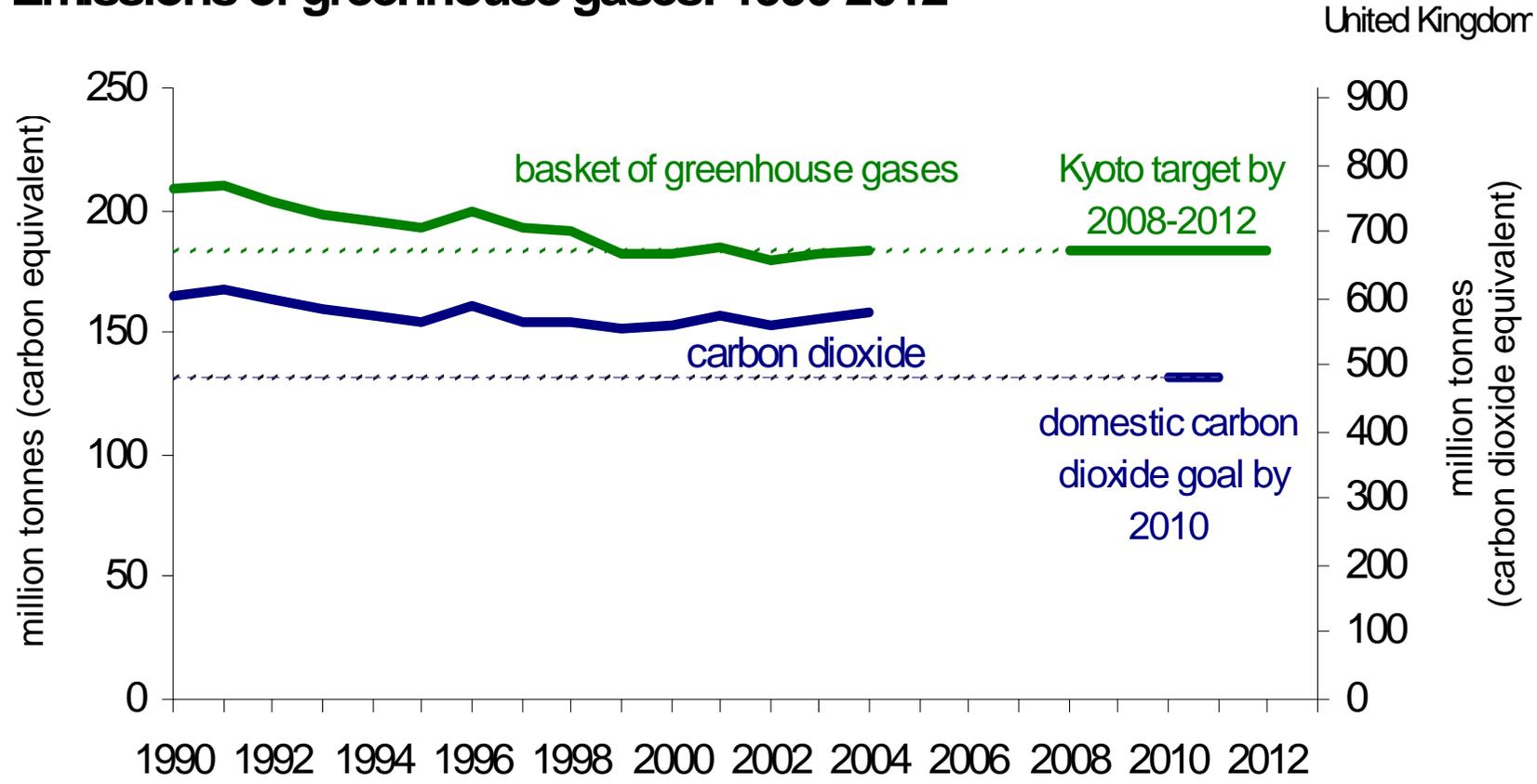
Summary of UK targets and goals

- Kyoto: Emissions basket 12.5% below 1990 levels by 2008-2012
- Domestic: CO₂ emissions 20% below 1990 levels by 2010
- Long term: CO₂ emissions 60% below 1990 levels by 2050

Domestic programme is under review

UK on track to meet Kyoto target

Emissions of greenhouse gases: 1990-2012



Note: Estimates for 2004 are provisional

Source: netcen



UK Climate Change Programme

- Improved business use of energy
- Stimulating more efficient power generation
- Cutting emissions in transport sector
- Promoting better efficiency in domestic sector
- Improving efficiency in building sector
- Reducing agricultural emissions
- Reduce emissions from public sector buildings

Emissions Trading



- UK Emissions Trading Scheme (April 2002)
- EU trading scheme (2005)
- CO₂ trading now at 20-30 €/ tonne
- Global market worth 5€ billion in 2005?

Adaptation in the UK



- Adaptation recognised as an essential response but not a substitute for mitigation
- Underpinned by the UKCIP
- Adaptation Policy Framework initiated