



# Scottish Government: Climate Change

ECRR/SNIFFER Conference

Philip Wright

Wednesday 7<sup>th</sup> November



**The Scottish Government**



## **Science and Policy & Statutory Framework**

- Need for action
- International response
- UK-level response – UK Climate Change Bill
- Scottish response – Scottish Climate Change Bill
- Adaptation
- Current research
- Living With Environmental Change



**“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level”**

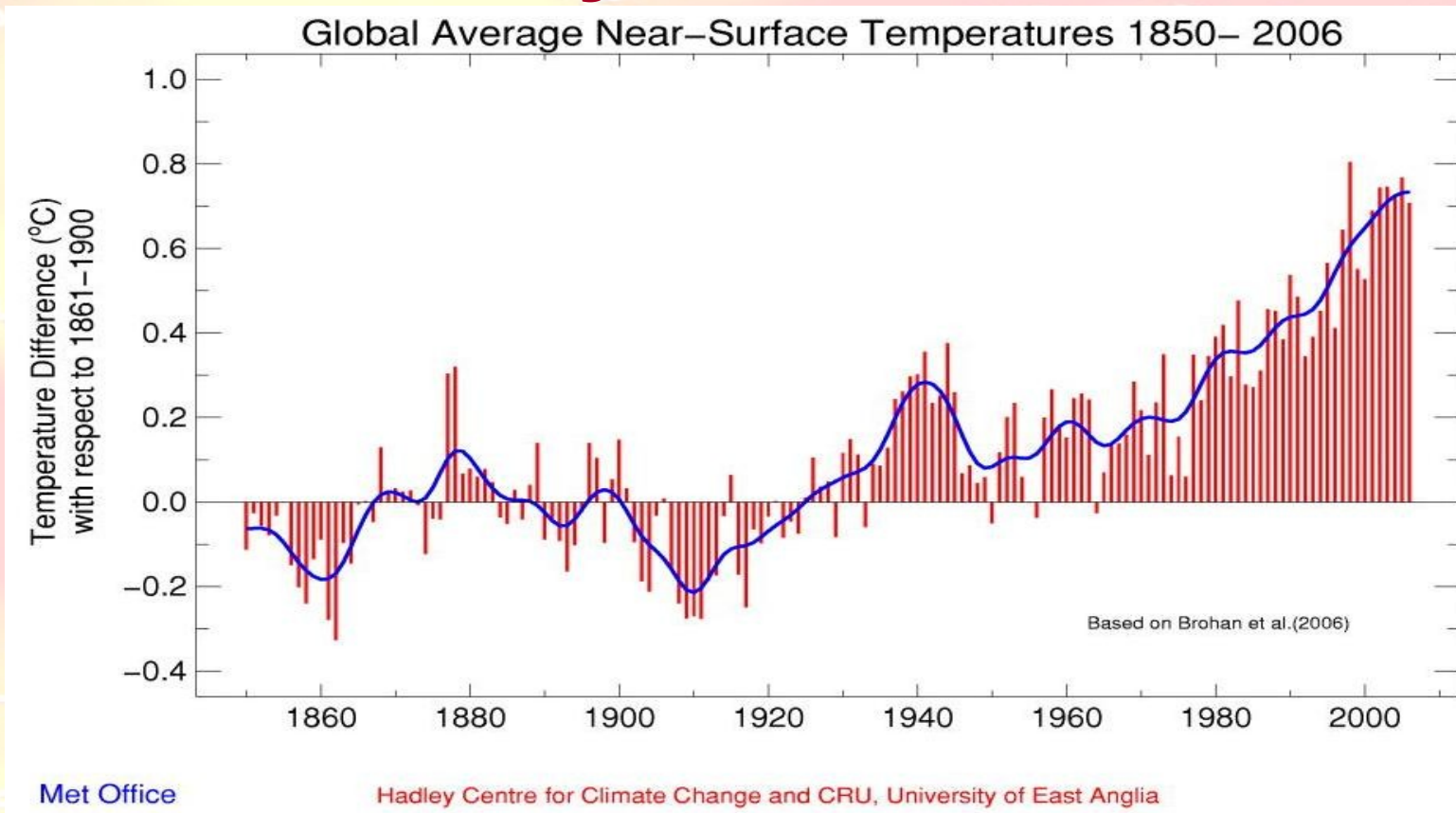
Intergovernmental Panel on  
Climate Change (IPCC)



Photo credit: NASA



# Global surface temperature increased by 0.74°C, 1906-2005





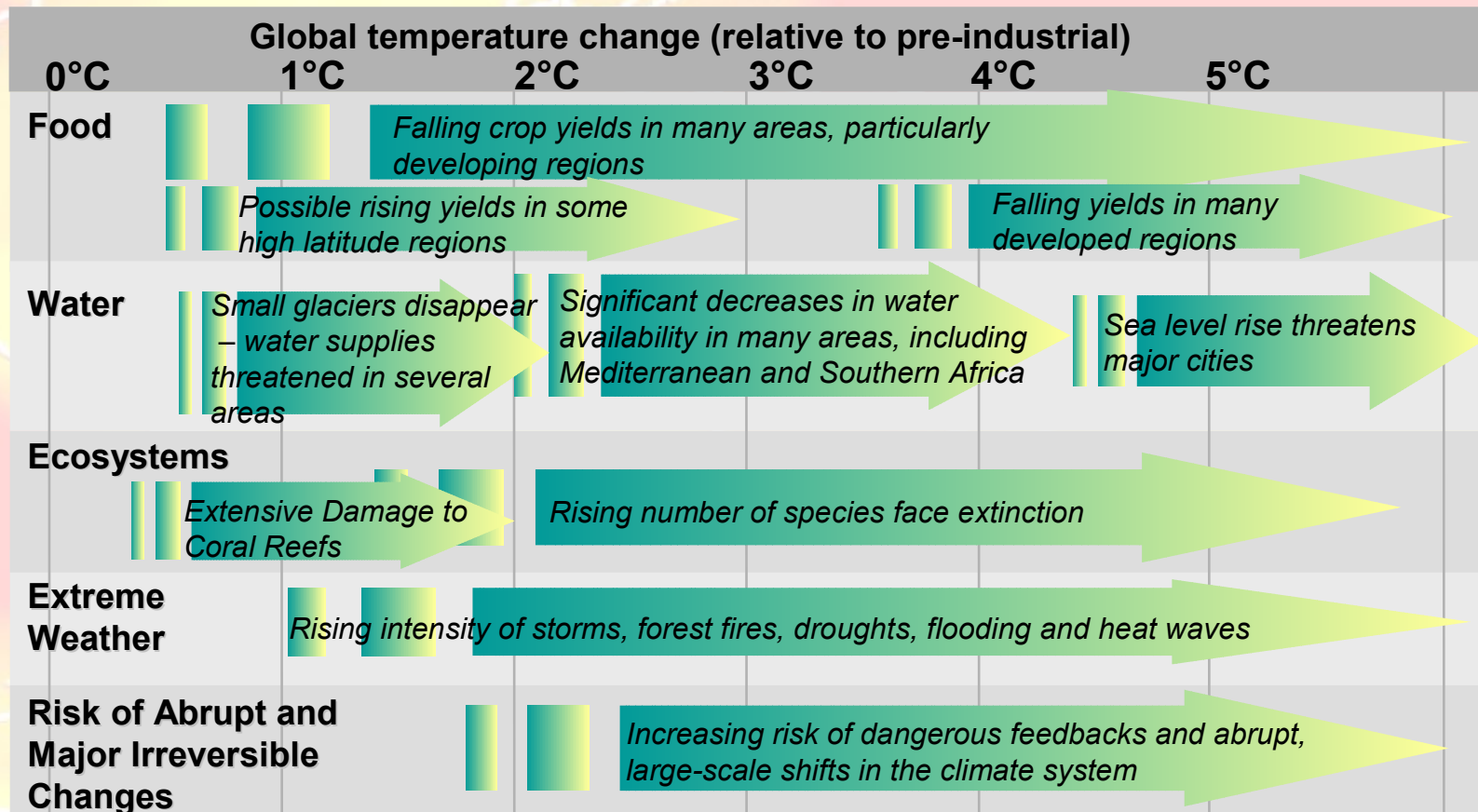
**“When one tugs at  
a single thing in  
nature, he finds it  
attached to the rest  
of the world.”**

**John Muir**

**Scottish naturalist  
and writer, 1838-  
1914**

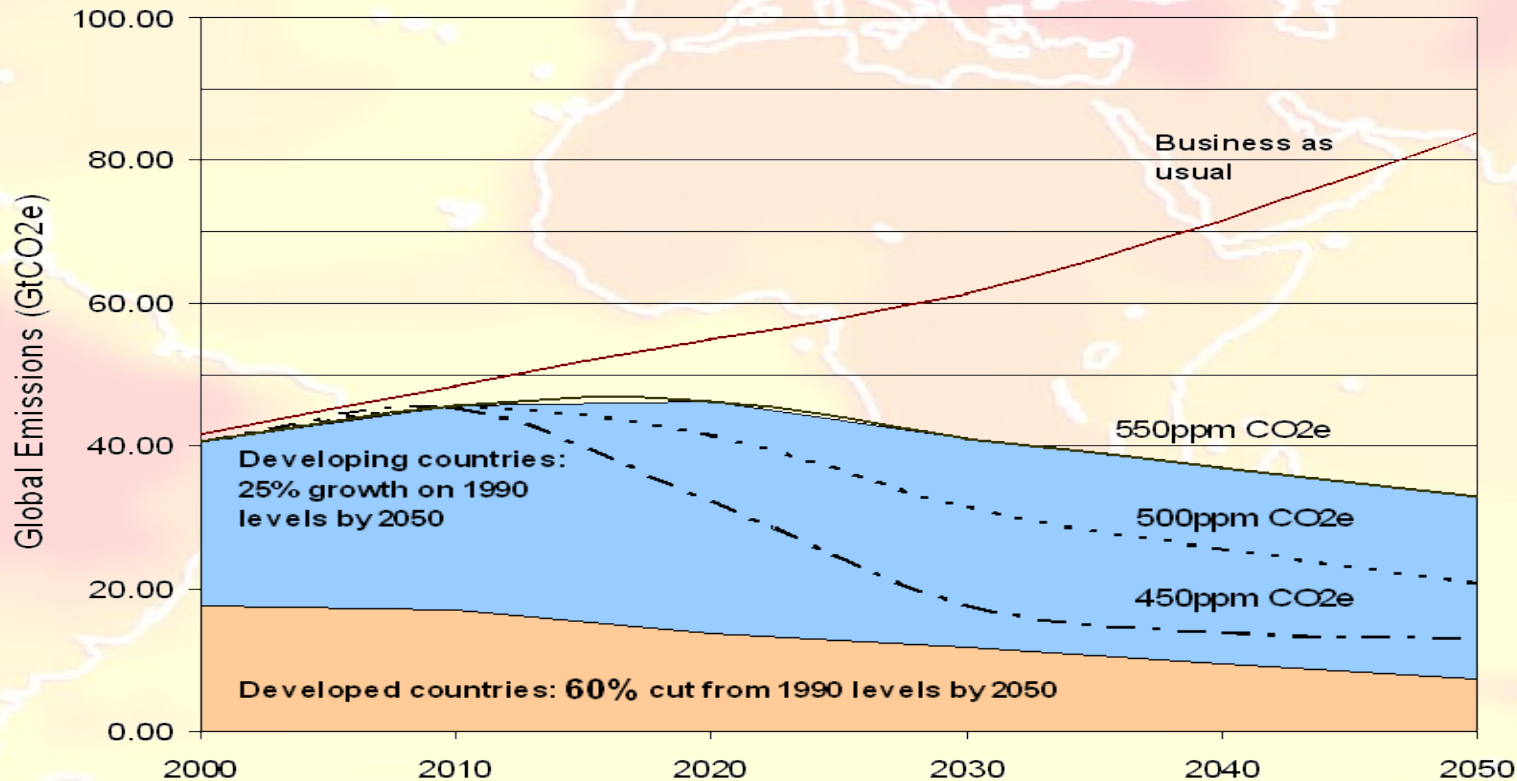


# The effects could transform the physical and human geography of the planet





# The global challenge is to stabilise global emissions at levels which avoid the risk of dangerous climate change



Stern Review (2006); 'ppm' = parts per million concentrations in the atmosphere.



## **International Action:-**

- Kyoto Protocol
- EU Climate Change Programme
  - 20 / 30% reduction in GHG emissions by 2020

# UK Climate Change Bill



- Announced late 2006 – Stern Review
- Re-affirming UK Government's – and DAs' commitment
- Certainty for business
- Maximising UK's leverage internationally
- To be introduced after Queen's Speech (yesterday)

# What does the UK Bill do?



- 60% reduction in carbon emissions by 2050 (26-32% by 2020);
- 5 year carbon budgets;
- establishes a Committee on Climate Change with a UK-wide remit to advise governments;
- Ministers to have powers to put in place new emissions trading schemes; and
- improves monitoring and reporting to UK Parliament.



# Scotland's record

Greenhouse gas emissions in Scotland fell by about 16% between 1990 – 2004.

The economy grew by 32%.



# Scotland's Climate Change Programme

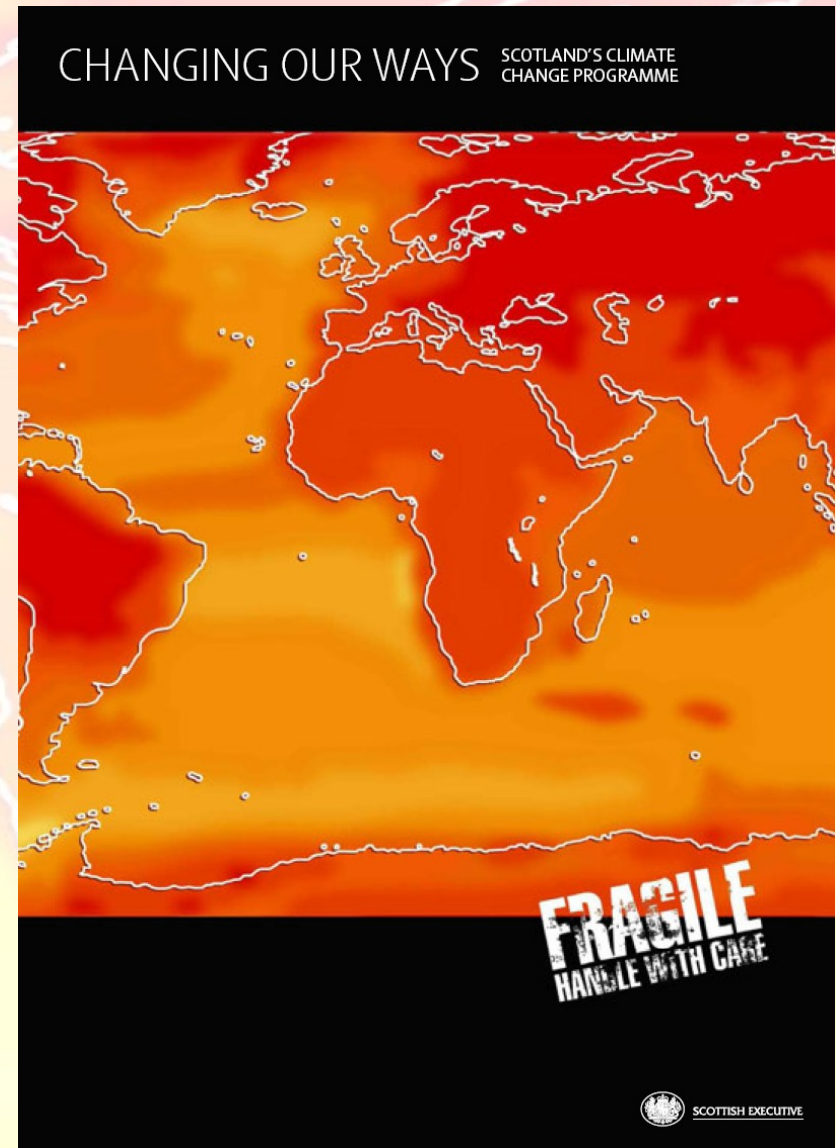
March 2006

## Scottish Share

Devolved policies  
save 1.7 million  
tonnes of carbon

## Scottish Target

1 million tonnes more





**“We will introduce a  
Scottish Climate Change  
Bill and consult on a  
mandatory long-term  
target to reduce our  
emissions by 80 per cent  
by 2050.”**

**John Swinney,**

Cabinet Secretary for Finance  
and Sustainable Growth



# What will the Scottish Bill do?



- 80% target for emissions reduction by 2050
- Interim targets or budgets
- Mandatory annual reporting
- Source of independent advice and monitoring
- Provisions to deliver targets or adapt to climate change – primary legislation or enabling powers

# Timetable for a Scottish Bill



Summer '07

Stakeholder and informal engagement on a Bill

Dec 07

/ Jan '08

Formal public consultation  
- 3 months

Summer '08

Review results of consultation

Autumn '08

Present Draft Bill to Parliament

# Scottish Government Action



- Target to generate 18% of Scotland's electricity from renewable sources by 2010 was met in 2005.
- Recycling record improves: recycling and composting of municipal waste increased from 17.3% to 24.4% (2006)
- SPP6 Target – new developments to reduce carbon emissions by 15%
- Scotland active in international efforts eg. EU Emissions Trading Scheme.



## What do we mean by adaptation?

- Impacts of climate change over next 30 to 40 years determined by past and present emissions.
- Some change is unavoidable – need to ensure policy incorporates the risks and opportunities posed by this change.

## Drivers for a Scottish adaptation strategy?

- Identified need to strengthen the Scottish Government's adaptation response
- Responses to consultation on UK Climate Change Bill
- Early stakeholder discussions on Scottish Climate Change Bill

# Action to adapt?



## *EU paper 'Adapting to Climate Change in Europe: Options for EU Action'*

- Seeks to strengthen member states' adaptation to climate change impacts.
- Consultation closes 29 November. Encourage you to respond.

## *UK Adaptation Policy Framework*

- High level, strategic framework to identify priority areas for adaptation across the UK.
- Scottish Government engaged in development of Framework along with UK Government, Welsh Assembly and Northern Irish Executive.
- Due for early-2008 release.

## *Scottish adaptation activity*

- Scottish Government uniquely placed to influence - and ensure good integration across - a number of policy areas central to a strong adaptation responses eg planning, health, flood risk management, transport, forestry, building standards, agriculture and nature conservation.
- Currently considering best option to support a strong adaptation response in Scotland and to address those vulnerabilities specific to Scotland



- **UKCIP Scenarios:-**

- **UKCIP '98** (300 km grid)
- **UKCIP '02** (50km grid)
- **UKCIP '08** (25 km grid)
  - (Nov '07) **UK climate trends report** – based on SNIFFER Handbook on Scottish climate trends
  - (Oct '08). **New marine and land scenarios** climate and “weather” scenarios by 25km grid and river catchment. Probability analysis of scenarios



## Current projects (07/08) funded by Scottish Government:-

- ECOSSE II – follow-up project to develop and validate the ECOSSE model to provide predictions on the impacts of climate change and land use scenarios on Scotland's organic soils
- GIFTSS I – exploratory project with British National Space Centre to evaluate satellite images for their ability to detect GHG emissions from land use sector – this will be linked to ECOSSE project
- Revision of calculation to determine carbon balance of wind farms developed on Scottish peatlands – using ECOSSE model to predict changes to soil carbon turnover



## **Improved evidence base to support introduction of Scottish Climate Change Bill and progress along trajectory to 80% emission reduction target**

- First step – initial assessment of possible options and likely costs of climate change mitigation policies in Scotland.
- Future work – develop initial project and establish more robust options and costs.
- Vast area – work with Defra, UK Climate Change Committee, Office of Climate Change and across all policy areas in Scottish Government.



## Plan to produce a ‘street map’ of climate change science advice for Scotland:-

- covering - people / institutes (Scotland or further afield) who / which can be seen as sources of authoritative advice;
- with aim - to enhance the effectiveness of scientific advice to Scottish Government policy makers
- We’ll be in touch!

# Living with Environmental Change



- UK's main funders of environmental research have joined forces to address this urgent situation.
- Living With Environmental Change is a ten-year programme, which will provide decision makers with the best information to effectively manage and protect vital ecosystem services.
- It will improve the tools and knowledge needed to build resilience, mitigate problems, and adapt to environmental change.
- **See leaflet for details.**