

*The changing climate of global  
warming*

Sir David King

Chief Scientific Adviser to HM Government

2 November

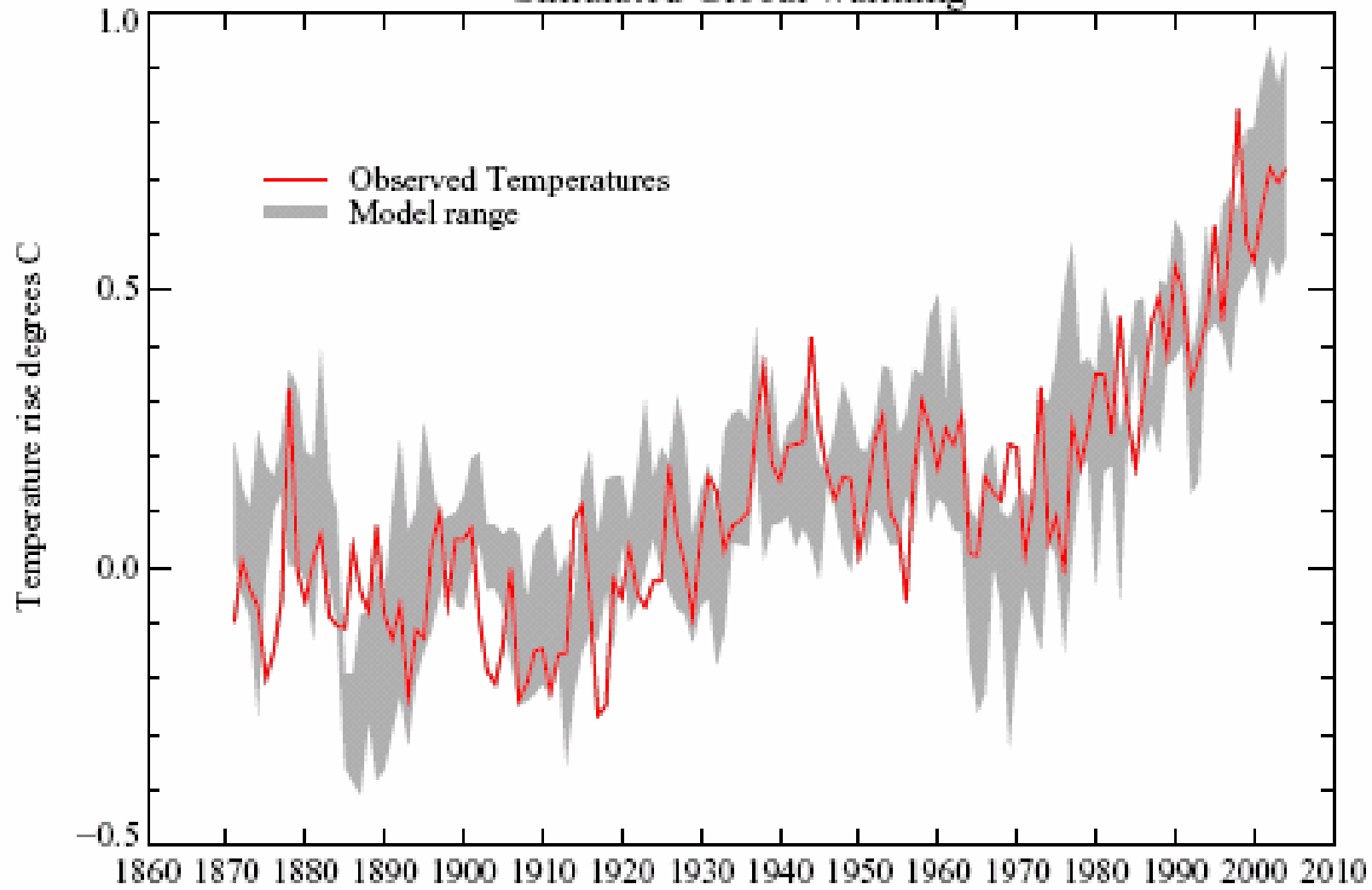
Launch of the Walker Institute  
for Climate Change System Research  
at the University of Reading

# 2004 Boxing Day tsunami

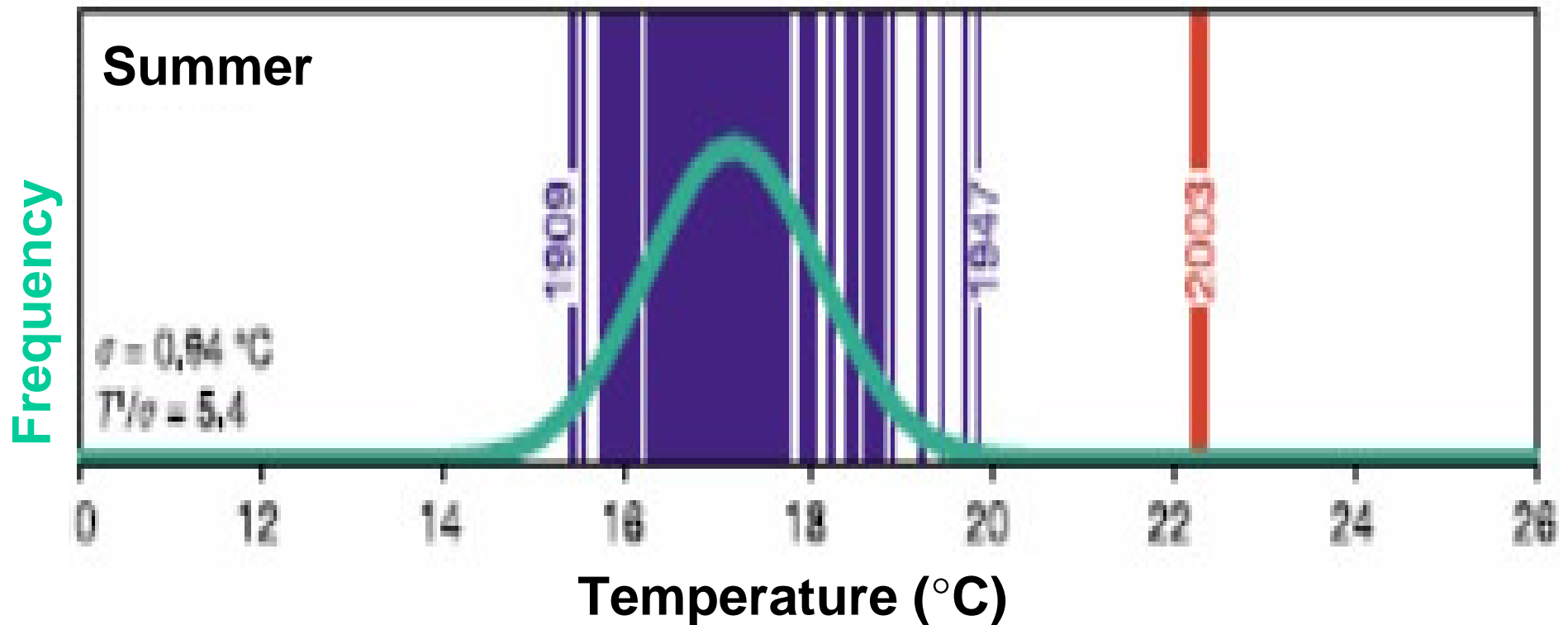
- Part of the devastation of Banda Aceh on the island of Sumatra as a result of the tsunami caused by the 2004 Indian Ocean earthquake



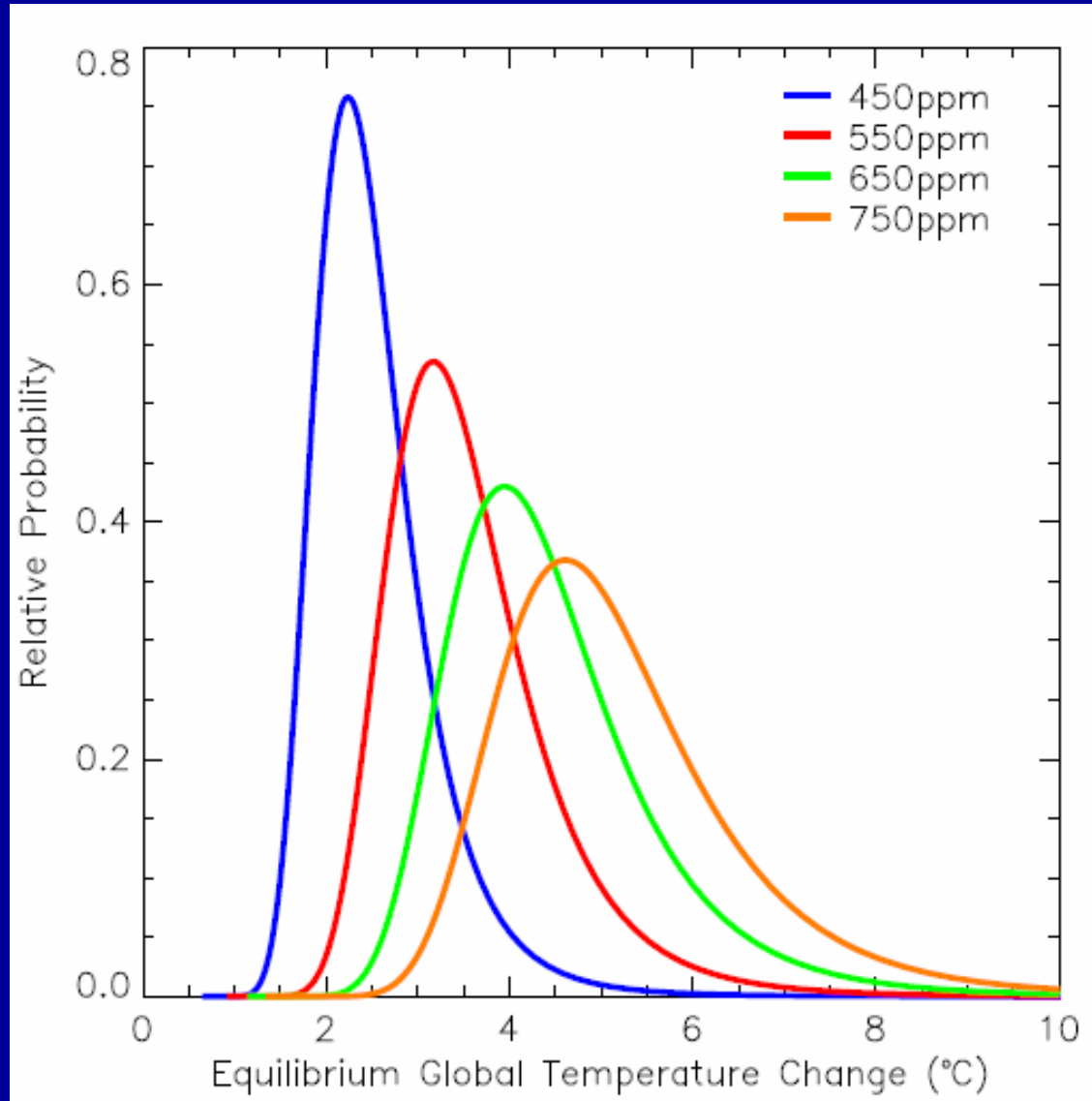
### Simulated Global warming



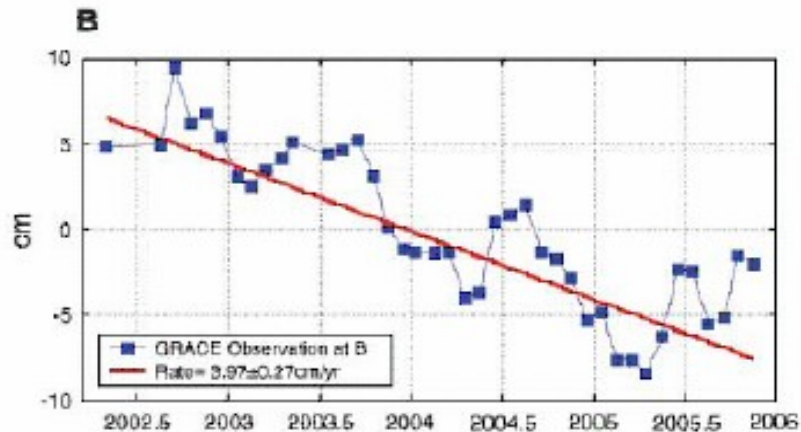
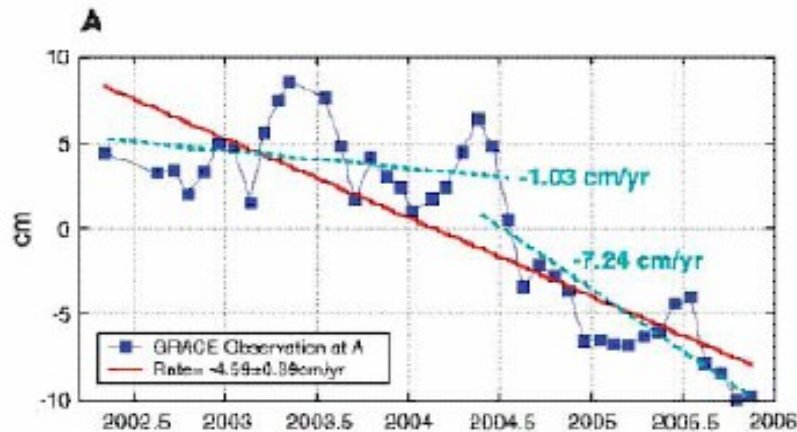
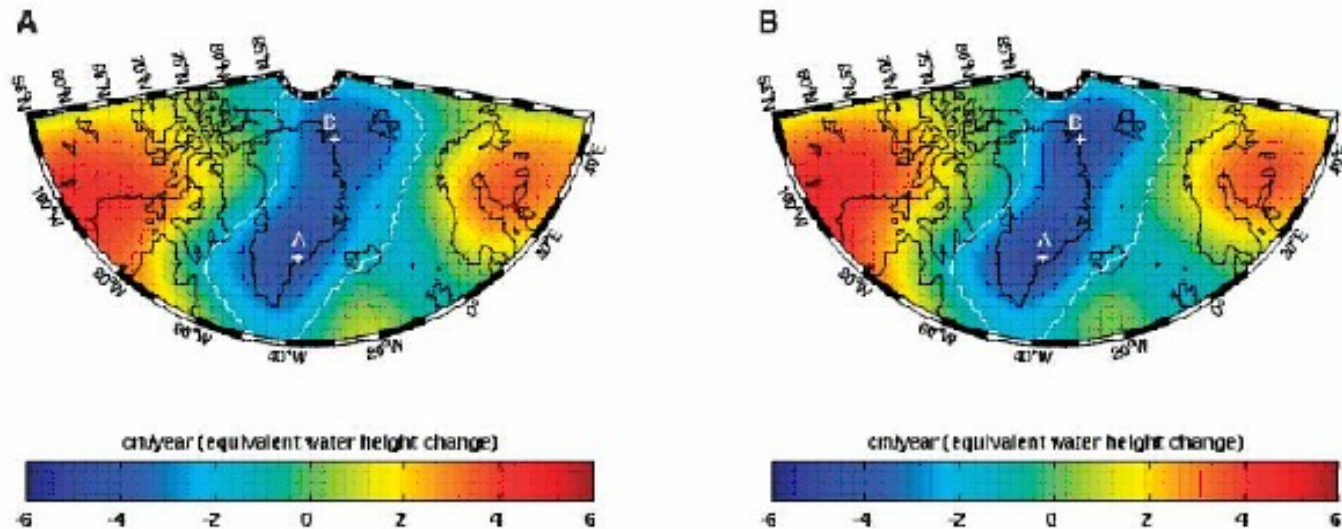
# Distribution of seasonal summer temperatures 1864-2003



# Climate sensitivity

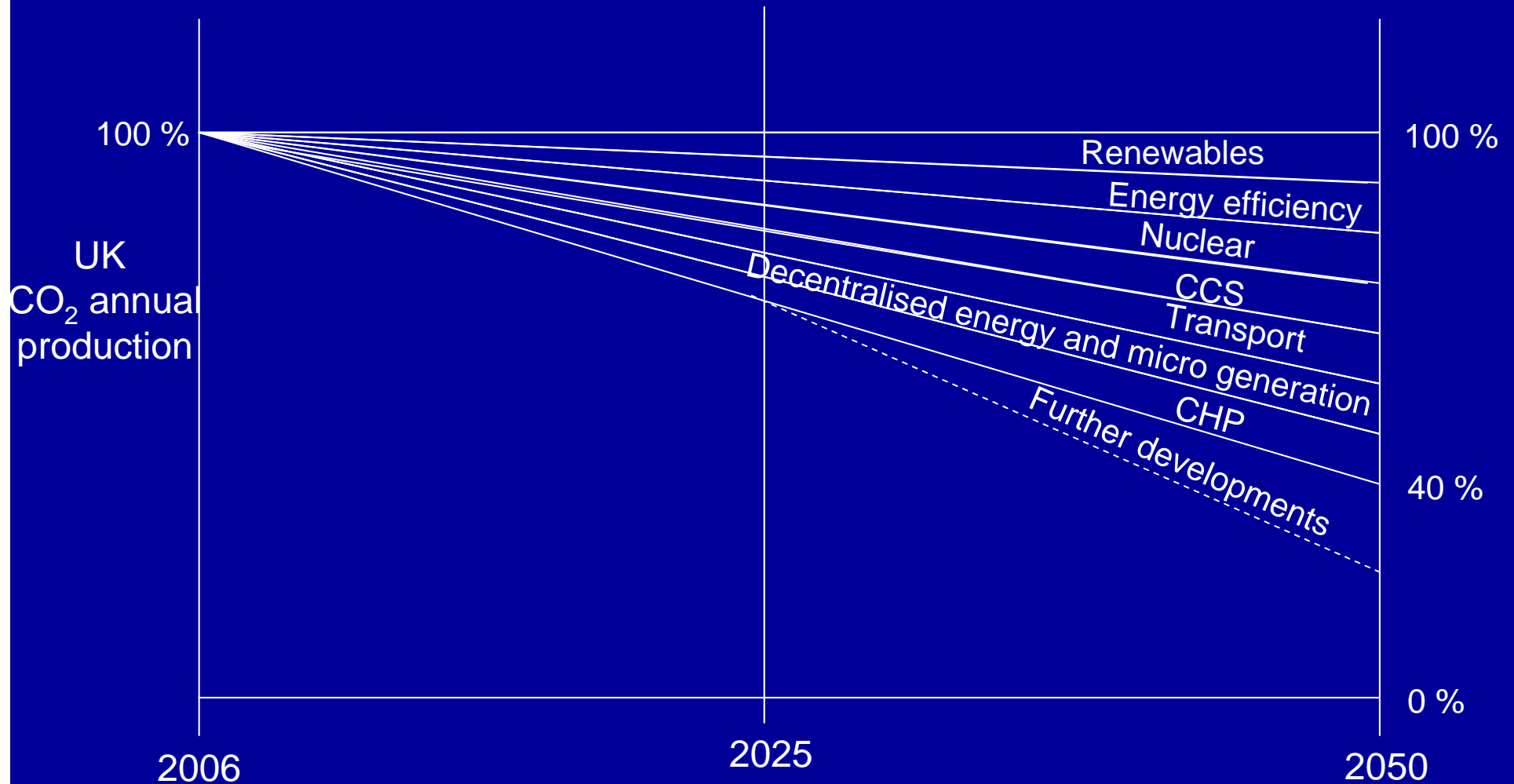


# Accelerated melting of Greenland ice sheet



Source: Chen, J.L et al, Science Vol 313, pp1958-1960 (2006)

# The wedges solution - illustrative



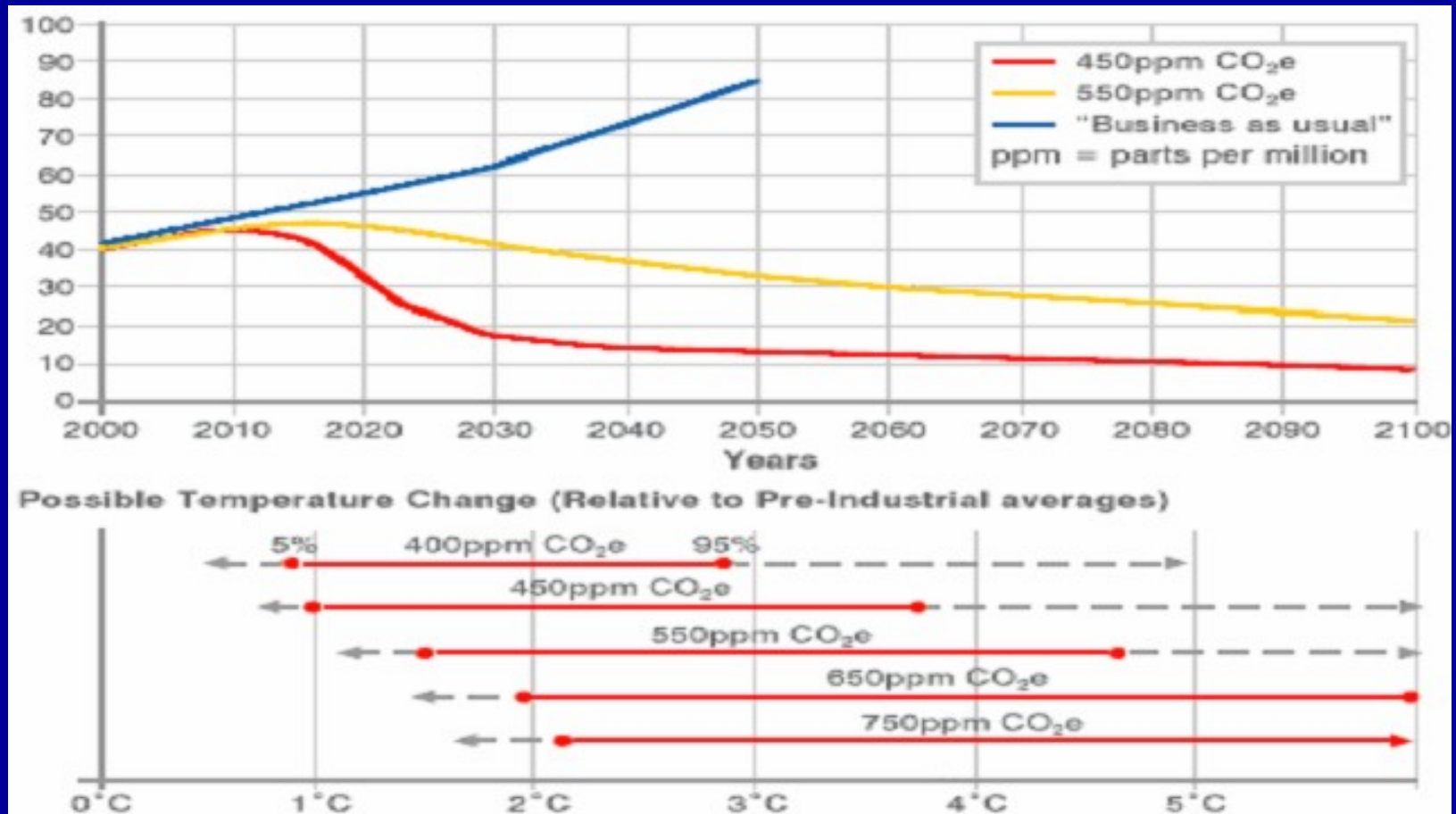
# Gleneagles Dialogue, Mexico

## October 2006

- Science and economic analysis (Stern) is now accepted
- Cost of inaction to global economies is huge
- Need to both adapt and mitigate
- Energy efficiency; carbon capture & storage; new low carbon sources – all require investment now

# Emissions path to stabilisation

Global emissions (gigatonnes of CO<sub>2</sub> equivalent gases per year)



Source: Stern Review

# Future Challenges

- Post 2012 international process
  - future of the European Trading System (ETS)
- Development of Energy Technologies Institute (ETI) – further international co-operation needed
- Science and innovation research should underpin both research activity and policy development



# Energy Technologies Institute

- Public-Private partnership between UK Government and industry
- BP, Shell, EDF and E:On all core partners
- Will invest £1bn in energy research, design, demonstration and development over 10 years
- Looking to develop links with other countries