



Briefing Note (October 2013)

Policy brief: Recent and future changes in the global and UK climate

Headline issue

The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) is the most comprehensive assessment of the physical science basis of climate change that has ever been written. This policy brief summarises the key findings of the report and policy implications for the UK.

Key points

- The Earth is warming. Almost the entire globe has warmed, including the land surface, oceans and atmosphere, while the extent of snow and ice cover has also decreased and sea level has risen.
- Global average surface temperature has increased by 0.85°C since 1880, and by about 0.6°C to 0.7°C since 1950.
- It is extremely likely, or 95 per cent probable, that most of the warming of about 0.6°C to 0.7°C since 1950 is due to human activities, such as burning fossil fuels and deforestation.
- The average annual UK temperature increased by about 0.59°C between 1910-1939 and 1983-2012, and the seven warmest years on record have all occurred since 2000.
- The linear rate of increase in UK annual average temperature since 1950 has been 0.18°C per decade, and has been faster than the rise in the global average.
- Total UK annual rainfall has also been increasing since about 1970, and six of the ten wettest years on record have all occurred within the last 15 years.
- The new IPCC report indicates that to have at least a 50 per cent chance of avoiding global warming of more than 2°C above late 19th century levels, the total cumulative budget of carbon dioxide and other greenhouse gases that can be emitted from human activities will have to be limited to no more than between about 820 and 1445 billion tonnes.
- At current rates of annual emissions, this budget would be exhausted within about 30 years, and even sooner if emissions continue to increase.

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