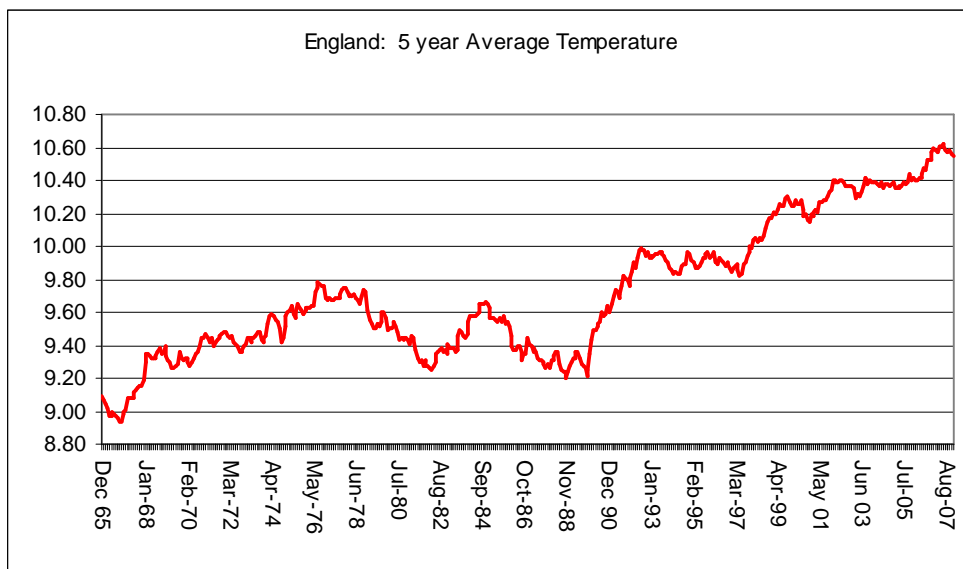


## Climate Change

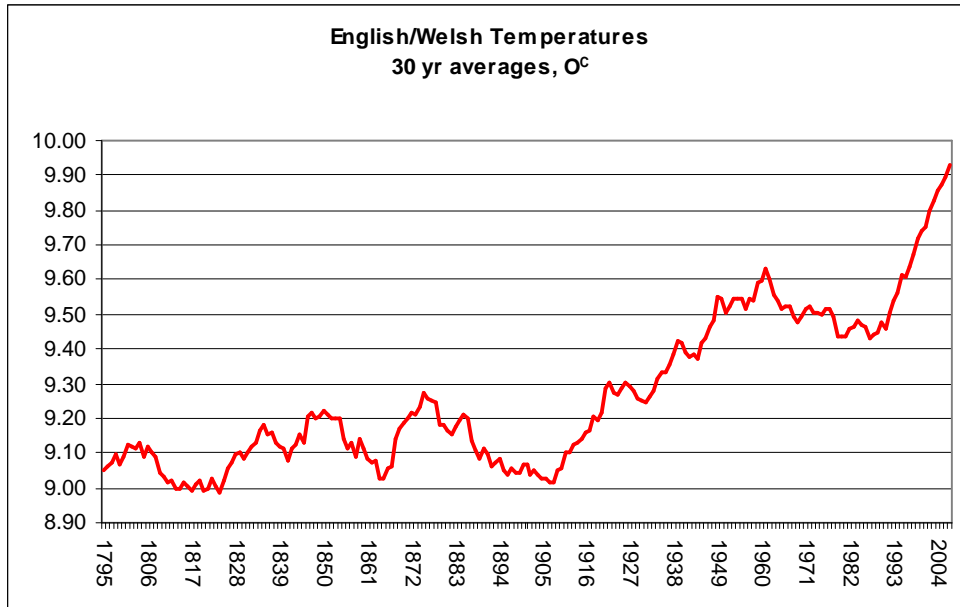
Like it or not, we are all caught up in a real time experiment to see the extent to which greenhouse gases and pollution are changing our climate. Scientists believe that greenhouse gases are causing global warming, whilst pollution, on the other hand, appears to be reducing the amount of sunlight reaching the Earth's surface, and so causing global dimming and cooling. The net effect seems to be causing temperatures to rise and - in the UK at least - rainfall to increase in Spring and Autumn. However, as with vCJD (see separate note at [www.civilservant.org.uk/vcjd.pdf](http://www.civilservant.org.uk/vcjd.pdf)), it is not possible to have absolute faith in any one interpretation of the statistics.

### The Statistics

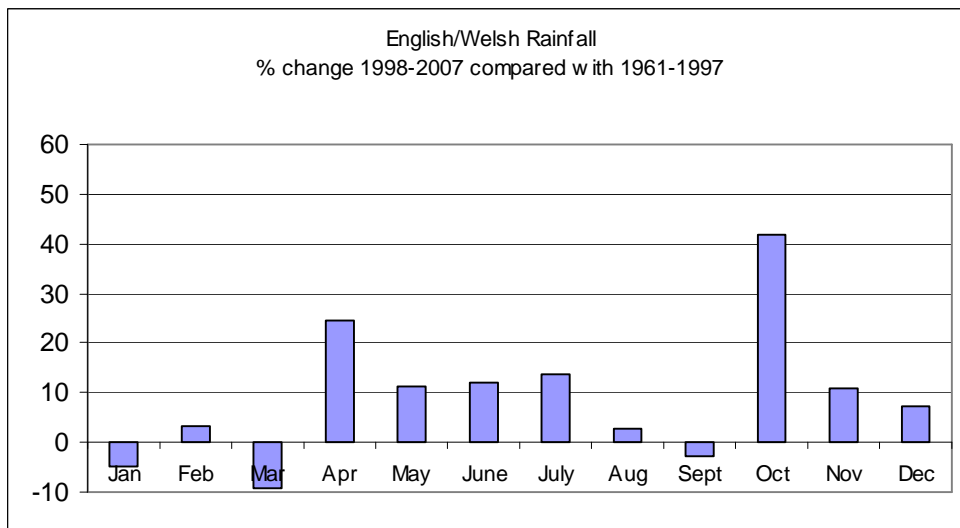
The temperature trend looks pretty clear, even over the relatively short term:-



And the 30 year temperature picture seems even clearer: an unwavering climb:



But the most dramatic recent extreme in the UK has been in rainfall, not temperature. The five years to December 2002 were, in the UK, by far the wettest five years on record. Subsequent periods, however, have been relatively dry, although April and October appear nowadays to be pretty wet most years. Maybe the climate is beginning to contain more extreme rainfall events?:-



### The Policy Options

What action would you recommend, if you were giving advice to a Minister? Few would these days doubt that global warming is really happening, but many sensible commentators, including a House of Lords Economic Affairs Committee\* have pointed out that there are big uncertainties about the economics of current proposals to limit emissions

of greenhouse gases, and that proposals that exclude developing countries are unlikely to be effective. Other commentators have pointed out that, on a global scale, the substantial increases in total emissions over the last three decades correlate closely with population growth, and that population control might be a very effective way of limiting climate change. Even the Kyoto protocol - requiring a 5% reduction in emissions - seems to miss the point. If global temperatures are anyway going to rise very quickly over the next few decades then a 5% reduction in emissions will hardly alter the result. It might make much more sense to put money into population control, developing new fuel technologies\*\*, or into ways of soaking up CO<sub>2</sub>, rather than use up precious political capital in arguing about how reductions in carbon emissions should be shared around the world.

(\* <http://www.publications.parliament.uk/pa/ld200506/ldselect/ldeconaf/12/12i.pdf> )

(\*\* see for instance Paul Klemperer's 13 December 2007 VoxEU article at <http://www.voxeu.org/index.php?q=node/803> )

*Note:- The charts in this note are updated every few months to include the latest figures from the Met Office's Hadley Centre*  
<http://www.metoffice.gov.uk/research/hadleycentre/> .

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