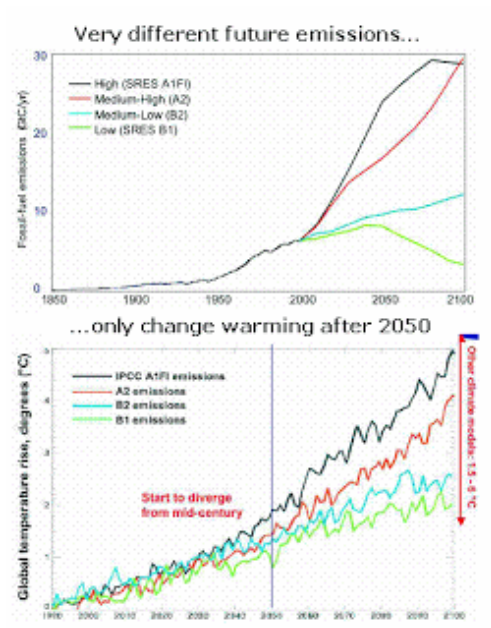


Cut greenhouse gases and see results in 50 years



Here are candidates for the most troubling graphs I came across in 2006. These are from the UK Met Office's Hadley Centre publication [Climate Change and the Greenhouse Effect \[PDF\]](#) with my titles. The top chart shows very different possible paths for emissions of greenhouse gases for the rest of the century - depending on what we do to tackle greenhouse gases. The lower chart shows modelling of what effect these will have on warming.

Now the depressing part: not much we do today to reduce emissions, even if everyone else in the world does a lot too, will make much difference to the level of warming we experience *until the second half of this century* (warming diverges after the line drawn at 2050). Why is this and what does it mean?

This is because there is a lot of 'inertia' in the climate system and a lot of warming is already committed from earlier emissions. Changes in warming lag changes in emissions by several decades. Sea level changes can take centuries to work through. Two main propositions follow from this:

1. Our collective willingness to make sacrifices to cut emissions today will depend on how much we care, really care, about welfare in 40 years or more from now when those changes start to make a difference. See [my comments on the Stern Review and how much we care about the future](#). This is why I favour aggressive pursuit of 'no-regrets' measures to reduce emissions that also save money ([see this posting](#)) I just don't think we yet have a society or a politics that looks sufficiently far ahead to take pain today for gain in 40 to 200+ years time. I am not advocating softening on emissions reductions...far from it. But we need to be smart about what we expect people to do.

1. To the extent that we can influence *welfare outcomes* related to climate change (ie. impacts on mortality, disease, poverty, conflict, etc) over the next 30-40 years it will be almost entirely down to how well we *adapt* to the inevitable warming we will face rather than how we reduce emissions (eg. flood management, water security, food security, coastal realignment, resilience of infrastructure, changes to buildings). We are undervaluing this at present and need to get serious about adaptation to climate change. Especially in developing countries where the risks and the vulnerability are highest and resilience lowest.