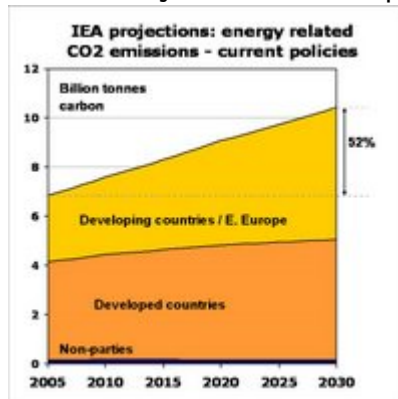


Stern warning ahead

written by Clive Bates | 28 October 2006



I'm looking forward to the release of the [Stern Review on the economics of climate change](#) on Monday. Sir Nick Stern has been thoughtful and eloquent on the subject, describing the problem of climate change as a complex international and intergenerational collective action problem, in conditions of uncertainty and with potentially irreversible effects. He also makes much of grounding the economics in the science - hopefully consigning once and for all one of the great shortcomings of many of the sceptics' economic critiques of climate change. The timing is auspicious and deliberate - in advance of the [UNFCCC & Kyoto Protocol meeting](#) in Nairobi in November, where new impetus will be sorely needed.

Much of the economic debate about climate change has focussed on four themes: the impact of growth on emissions; the availability of low-C technologies and the economics of their adoption; [the external \(social\) cost of carbon](#); and fiscal instruments and market designs to control emissions. A bold new analysis will need to build on this and integrate several difficult concepts. If I may be so bold:

- **Tolerability of climate risks** in conditions of uncertainty - the [Avoiding Dangerous Climate Change](#) initiative points to the need to keep temperature rises below 2 degrees (and so stabilising at 450ppm CO2 equivalent or less) otherwise risk triggering major changes like melting of polar ice caps. But we are already at 425ppm and *emissions* are rising rapidly (see IEA projection chart above) - adding 2ppm per year. It will be incredibly difficult to turn this around and get emissions to fall fast enough to hold concentrations at 450ppm. So how risky is too risky? And how much should we be ready to spend and act to mitigate these risks?
- **Costs of adaptation and impacts** - we do have options to spend to control impacts. For example, the [Foresight Future Flooding report](#) for the UK estimated property damage costs due to flooding would rise from £1.4 billion to £27 billion per year under current policies in a business-as-usual climate change scenario. However, an adaptation programme could keep that to £2 billion per year if we increase flood risk management

expenditure from £500m to £1.1 billion per year. How does that sort of calculation play out world wide? The [World bank's project in Bangladesh](#) shows what could be done but also how difficult it is - and it's not just a matter of money.

- **Equity and burden sharing...** UK CO2 emissions (2002) per capita were 9.1 tonnes compared to 3.0 for China, and cumulative emissions per capita from were 504 and 56 tonnes respectively. [[CAIT for data](#)]. But we can also expect impacts to fall disproportionately hard on poor countries: the literature on the development impacts of climate change is growing and scary - I liked this recent [Tear Fund report](#) (if not the advice to pray for the climate). Who should bear the costs?
- **Short-termism and insularity.** My concern is that whatever our leaders might say, we collectively simply don't care enough about the future or other countries to bother ourselves too much to act on their behalf. One of the most troubling realisations is that most of our efforts to address climate change will not impact significantly on the climate until the latter half of the present century (see p.40 of this [excellent Hadley Centre briefing on climate change](#)) - is there anything we can do to overcome this...? My own view is that 'no-regrets' measures (things that have good economics in their own right - mostly efficiency measures) are much under-discussed and have a huge potential role.

Stern promises to deploy many concepts in his analysis: [collective action theory](#), [game theory](#) and [free-riding](#), [externalities](#), [development economics](#), [behavioural economics](#), and much more. It will be an important contribution if he and his team can give us better ideas about how to strike a balance between controlling and tolerating risk, and the related costs and benefits of mitigation and adaptation, and, given his emphasis on the collective action problem, some new insights into *who* should pay for *what* and *how*.