



Call for urgent action on climate change

Urgent action to mitigate climate change makes economic sense, according to a new report which presents a response to critics of the *Stern Review*. The report also calls for a greater consideration of risk and ethical issues in economic climate change models, as well as political agreement on greenhouse gas (GHG) targets.

The landmark *Stern Review*¹ discussed the effects of climate change on the world economy. Some critics, particularly economists, argued that Stern had overestimated the present value of the costs of climate change and underestimated the costs associated with reducing emissions. Business stakeholders argued that the economic cost of Stern's proposals would be severe.

The new report argues that the cost of having to cope with the effects of climate change is much higher than the cost of mitigating climate change. It argues that adaptation can play a significant role in controlling costs and capturing benefits if global temperature rises are limited to 1-2 °C. However, under the business as usual model the authors argue that global temperatures could rise by as much as 5 °C, which could cause abrupt and global changes, such as weakening the Atlantic thermohaline circulation and collapse of ice sheets leading to significant sea level rise, to which we could not easily adapt.

Furthermore, expecting future generations to cover the costs of adapting to these changes is unethical. Basing real world policy on formal economic models would be misleading and dangerous, the report argues. This economic view of the environment as an externality fails to take into account several key aspects of climate change. Namely that:

- Climate change is global in cause and consequence
- Its impacts are long-term and persistent
- There is risk and uncertainty surrounding the impacts
- There is a risk of major, irreversible change that will affect global growth and development

The *Stern Review* recommends that the GHG target range should span 450 to 550ppm (parts per million) CO₂e (a measure that combines the effect of all the GHGs), and that we should act now to avoid costly delays and more extreme measures in the future.

The costs of climate change for global trade in commodities as well as in terms of damage to human wellbeing, social instability and migration are great. For example, as global temperature rises by over 4 °C, which studies predict is possible at 550 ppm CO₂e, entire regions are expected to see significant declines in crop yields, which may be as high as a third in Africa, and sea level rises are predicted to affect major cities, such as New York, Shanghai and London.

Strong and urgent action on GHG emissions is likely to help reduce the cost of new, low-emissions technologies more quickly, because these will then benefit from economies of scale. Political agreement on targets improves the credibility of climate change policy, leading to greater investment in low-emissions technologies².

1. Stern, N. 2007. *The Economics of Climate Change: The Stern Review*. Cambridge: Cambridge University Press.
2. EU leaders have set three key targets to be met by 2020:
 1. a 20 per cent reduction in energy consumption compared with projected trends
 2. an increase to 20 per cent in the share of total energy consumption provided by renewable energy
 3. an increase to 10 per cent in the share of petrol and diesel consumption from sustainably-produced biofuels.

These targets are now being discussed by the European Parliament and the Council of the EU. EU leaders have expressed their wish for agreement to be reached on the package before the end of 2008. See: http://ec.europa.eu/environment/climat/home_en.htm

Source: Dietz, S. and Stern, N. (2008). Why Economic Analysis Supports Strong Action on Climate Change: A Response to the Stern Review's Critics. *Review of Environmental Economics and Policy*. Doi:10.1093/reep/ren001.

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