

Research impact: making a difference

Designing a global agreement on climate change finance

Research by Nicholas Stern and colleagues influenced an international agreement to provide \$100bn p.a in support for crucial climate change activities in developing

What was the problem?

The risks of unmanaged climate change are huge. Changes in temperature and climate patterns have the potential to force the migration of hundreds of millions of people and produce severe and extended conflict as people escape from the areas worst affected by, for instance, coastal and inland flooding, heatwaves, storms and hurricanes, droughts and desertification.

Climate change is being driven by rising levels of carbon dioxide and other greenhouse gases in the atmosphere, which enhance the Earth's natural 'greenhouse effect'. This increase is due to human activities such as the burning of fossil fuels and deforestation. International efforts to address climate change have therefore focused primarily on reducing greenhouse gas emissions and increasing levels of resilience against those impacts that cannot now be avoided.

Close to 115 world leaders attended the 15th session of the Conference of the Parties (COP15) to United Nations Framework Convention on Climate Change (UNFCCC), which took place in Copenhagen in December 2009.

COP15 aimed to produce a new international agreement on actions to achieve the UNFCCC aim of avoiding dangerous climate change.

What did we do?

Prior to the conference, LSE Economics Professor Nicholas Stern, Chair of the Grantham Research Institute on Climate Change and the Environment, and his colleagues had conducted research into the required scale, nature and potential sources of financial support for climate change action.

They showed that mitigation actions by rich countries, which historically have been the biggest emitters of greenhouse gases, were necessary but not sufficient to avoid the risks of dangerous climate change.

Estimates by the United Nations suggested that by 2050 over eight billion out of a global population of about 9 billion would live in what are today described as developing countries. Even if rich countries managed to reduce their emissions to zero, the emissions produced by poor countries would need to be radically reduced from projected levels. Stern and colleagues argued that any effective global deal must therefore have poor countries at its centre. Basic principles of

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equity required rich countries to provide additional assistance to help poor countries handle the projected expense of meeting their emissions targets and adapting to those impacts of climate change that cannot be avoided.

In his book, *A Blueprint for a Safer Planet*, based on the LSE research which was published early in 2009, Stern estimated that rich countries would need to provide US\$130 billion a year in public funding to support developing countries in boosting climate resilience and making the transition to low-carbon economic growth.

Flows of a further US\$100 billion from rich to poor countries could be generated by the 2020s by developing carbon markets, which create a price on carbon and allow the sale and purchase of emissions allowances, hence generating revenues while also reducing emissions.

Stern also highlighted the importance of carbon taxes as both a source of revenue and an incentive to reduce emissions. He suggested that governments extend carbon pricing policies beyond their domestic markets to international shipping and aviation.

What happened?

Stern had discussions about climate finance during 2008 and 2009 with a number of leaders and ministers in key countries and outlined the case for increasing financial support for developing countries. In June 2009, the UK Prime Minister, Gordon Brown, announced his support for a fund to channel US\$100 billion per year by 2020 from rich countries to support action by developing countries.

Stern worked closely with Ethiopian Prime Minister Meles Zenawi on a proposal to commit rich countries to providing US\$50 billion p.a by 2015 and US\$100 billion p.a by 2020 and to establish a formal mechanism for exploring potential sources. Prime Minister Zenawi, working closely with Stern before and during the conference, put forward their proposal at the Copenhagen conference, where it received the backing of the United States and other countries.

Although the conference closed without an all-encompassing international deal, the participants agreed that rich countries should provide US\$100 billion a year by 2020 to support developing countries.

According to a high-ranking official in the UK Government, “The High Level Commission on Climate Finance set up by Ban Ki Moon and chaired (initially) by PM Gordon Brown [UK] and PM Meles Zenawi [Ethiopia] was, in many ways, an outcome of Stern’s research and influence. During the course of that High Level Panel’s work Lord Stern was the dominant intellectual leader, drawing upon the results of his research program.”

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Stern was invited by United Nations Secretary General Ban Ki-moon to serve as a member of the High Level Working Group on Climate Change Financing. The Group was asked to undertake a study of potential ways to scale up new and additional resources from developed countries for financing of climate change mitigation and adaptation activities in developing countries. Stern contributed to a number of analytical papers about various potential sources of revenue.

The 16th session of the Conference of the Parties (COP16) to the UNFCCC in Mexico in November 2010 acknowledged this Working Group's report and decided that rich countries should provide US\$30 billion between 2010 and 2012, increasing to US\$100 billion a year by 2020.

COP17 in Durban, South Africa in November and December 2011 built upon the report of the High Level Working Group by establishing a work programme on long-term climate finance. This programme focused on analysing options for mobilising resources from a wide variety of sources in order to hit the US\$30 billion and US\$100 billion targets. By the end of 2012, developed countries reported that they had exceeded the commitment to provide US\$30 billion between 2010 and 2012.

LSE research has been acknowledged as highly influential in these climate change finance activities and outcomes. According to a high-ranking official in the UK Government, "The commitment of advanced countries to provide US\$100 billion per year for climate investments in developing countries owes much of its intellectual basis to Lord Stern... The High Level Commission on Climate Finance set up by Ban Ki Moon and chaired (initially) by PM Gordon Brown [UK] and PM Meles Zenawi [Ethiopia] was, in many ways, an outcome of Stern's research and influence. During the course of that High Level Panel's work Lord Stern was the dominant intellectual leader, drawing upon the results of his research program."

In 2013, Stern was elected President of the British Academy, and in 2014 he was awarded a prize from the British Institute of Energy Economics (BIEE) for the greatest contribution to British energy economics over the last ten years.

Professor Lord Stern of Brentford is I.G. Patel Professor of Economics and Government, Chair of the Grantham Research Institute for Climate Change and the Environment, and Chair of the ESRC Centre for Climate Change Economics and Policy at London School of Economics and Political Science. Lord Stern is also President of the British Academy. His research interests include the economics of climate change; economic development and growth; economic theory; tax reform; public policy; and the role of the state and economies in transition. He was Second Permanent Secretary at Her Majesty's Treasury and Head of the UK Government Economic Service 2005-07, during which time he was also adviser to the UK Government on the Economics of Climate Change and Development, and led the Stern Review on the Economics of Climate Change, which was published in 2006. Previously, he was also Chief Economist and Vice-President at the World Bank. During his time as Chief Economist of the European Bank for Reconstruction and Development, and Visiting Professor of Economics at LSE, he was one of the founding forces behind the Asia Research Centre at the LSE, formally becoming its director in 2007. Lord Stern recently received a prize from the British Institute of

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Energy Economics (BIEE) for the greatest contribution to British energy economics over the last ten years.

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