

## Climate change worse than expected, argues Lord Stern

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The economist who laid out the business case for combating climate change in 2006 suggests that his own review underestimated the risk from global warming.

Climate change looks far more threatening than it did six years ago as the world marches toward a warming of 4 degrees Celsius higher by the end of the century compared to the preindustrial era, said Lord Nicholas Stern, a professor of economics and chairman of the Grantham Research Institute at the London School of Economics.

Stern called for new and better climate models and better economic assessments of climate impacts but maintained that the main obstacle to action is political will.



According to Stern, the current rate of greenhouse gas emissions will warm the world much more than the targeted 2 degree Celsius above preindustrial levels by the end of the century. Image: Flickr/CIAT International Center for Tropical Agriculture

The former World Bank chief economist was critical of his own 2006 review on the economics of climate change, a document considered seminal to climate change discussions, which estimated that the overall cost of climate change would shave off at least 5 percent of gross domestic product growth annually. Stern said that the review underestimated the "immense risk" from global warming. He made a similar admission and warning earlier this year at the World Economic Forum in Davos, Switzerland.

Speaking at the International Monetary Fund headquarters in Washington, D.C., Stern painted a gloomy picture of emissions being at the top end of the Stern Review projections, sea ice decline and ocean acidification occurring faster than anticipated, and growing impacts from feedbacks and tipping points not factored into climate models.

The current rate of greenhouse gas emissions will warm the world much more than the targeted 2 degree Celsius above preindustrial levels by the end of the century, according Stern. Even if nations stick to the emissions reduction commitments they made at the 2010 U.N. climate conference in Cancun, Mexico, temperatures will rise between 4 and 5 degrees, causing boundaries for deserts, coastlines and rivers to be redrawn. These issues of human welfare need to be factored into climate models, Stern said.

### Life-affecting changes

He drew on the example of climate models that predict a 20 percent loss in agriculture in India with a 4-degree-Celsius rise in temperature. The models do not factor in further deterioration due to loss of snow in the Himalayas that would lead to destruction of rivers or for radical changes in the south Asian monsoon. "Some of the questions we have to ask are what really affects human life -- extreme weather events, inundation, desertification. That's what affects human life," Stern said.

Also missing from current climate models are the lasting and dynamic impacts of extreme weather events. "Some close friends in Pakistan tried to describe to me with what happened in the floods in 2010. They said development was put back by 20 years. If you put back development by 20 years every 10 years, you are going backwards," he said.

Similarly, according to Stern, economic assessments underestimate impacts of climate change, place a modest price tag on carbon, and don't make room for loss of capital, labor and land in the future. The economic scenarios fail to recognize that future generations may be poorer and growth could be reversed, he said. He called the discussion of discounting in climate change "purely awful."

Another major failure of economic policies, he said, has been the pricing of hydrocarbons. "You cannot believe two things together -- that the price of hydrocarbons is right and the world has a 50-50 chance of holding to 2 degrees [Celsius]," Stern said.

The economist said that world has to make the transition to a low-carbon economy with innovation, investment and dynamism. "We have to see this alternative path as a new energy industrial revolution. We must divide emissions output by a factor of seven or eight," said Stern pointing to the fast-falling costs of solar energy technology as evidence that it can be done.

Technical progress is needed not only in alternative energy technology but in hydrocarbons, as well, and for developing other lower-emission bridge fuels, like natural gas, in the move toward fossil fuel-free economies, he said.

Political inaction on climate change may have been largely due to the global economic crisis, but Stern was emphatic that growth and climate management are not antithetical. "We must be very careful to think of development, mitigation and adaptation as together. Sometimes they get separated out. That's a logical and policy mistake of great magnitude," he said.

Climate change on the agenda for IMF, World Bank

Stern said it is time for governments to invest in low-carbon growth with clear and credible policies and instruments to manage risks. "We can't portray this as an artificial horse race of growth on the one hand and climate responsibility on the other," he said.

The political environment for action on climate change in 2014 is as good as it is going to get, said Stern, with U.S. President Obama and Secretary of State John Kerry, Chinese Premier Li Keqiang, German Chancellor Angela Merkel and French President François Hollande promising action on reducing emissions, promoting clean energy and pricing carbon.

The IMF's chief managing director, Christine Lagarde, and the World Bank's vice president of sustainable development, Rachel Kyte, also spoke at the event, throwing the combined weight of their institutions behind climate-smart economic policy.

Lagarde said that the IMF's core mandate is to provide policy advice and technical assistance to countries on all issues directly and indirectly related to issues of growth, and climate change is central to revenue raising, sustainability and stability. "The same goes when we offer some expertise on carbon pricing. We must get prices right. It has many ramifications in terms of climate change and revenue raising," Lagarde said.

Lagarde and Kyte said that it is the role of global financial institutions to provide poor people the cushion when climate change pulls the rug from under their feet. Therefore, Kyte said, "It is not bizarre, odd, weird or off point for the IMF and the World Bank group to be talking about climate change as the next big economic risk."

**Fonte: Scientific American [Portal]. Disponível em: <<http://www.scientificamerican.com/article.cfm?id=climate-change-worse-than-expected-argues-lord-stern&page=2>>. Acesso em: 3 Apr. 2013.**