



Commentary

## Climate Change: A Perilous Path

Bjorn Lomborg 09.21.09, 12:00 AM ET

Evidence is growing that relatively cheap policies like climate engineering and non-carbon energy research could effectively prevent suffering from global warming, both in the short and long term. Unfortunately, political leaders gathering at a special meeting of the United Nations in New York this week will focus on a very different response.

They will make many of the most important decisions on how to respond to climate change over the next decade. They are expected to thrash out political disputes like how much carbon rich and poor nations should agree to cut. The real question that must be addressed is: Do we want to be the generation that promised so much but failed to solve global warming? We will not be judged by our descendants on our rhetoric, nor on the scale of our promises. We will be judged on what we deliver.

We have failed to rein in emission rises despite sincere and well-meaning promises made in Kyoto in 1997 and earlier, because carbon cuts are expensive to enact. That problem is only going to grow as our promises become more ambitious.

Research by climate economist Professor Richard Tol shows that carbon cuts big enough to keep temperature rises lower than 2 degrees Celsius (3.6 degrees Fahrenheit)--a target that the G-8 and many others argue is necessary--could cost a staggering 12.9% of global GDP in 2100. That is the equivalent of \$40 trillion a year. Available estimates show that the welfare loss induced by global warming will be just \$3 trillion per year by 2100. For each dollar spent on global carbon cuts, we buy two cents worth of avoided climate damage. The solution is far more costly than the problem.

A global deal based around carbon cuts is expected to include a lot of spending from rich countries to help poor nations to prepare for global warming. There is a great danger that this will actually be diverted away from saving lives that are at risk from *today's* problems. Developed countries seem set to spend much money to save few lives in the distant future, instead of combating malnutrition, malaria, or communicable diseases today. It is amoral to build a dam to avoid flooding in 100 years, when the people living beside that dam are starving today. We should be helping communities become stronger today and better able to prepare for global warming in 50 years.

Little wonder that five of the world's top economists--including three Nobel laureates--who gathered this month for the Copenhagen Consensus on Climate to evaluate policy responses to climate change found that global carbon taxes are a "very poor" option.

Yet, carbon cuts have become the mantra of the political elite. We need another way that is politically feasible, economically responsible and morally right. World leaders should focus on the investments that the economists for the Copenhagen Consensus project found most promising.

Imagine we could fix climate for the next hundred years for less than what the U.S. spends on climate research in a year. Research from Eric Bickel of the University of Texas highlights the potential of climate engineering to do just that.

Bickel explores the costs and benefits of so-called marine cloud whitening, a well-established tech-proposal in which boats would spray seawater droplets into clouds above the sea to make them reflect more sunlight back into space--augmenting the natural process where evaporating ocean sea salt helps to provide tiny particles for clouds to form around. He concludes that about \$9 billion spent developing this technology might be able to cancel out this century's global warming. The benefits--from preventing the temperature increase--would add up to about \$20 trillion. We should research this technology today to identify its limitations, risks and potential as a stop-gap measure that could buy us a century's delay in warming.

To sustainably reduce temperature rises, though, we need better non-carbon-based technology options. Research by

economist Chris Green from McGill University shows that non-fossil sources like nuclear, wind, solar and geothermal energy will--based on today's availability--get us less than halfway toward a path of stable carbon emissions by 2050, and only a tiny fraction of the way towards stabilization by 2100.

Policy makers should abandon carbon-reduction negotiations and make agreements to seriously invest in research and development. About \$100 billion spent annually on non-carbon-based energy research could essentially stabilize our emissions and get temperature reductions under control within a century or so. Green conservatively concludes that the benefits of such an investment--from reduced warming and greater prosperity--would bring about \$11 worth of climate damage prevention for every \$1 invested.

Because research spending would be much cheaper than carbon-emission cuts, there would be a much higher chance of political agreement, and a much higher probability of the promises being enacted.

Many of us fear inaction on global warming. But we should equally fear continuing down the perilous path of promising costly action that will either fail to be enacted, or be more harmful than global warming itself. We have within our grasp alternative policy options that would truly leave the planet in a better state.

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