



## Moving beyond Kyoto

To seriously address the issue of global climate change, policymakers need to establish a framework that extends through the end of the century By JEFFREY D. SACHS

Late in 2006 several events moved the U.S. and other countries closer to serious global negotiations to control greenhouse gas (GHG) emissions. It is therefore timely to ask what a meaningful global agreement would entail. A solid starting point is the 1992 U.N. Framework Convention on Climate Change, the international treaty that binds countries to act on the problem and under which specific measures, such as the Kyoto Protocol, are adopted. The signatories to the Framework Convention, including the U.S. and almost all other countries, declared the objective to be the “stabilization of greenhouse gas concentrations in the atmosphere at a level which would prevent dangerous anthropogenic [man-made] interference with the climate system.” The Kyoto Protocol, adopted in 1997, did not implement this idea very well: it took a short-term view of a long-term objective and as a result lost clarity, credibility and support along the way. The key now is to move beyond it.

**The costs of emissions control will be far lower than the costs of inaction.**

The Kyoto Protocol calls on the high-income countries and the postcommunist nations of eastern Europe and the former Soviet Union to reduce their GHG emissions as of 2012 by around 6 percent compared with the 1990 level. This commitment is far better than nothing (a fair description of the Bush administration’s nonpolicy), but it has two major flaws. First, it leaves out the developing countries, which soon will emit more than half of the world’s GHGs. Without the active participation of China, India and other developing countries, stabilization of emissions is simply impossible. Second, the Kyoto Protocol takes the long-term objective of stabilization of GHG concentrations and transforms it into a short-term target on emissions reductions, with no clear link between the two. The main actions for stabilization will have to be long-term changes in technology, which exceed the 2012 horizon of the Kyoto Protocol.

This time around, it is better to start with a long-term view. “Dangerous anthropogenic interference” will most likely kick in when carbon concentrations in the atmosphere are at 450 to 550 parts per million (ppm). The world’s current trajectory

of energy use, deforestation and industrial growth could easily take us to twice that range by the end of the century. *The Stern Review*, an excellent new report by the U.K. Treasury, makes clear that the consequences could be catastrophic: melting of ice sheets, with a huge rise of ocean levels; massive crop failures; increased transmission of diseases; and potentially calamitous effects on ecosystem services.

The world should therefore agree to stabilize GHG concentrations in the 450 to 550 range (my esteemed colleague Jim Hansen urges the lower end of the range, others the higher end). A midcentury goal, perhaps 50 ppm lower, would provide a 40-year target consistent with the end-century target. As new scientific evidence arises, the goals would be periodically adjusted. With the two long-term anchors set, the world’s governments could then agree on strategies for reaching them. These strategies would include market incentives to reduce emissions; greatly expanded research on sustainable energy use, land use and industrial development; and technology transfers from rich to poor countries.

*The Stern Review* makes clear that the costs of such control will be far lower than the costs of inaction. Low-cost, high-benefit efforts look promising in at least three major areas: improved energy efficiency, energy technologies that reduce greenhouse gas emissions, and sustainable land use. Smart technologies can probably keep the long-term annual costs of GHG stabilization at below 1 percent of global GDP. Rich countries can help poor countries to adopt the needed technologies.

It is time, therefore, to aim for a sensible long-term framework in which all countries will participate. The economics are right. The U.S. Congress is set to back such a course. The White House will as well, soon after 2008 and, with some luck, even before. SA

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