Avoiding the worst case of climate change

By THOMAS A. STONE
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Climate change is happening now and will continue because there is so much carbon dioxide (CO2) in the atmosphere that future impacts are both inevitable and irreversible. Completely stopping CO2 emissions today, if possible, would not reverse climate change.

New analyses by a team led by Susan Solomon, a researcher with the National Oceanic and Atmospheric Administration, already see drying in the Southwestern U.S. due to climate change. The researchers predict droughts there reminiscent of the Dust Bowl that could continue for centuries because of persistently high levels of CO2.

Other aspects of irreversibility include an inexorable sea level rise of at least a meter accompanied by more melting of glaciers, ice caps and polar ice. The loss of the Himalayan glaciers, vanishing in the next 40 years, would be catastrophic for the hundreds of millions of people who get their water from the great rivers that these glaciers feed.

But this inevitability is not a reason to let up in our efforts to reduce our greenhouse gas emissions. As the predicted climatic effects of the greenhouse gas buildup range from tolerable to catastrophic, we must still reduce our CO2 emissions to avoid the most extreme climates. We must err on the side of caution and recognize that doing nothing will, in the end, be vastly more expensive than acting now.

There is a high price for delay. Climate change deniers make the struggle both more difficult and more costly, as early reductions are the key to avoiding the worst effects of climate change.

What might be the cost of stabilizing the amount of CO2 in the atmosphere? Economist Lord Nicholas Stern, in a 700-page analysis done for the British government, estimated the cost would be about 1 percent of gross domestic produce. The recent GDP of the U.S. was $14.4 trillion (third quarter 2008), so 1 percent would be about $144 billion.

While a large number, certainly, it is only a fraction of what we in the U.S. have put into bailout efforts in past year alone. Moreover, researchers at the Rocky Mountain Institute think climate protection may actually be profitable rather than costly, as saving energy through improved efficiency is cheaper than buying it. In the word of Rocky Mountain's Amory Lovins, "It is cheaper to fix than to ignore."

The first step to slowing greenhouse gas emissions is putting a price on carbon. Both the European Union and the 10-state Regional Greenhouse Gas Initiative, which includes states from Maine to Maryland, have done this, with the participating states using groundbreaking CO2 emission allowance auctions. Auctions provide money for states to invest in energy efficiency and let the market most economically allocate emission allowances.

It is now time for a similar federal program to unify the regional efforts and to put all large fossil fuel emitters on notice that there is a price for polluting the skies with greenhouse gases. If done, this will spark a wave of innovation that will vastly transform the energy sector and the economy as well as improve our energy security by reducing our dependence on foreign sources of oil.

We need to keep climate changes to a minimum by reducing greenhouse gas emissions as rapidly as possible at all scales, locally, regionally, nationally and globally. We, and farmers and their crops, depend upon a predictable climate. Every seed that goes into the ground is programmed to expect a climate like the one in which it was created. Our obligation to our children and grandchildren is to minimize climate change to give them a predictable world in which to grow.

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