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*What Should We Do About  
Global Warming? Weighing the  
Pros and Cons*

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# What Should We Do About Global Warming? Weighing the Pros and Cons

by Murray Weidenbaum

The most controversial environmental issue facing the United States today is how to respond to the pressure to fight global warming by substantially reducing emissions of carbon dioxide (CO<sub>2</sub>), the leading greenhouse gas. Representatives of the United States and about 150 other nations are scheduled to meet in Kyoto, Japan, in December 1997 to sign a successor treaty to the United Nations' voluntary 1992 Framework Convention on Climate Change.

It is with some reluctance that I suggest that before we act we should examine both the seriousness of the problem and the feasibility of the suggested solution. On the surface, my proposal would not seem to be exactly outrageous.

However, it is sad to have to acknowledge that we in the United States have reached the point where it is personally — and professionally — dangerous, if not foolhardy, to criticize in any way any proposal to “do more for the environment.” Just raising a question is guaranteed to result in the intrepid individual being castigated as caring more about dollars than ecology and having his or her viewpoint dismissed as defending “the polluters.” I will save for another day, however, the task of explaining why each of us is a “polluter,” either as a producer or consumer or both.

## How Serious Is Global Warming?

But let us begin by examining the question of global warming, or to use the more neutral (also more ambiguous) term, climate change. How serious is the problem that seems to require taking such tough action that it would have serious repercussions for production and employment in key manufacturing industries?

Proponents of quick action rely for support on a widely quoted passage from a 1995 report

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of the UN's Intergovernmental Panel on Climate Change (IPCC), an impressive group of scientists and government officials. That widely cited portion of the report's summary states, "the balance of evidence suggests that there is a discernible human influence on global climate."<sup>1</sup> That is such a modest and vague statement that we have to wonder why people rely so heavily on it to support specific proposals for action.

In fact, that modest statement on "discernible human influence" is preceded by a caveat which is far less widely quoted: "Our ability to quantify the human influence on global climate is currently limited because the expected signal is still emerging from the noise of natural variability and because there are uncertainties in key factors."<sup>2</sup> The report then goes on to tell about those technical uncertainties.

Unfortunately, yet another shortcoming of the IPCC summary has been identified. Normally, a summary conforms to the body of the report. Apparently, that was not the procedure followed by those who edited the IPCC document. It seems that the editor, after writing the summary, went back and deleted sections of the report that did not conform to his summary. Here are two of the deletions:

None of the studies cited above has shown clear evidence that we can attribute the observed [climate] changes to . . . increases in greenhouse gases.

No study to date has positively attributed all or part [of the climate change observed to date] to anthropogenic causes.<sup>3</sup>

My understanding of all this is that knowledgeable scientists, including those who advocate tough action, admit that great uncertainty exists in the chain of causation from emissions of CO<sub>2</sub> by human [anthropogenic] activities to increases in global temperature.<sup>4</sup> This relationship is far from simple.

It is not a question of totally eliminating humanly generated greenhouse gases. It clearly is a matter of degree; a slight warming may result in agriculture becoming more productive, for example — but very substantial emissions may lead to genuine harm. Moreover, climate changes due to natural causes may swamp the anthropogenic influences. Historically, of course, the earth's climate has changed dramatically with no help or interference from mankind.

We also need to raise a troublesome side issue — why focus so heavily on CO<sub>2</sub>? After all, it is not the only greenhouse gas. There are other important greenhouse gases that humans put into the atmosphere, notably methane, the second largest source of such emissions. However, scientists tell us that CO<sub>2</sub> persists much longer than methane and, therefore, it is the most worrisome source of greenhouse gases. So far, less attention has been given to nitrous oxide, another long-lasting greenhouse gas. If all this gets across the notion that global climate analysis is not a neat, pat, fully accepted matter, that is surely correct.

In this century, the bulk of the modest warming that has occurred *preceded* the bulk of the buildup of the greenhouse gases (logic would lead us to expect that, if the gases *caused* the warming, the sequence would be the other way around). Moreover, weather satellites seem to show a mild cooling trend since 1979, which could be a normal recovery from a previous natural warming.<sup>5</sup> However, we're told that this is too short a period to worry about. In any event, the earth's temperature appears to have risen by about one degree over the past century.

In view of these complications, we can understand the odd response that the Science and Environmental Policy Project received when it surveyed the scientific contributors to, and reviewers of, the IPCC report; about half did not support the Policymakers' Summary. Many other distinguished scientists also disagree with the global warming hypothesis.<sup>6</sup>

Nevertheless, it does seem that, after taking account of all the *caveats*, a large portion of the scientific community, and likely the majority of those specializing in climate-related sciences, concur with the oft-quoted statement in the IPCC report. As some of them have said in informal discussions, the massive and unprecedented scale of CO<sub>2</sub> emissions into the atmosphere is a source of genuine worry, regardless of the other measurements. That the effects of those emissions are accompanied by natural fluctuations just serves to underscore their concern.

Earlier this year, 2,300 of the 20,000 members of the American Economic Association signed a petition stating that "preventative steps are justified" to deal with global climate change. One of the leaders of the petition effort, Professor William Nordhaus of Yale, in a subsequent lecture explaining the petition, stated that the timing, magnitude, and effect on human society of climate change are still not known. Nordhaus, a distinguished scholar, tem-

pered his words with the point that this uncertainty cannot justify inaction.<sup>7</sup>

Unfortunately, all this is reminiscent of the scary warnings in the 1970s about a new period of global cooling. Fortunately, the scientific community, in general, showed a sensible skepticism to that notion and did not embrace a policy agenda to deal with what turned out to be an ephemeral issue.

### Policy Responses

Let us now turn to the specific policy to deal with global warming that has gathered most attention — to force CO<sub>2</sub> emissions back to the 1990 level and to hold them there. The UN's Kyoto Conference in December supposedly will be the occasion for adopting that key recommendation. The Clinton administration appears to be an enthusiastic supporter of that approach.

Many public and private organizations have analyzed, in depth, the impacts of such a tough rollback in CO<sub>2</sub> emissions on the American economy. Professor Gary Yohe of Wesleyan University concludes that a carbon tax sufficient to stabilize emissions at 1990 levels by the year 2010 would slow down real wage growth, worsen the distribution of income, and make Americans feel as if they were living through the oil price shocks of the 1970s and early 1980s all over again.<sup>8</sup>

The various economic analyses tend to show that the impacts will be far from uniform across our country. As we would expect, the major energy-using sectors will be hardest hit. These include many important manufacturing industries, notably petroleum refining, chemicals, paper, cement, steel, and aluminum. Of course, the electric utilities — most of whom use fossil fuel — will be most directly affected and, because they serve virtually every part of our society, the results of a cutback in CO<sub>2</sub> emissions will be pervasive.

It is no surprise that each analyst comes up with a different set of numbers, depending on the assumptions made, the data set used, and the structure of the model to estimate the various effects. Yet, one overriding point emerges from examining a variety of these impact studies: the costs of meeting the proposed "caps" on CO<sub>2</sub> usage will be substantial. Thus, prudence re-

quires that we ascertain ahead of time that the benefits are worth those costs. The popular notion that we should combine a narrowly focused carbon tax with broadly diffused income tax reductions is likely to lead to disappointing results. Preliminary analysis indicates that the combination will not be neutral in terms of its macroeconomic impact; the net effect is estimated to be quite negative.<sup>9</sup>

Another shortcoming of the proposed UN policy is far more fundamental, calling into question whether there will be any net benefit at all in terms of reducing the “anthropogenic influence” on global climate. It turns out that those CO<sub>2</sub> “caps” would be limited to the United States and the other advanced industrialized nations. The developing nations will not be subject to limits on their fossil fuel usage for the foreseeable future. It is harsh to say so, but policymakers seem to be ignoring the obvious: global climate change is a *global* problem. Global warming, when it occurs, is brought about by greenhouse gases which are widely dispersed in the upper atmosphere. To be effective, restraint must therefore involve all major emitters of greenhouse gases.<sup>10</sup>

The UN conferees meeting in Kyoto — including our own State Department representatives — should realize that it will be futile to try to stop global warming by curbing our energy use if the developing nations will more than offset our costly contribution to a better global climate. And that is exactly the prospect we face.

In the next dozen years, China and India alone are expected to experience greater growth in emissions than the United States, Japan, and Western Europe combined. However, policy planners tell us that developing countries are adamantly opposed to a limit on their economic growth during this strategic period in their national development. From their point of view, it is patently unfair to expect them to cap their emissions when their per capita levels of energy use and economic output are still so low — and while we already have achieved so much higher levels of both measures.

One counter-argument to a passive U.S. position on compulsory CO<sub>2</sub> caps comes up frequently; if Western Europe is so anxious to move ahead on adopting firm limits on CO<sub>2</sub> emissions, why should the United States be reluctant to do so? As I tell my students, a cynical

explanation takes you a long way in public policy.

Major European nations — such as Germany and Great Britain — have been and still are closing down many coal mines and obsolete production facilities for economic reasons. Such actions also reduce substantially the amount of CO<sub>2</sub> their economies emit. Hence, they will be able to operate under the “cap” without significant additional effort or negative impacts on their economies.

Many American researchers have tried to design a way out of this dilemma. One suggestion for a global approach to CO<sub>2</sub> emissions is to set up a “trading” mechanism similar to that developed under the 1990 amendments to the Clean Air Act. Of course, the notion of “emissions trading” as a way of minimizing costs has great technical appeal to many economists.

Here is one time, however, that consideration should be given to the “distributional” aspects of the proposal, that is, to who benefits and who bears the costs. Such analysis shows the unexpected result that emissions trading among nations is, in effect, a disguise for a massive shift of wealth from the United States and other economically advanced societies to China, India, and other relatively poor nations. I don’t see any serious interest among Americans for that type of cross-border philanthropy.

All nations, advanced and developing, would be better off by following a very different strategy, at least in the short term. When we deal with climate change issues, we should recognize that short term means at least a decade or two. Viewed in this light, it likely will take decades for the most ambitious policy initiative to show up in global temperature change. Thus, instead of initiating a “crash” program of CO<sub>2</sub> emissions taxes and trading, it would make far more sense to encourage more investment, domestic and foreign, in the economies of the developing countries.<sup>11</sup> That would be a matter of enlightened self-interest by all parties concerned. The record shows that when a nation reaches a certain economic threshold (per capita income of about \$5,000 a year), it usually then has the ability and willingness to start spending its own money for a better environment.

Moreover, avoiding a crash program in favor of gradually phasing in whatever policy actions are adopted will minimize the costs and disruption to the economies of the advanced



industrialized nations. That is so because a crash program would involve the expense of prematurely retiring much of the nation's capital stock. In contrast, a gradual transition entails replacing the existing capital stock as it wears out with more advanced capital equipment which uses less fossil fuel. In any event, a study by Resources for the Future notes that, given current emissions trends and the inertia of the climate system, climate changes (to the extent they are occurring) would continue — even if emissions were stabilized or reduced substantially.<sup>12</sup>

During this transition period, it also makes good sense for the United States and other advanced nations to embark on a “no regrets” policy. That is, we should start doing some of the sensible things that are desirable for domestic economic reasons that would simultaneously reduce CO<sub>2</sub> emissions and other environmental pollution. A good place to start is to eliminate any uneconomical tax and budget subsidies that artificially encourages the extra use of fossil fuel, the major generator of greenhouse gases.

Here are a few examples of the subsidies whose elimination would constitute a real “two-fer,” simultaneously reducing the budget deficit and CO<sub>2</sub> emissions:

- Special capital gains treatment of royalties on coal
- Excess of percentage over cost depletion of fuels
- Expensing of exploration and development costs of fuels
- Hard rock mining subsidies<sup>13</sup>

These examples all relate to the United States. Each of the other advanced economies maintains similar inefficient subsidies, often on a much larger proportional scale than we do.

### **Some Longer-Term Proposals**

Looking beyond this interim period, and in view of the serious economic impacts of a CO<sub>2</sub> tax on American industrial production and employment, it seems advisable to consider alternative responses to the issue of global climate change. Personally, I believe that it is time to start thinking about the unthinkable: a new hard look at the cleanest and most environmentally benign fuel available to us. Yes, I am referring to nuclear power. Surely, dealing with the most publicized obstacle to building new nuclear power plants — the location of spent fuel in secure bunkers — is a technological challenge that our scientists and engineers are capable of solving.

Indeed, some believe they have already done so.

Meanwhile, one important initiative seems highly desirable, although it is usually overlooked in the heat of the debate on global warming. Greater emphasis should be placed on improving our base of scientific and engineering knowledge. The body of the IPCC report provides cogent detail on the shortcomings in existing information necessary for climate analysis. Also, imminent advances in technology, according to eminent engineers, promise important advances in efficient utilization of energy. This would make it possible to curb CO<sub>2</sub> emissions with fewer harmful side effects on the economy than envisioned by current policy proposals.

About \$2 billion a year is now spent by the federal government on climate change research.<sup>14</sup> That is not small potatoes. But in view of the hundreds of billions of dollars of costs a year that any of the proffered solutions would impose on the American economy and the serious qualitative impacts on our society, a stronger research effort seems to be worthwhile. Those research dollars should include a substantial expansion of the monitoring systems that provide key information needed to improve the evaluation of climate changes.<sup>15</sup>

A final thought: it is likely that any combination of policies that is adopted to deal with global climate change will be tough and costly, affecting the jobs and incomes of large numbers of people. Policymakers should not jump into taking those actions prematurely just to show the advocates of urgent action that they care about the environment. We all do. But the heart is not a thinking instrument.

A step-at-a-time approach seems to be the most sensible way to proceed, giving time for scientific uncertainties to be reduced and improved energy technologies to be developed. One insight from the IPCC report is especially cogent, "The challenge is not to find the best policy today for the next 100 years, but to select a prudent strategy and to adjust it over time in the light of new information."<sup>16</sup>

## Notes

1. *Climate Change 1995, Summary for Policymakers: The Science of Climate Change* (Intergovernmental Panel on Climate Change, 1995), p. 3.
2. *Ibid.*, pp. 3-4.
3. S. Fred Singer, "Dirty Climate," *National Review*, November 25, 1996, pp. 62-63 and following pages.
4. Michael Toman, *Climate Change Risks and Policies*, Resources for the Future Climate Issues Brief No. 1, March 1997.
5. S. Fred Singer, ". . . Not Scientific Consensus," *Wall Street Journal*, July 25, 1997, p. A-14.
6. It is reported that nearly a hundred climate scientists signed the Leipzig Declaration disagreeing with the IPCC conclusions. See Singer, "Dirty Climate," p. 62.
7. William Nordhaus et al., *How Economics Can Inform the Climate Change Debate* (Washington, D.C.: American Enterprise Institute, 1997), p. 1.
8. Gary W. Yohe, "Climate Change Policies, the Distribution of Income, and U.S. Living Standards," in *Climate Change Policy, Risk Prioritization and U.S. Economic Growth* (Washington, D.C.: ACCF Center for Policy Research, 1997). See also Frederick H. Reuter, *Coherent Climate Change Policy Must Consider Science and Economics* (St. Louis: Washington University, Center for the Study of American Business, forthcoming).
9. Jan Parry, *Revenue Recycling and the Costs of Reducing Carbon Emissions*, Resources for the Future Climate Issues Brief No. 2, June 1997, p. 4.
10. Richard N. Cooper, *A Treaty on Global Climate Change: Problems and Prospects* (Unpublished paper, October 1996).
11. Warwick McKillin and Peter Wilcoxon, *A Better Way to Slow Global Climate Change*, Brookings Policy Brief No. 17, June 1997.
12. Toman, p. 2.
13. Murray Weidenbaum, Christopher Douglass, and Michael Orlando, *Toward a Healthier Environment and a Stronger Economy* (St. Louis: Washington University, Center for the Study of American Business, 1997).
14. Alan Robock, *Global Warming: Must We Act Now?* Presented at the Costs of Kyoto press briefing, Washington, D.C., July 15, 1997.
15. Annapolis Center for Environmental Studies, *Global Climate Change* (forthcoming).
16. *Climate Change 1995, Summary for Policymakers: The Economics and Social Dimensions of Climate Change* (Intergovernmental Panel on Climate Change, 1995), p. 2.