



Goldilocks and the Three Climates

Jonathan Lesser

As Jim Hoecker says in his column this month, in Washington and elsewhere these days, environmental issues are “everywhere, all the time.” To attempt to add a voice of reason about global warming and other so-far-unproven theories about which many billions are about to be spent, we are pleased to add Jonathan Lesser as a columnist.—Ed.

With the release in February of the Intergovernmental Panel on Climate Change’s (IPCC’s) summary of its forthcoming fourth report,¹ all manner of storms, disease, death, plagues of locusts, and generalized mayhem are apparently rounding the global corner as a result of global warming. Apparently, “everybody” agrees that, if we do not immediately reduce greenhouse gas emissions far more than the decreases proposed under the Kyoto Protocol, “grim” and “catastrophic” impacts await. To emphasize the point, many articles on climate change are accompanied by pictures of cuddly polar bears that, from all appearances, have been cast adrift far at sea by a band of evildoers, led by the notorious Captain Coal.

Not to be outdone, France has proposed to create a new, worldwide environmental regulatory body with the power to “punish” greenhouse polluters (read that: the United States). How France

would punish the United States—stop exporting Brie, perhaps—or why the United States would care, is not clear.

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Although many scientists view global climate change as a serious problem, many others continue to express doubt regarding both its magnitude and causes.² Clearly, the Earth’s climate has changed continuously throughout its history and long before mankind was mucking about. Far more recently, at least by geologic time, the Vikings were farming in Greenland during the 1300s, only to be forced to abandon their efforts when temperatures dropped during the Little Ice Age that followed.

For those who, like me, do not wish to reflexively subscribe to some of the predicted doomsday scenarios—after all, it was just 30 years ago the public was bombarded with headlines that the world was entering a new ice age—with all of their dire consequences, the uncertainty about climate change raises a number of issues. First, how accurately can the costs (and, yes, the benefits) of climate change be estimated? Second, what are the best policy approaches to address climate change, and how much of an impact will those policies have? Do we try to reduce climate change, reverse it, or adapt? Third, what will be the unintended consequences of implementing the policies we choose? For surely there will be unintended consequences. Fourth, what is the best way to explain to individuals that, whatever ac-

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tivist policies are chosen—carbon taxes, cap-and-trade systems, shuttering every coal-fired power plant—such policies will affect everyone, and not just those “wicked” polluters like Captain Coal.

WHEN HAS THE CLIMATE BEEN “JUST RIGHT”?

In reading the IPCC *Summary for Policymakers*, one question leaps out: is there a “best” global climate? No doubt the Vikings preferred the warmer climate that allowed them to farm in Greenland to the subsequent “Little Ice Age,” which did not. The most recent major ice age ended about 20,000 years ago, having lasted for some 40,000 years. During that time, much of North America was covered in mile-thick glaciers. That climate does not sound overly pleasant. Moreover, I doubt that it would be costless. Thus, if we are concerned about a warming climate, more frequent hot spells, and other climate-related phenomena, does that mean we would be better off if average temperatures were a few degrees lower? If we would be, how much lower? Nobody talks about that. Additionally, no one has shown that today’s climate is optimal, in the sense of providing the mix of temperatures, precipitation, and sea level that is just right. Dr. Pangloss, where are you when we need you?

The panic over climate change presumes that, by manipulating greenhouse gas emissions, we can achieve a Goldilocks climate—not too hot, not too cold, but just right. This seems unlikely, especially given examples of rapid climate changing in the past, long before Captain Coal began his reign of terror. For example, according to the National Oceanic and Atmospheric Administration, about 11,600 years ago the climate warmed by 15°C (27°F) in less than a decade.³ Then, around 8,200 years ago, temperatures abruptly plunged for about 400 years.⁴

I do not know if mankind has the technical wherewithal to prevent those sorts of abrupt changes. I doubt it. Far easier, it seems, is to adapt to a changing climate and minimize the costs to those most affected.

REAL COSTS, ETHEREAL BENEFITS

Rather than arguing over the pace of climate change and, more important for some, who should be blamed, let us instead assume that the only debate is over the appropriate policies. Given that, before US policymakers leap headfirst into the car-

bon policy pool, they should examine the costs and benefits of each policy alternative (as well as combinations of alternatives). The benefits will be based on each policy’s ability to mitigate climate change, both in absolute terms and the speed at which mitigation would occur under each policy.

Costs will be based on the net impacts on the world economy as well as opportunity costs associated with other policy imperatives, such as improved access to clean water and health care, reduced levels of disease, and so forth. Of course, some argue that climate change will exacerbate certain diseases, such as malaria. If that is the case, then the appropriate framework is to determine whether the least-cost strategy for such impacts is reducing greenhouse gases or, in the case of malaria, direct alternatives such as netting and spraying with DDT.

One issue that is attracting too little attention but that will be crucial for *any* mitigation policy to work is an ability to limit free riders, the numbers of which, in the case of greenhouse gas emissions, may be huge. Just like a cartel, even if all nations agree to a set of emissions reductions, each nation will have a tremendous incentive to cheat, especially as the stringency of the reduction targets increases. After all, monitoring all the world’s greenhouse gas emissions—carbon dioxide (CO₂), methane, and chlorofluorocarbons—will be neither simple nor cheap. Moreover, the more stringent the emissions reduction targets, the greater the incentive to cheat.

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On top of that problem, of course, is the fact that some nations may simply refuse to go along. China, for example, announced earlier this year that global warming was a problem for “developed countries,” implying that it would continue to spew forth carbon dioxide with impunity. If some nations, especially developing nations that “blame” climate change on the developed nations, opt out of climate-change mitigation, then what? (It is probably safe to assume that France’s proposal would be a particularly poor enforcement mechanism.) With those caveats, what would the types of costs and benefits of alternative policies be, specifically with respect to energy consumers?

Policies likely to offer the least benefit at the highest cost likely are the command-and-control variety or, still worse, policies resulting from litigation, such as the lawsuit filed by California's Attorney General last September against US and Japanese automobile manufacturers for creating a "public nuisance" because cars emit CO₂. The lawsuit alleges that "global warming is causing significant harm to California's environment, economy, agriculture and public health."⁵ (No mention if CO₂ emissions from fulminating state attorneys general are also considered to be a public nuisance.)

A more likely command-and-control approach to greenhouse gas emissions will be specific laws mandating emissions reductions, such as those contained in Maryland's Healthy Air Act. Alternatively, these approaches could take the form of higher automobile fuel efficiency (CAFE) standards, banning the use of incandescent lighting (legislation introduced in the California State Assembly), more stringent renewable portfolio standards for electricity generation, and so forth. The impacts of these sorts of policies, especially those that address major stationary source emissions sources like coal-fired generating plants and cement factories, will be to restrict output and raise prices throughout the economy.

Thus, retail consumers will pay more for electricity, and contractors will pay more for cement. Both goods are basic inputs to a growing economy, and price increases will affect everything from the price of homes to the cost of food and health care. Moreover, those economic impacts will ripple through the entire economy. When the prices of basic production inputs increase, so do prices of almost all goods and services. Those price increases, in turn, create more economic ripples that will reduce employment, tax collections, and so forth.

The overall costs of such policies will clearly depend on how stringent the policies are. Raising CAFE standards by one mile per gallon in five years is unlikely to be an economy killer. Ordering all coal-fired power plants to shut down within one year could be. Of course, some, especially those bent on "punishing" polluters, may see this as rough justice for a society that deserves to suffer collectively. However, consumers (and voters) who suffer real economic pain, but who will be unable to discern any benefits whatsoever for that suffering, may rebel.

The other category of policies is market-based, and it includes emissions "cap-and-trade" programs,

carbon taxes, fuel taxes, and so forth. These sorts of policies are more efficient, in the sense that they are more likely to reduce greenhouse gas emissions at a far lower cost. However, these programs will not be costless. It is true that some proposals, such as carbon tax "recycling"—levying carbon taxes while reducing other taxes—would reduce economic harm, compared with simply levying carbon taxes. How much tax recycling would reduce the overall costs will depend on the form of the tax recycling. Moreover, revenue recycling could easily introduce yet more distortions to the US tax code.⁶ Again, however, consumers will likely respond poorly to any form of tax scheme that raises the costs of the goods and services that they rely on. Finally, market-based approaches, such as cap-and-trade programs, are likely to be more vulnerable to free-rider problems than command-and-control policies.

Of course, global climate change mitigation policies are complicated by the fact that they must be global. The United States cannot impose its policies on the rest of the world, which cannot, in turn, impose its policies on the United States. Developing nations, especially large polluters like China and India, will be reluctant to reduce economic growth that is finally providing so many tangible benefits to their citizenry. It is those nations, rather than the "developed" nations like the United States, Canada, and Europe, that will ultimately determine the success or failure of climate-change policies. Perhaps, then, another policy must be more actively considered: *adaptation*. That will be the subject of my next column. ●

NOTES

1. Intergovernmental Panel on Climate Change. (2007). *Climate Change 2007*. Paris: Author.
2. See, e.g., Lindzen, R. S. (2006, June 26). There is no 'consensus' on global warming. *Wall Street Journal*. See also Wegman, E., et al., Ad Hoc Committee Report on the 'Hockey Stick' Global Climate Reconstruction. Presented to the House Energy and Commerce Committee, July 14, 2006.
3. www.ngdc.noaa.gov/paleo/ctl/abrupt.html.
4. Baldini, J. U. L., McDermott, F., & Fairchild, I. J. (2002). Structure of the 8200-year cold event revealed by a speleothem trace element record, *Science*, 296, pp. 2203–06.
5. A copy of the actual complaint can be found at the California Office of the Attorney General Web site: http://ag.ca.gov/newsalerts/cms06/06-082_0a.pdf.
6. For an introductory discussion, see Parry, I. (1997, June), Revenue recycling and the costs of reducing carbon emissions. Washington DC: Resources for the Future, Climate Issues Brief No. 2, <http://www.rff.org/Documents/RFF-CCIB-02.pdf>.