

# Tree-Huggers No Longer!

Frank Ackerman

Review of *The Skeptical Environmentalist: Measuring the Real State of the World*. By Bjorn Lomborg (Cambridge, 2001). (A version of this review appeared in *The Nation*, March 25, 2002.)

It's official now: the US has a policy on climate change. President Bush announced it on Valentine's Day at a government climate and oceans research center. "My approach recognizes that economic growth is the solution, not the problem," he said. Instead of requiring the nation to lower greenhouse gas emissions below 1990 levels, as called for in the Kyoto Protocol, the new policy is voluntary and aims only to slow the growth of emissions, not reduce them. The centerpiece of the new climate policy is a tiny little tax cut for any manufacturers who are interested.

Of course, it's not nearly as big as the tax cuts used for real national priorities like redistributing income upward or starving civilian government of resources. It's just some walking-around money, less than \$1 billion a year, for investors who voluntarily, now and then, feel like doing the right thing for the environment. The president would also like industries to report their own emission levels voluntarily, which may earn them valuable credits in the future if an emissions trading scheme is implemented.

It takes a creative imagination to believe that this is an appropriate way for the world's largest economy (and producer of 20 percent of the world's greenhouse emissions) to respond to a serious global crisis. If you believe, that is, that global warming is a crisis. George Bush and his friends keep hoping it's not, but the scientific consensus, not to mention world opinion, is absolutely clear on this point. At the request of the Bush Administration, the National Academy of Sciences re-examined the climate change issue last year and promptly concluded that the problem is every bit as important as previously reported. Finding a way to debunk all this annoying environmental science must be high on the White House wish list.

It almost looks like that wish has been granted. Bjorn Lomborg, a statistics professor at

a Danish university and self-described "old left-wing Greenpeace member," says the story began when he got interested in the longstanding debate between environmentalist Paul Ehrlich and economist Julian Simon. Ehrlich claimed that shortages of many natural resources were imminent; Simon said they were not. A few years ago Lomborg started researching the facts in order, he says, to prove that Ehrlich was right. Instead he found to his surprise that Ehrlich was wrong - and indeed, environmentalists were wrong about many, many things.

Trapped by the "litany" of doom and gloom, environmental advocates have, according to Lomborg, missed the evidence that most of the problems they worry about are not so bad, and are not getting any worse. There are more acres of forests all the time, plenty of fish in the sea, no dangers of acid rain, no threats of rapid extinction of species, no need to do much about global warming, and no reason to worry about environmental causes of cancer. Everyone in the environmental world, his erstwhile comrades at Greenpeace included, has misunderstood the subtleties of statistics and overlooked the growing good news, as he graciously offers to explain.

Preposterous as it sounds (and in fact, is), that's the message that Lomborg presents in *The Skeptical Environmentalist*. It received rave reviews in the *Wall Street Journal*, the *Washington Post*, the *Economist* and elsewhere, and it looks as if the Bush Administration has torn a few pages from it. Lomborg plausibly points out that the environmental litany of short-run crisis and impending doom is unrealistic, and sometimes based on statistical misunderstandings. If he had stopped there, he could have written a useful, brief article about how to think about short-run versus long-run problems and avoid exaggeration.

Unfortunately, Lomborg stretches his argument across 350 dense pages of text and 2,930 somewhat repetitive footnotes, claiming that the litany of doom has infected virtually everything written about the environment. As an alternative, he paints a relentlessly optimistic picture of dozens of topics about which he

knows very little. Responses from researchers who are more familiar with many of his topics have started to appear, including rebuttals in the January issue of *Scientific American*, in a report from the Union of Concerned Scientists, and on the website [www.anti-lomborg.com](http://www.anti-lomborg.com).

On global warming, Lomborg believes that "the typical cure of early and radical fossil fuel cutbacks is way worse than the original affliction, and moreover [global warming's] total impact will not pose a devastating problem for our future." In support of this Bush-friendly thesis, Lomborg attempts to reinterpret all the massive research of recent years, including the carefully peer-reviewed Intergovernmental Panel on Climate Change (IPCC) reports. But he is not up to the task. Discussing the standard graphs of average temperature over recent centuries, which most analysts use to highlight the exceptional recent increases, he offers pages of meandering speculation and concludes that "the impression of a dramatic divergence [in recent world average temperature] from previous centuries is almost surely misleading." Lomborg's own Figures 134, 135, and 146 present strong visual evidence against his strange conclusion, showing average temperatures heading sharply and unprecedentedly upward in recent decades. He also finds it terribly significant that we do not know exactly how fast temperatures will change in the future, as greenhouse gases accumulate in the atmosphere; nonetheless he accepts IPCC estimates that temperatures above the range of recent historical experience are essentially certain to occur.

When it comes to estimating the economic costs of reduction in greenhouse gases, Lomborg's claim that all models produce "more or less the same results" is absurd. He has missed a valuable analysis from the World Resources Institute, by Robert Repetto and Duncan Austin (*The Costs of Climate Protection: A Guide for the Perplexed*), which describes and analyzes the huge range in sixteen major models' estimates of the costs of greenhouse gas reduction. Repetto and Austin attribute the divergent estimates to the models' differing assumptions about the pace of economic adjustment to future changes, the extent of international emissions trading, and the uses the government will make of revenues from carbon taxes or similar measures, among other factors.

I turn out to have a small part in Lomborg's story, in a manner that does not increase my confidence in his research. My name appears in footnote 1605 in his chapter on solid waste, where he cites in passing a three-page article based on my 1997 book on recycling but overlooks the book (*Why Do We Recycle?*) and the larger point that it makes. Lomborg's solid waste chapter simply says that the United States is not running out of space for landfills. Echoing an example long favored by the most vehement critics of recycling, he calculates that a landfill big enough to hold all U.S. solid waste for the next 100 years would be quite small compared to the country's land area. Nothing is said about other countries - Denmark, for example - where land might be a bit scarcer. Almost nothing is said about recycling, either, because it seems that it doesn't much matter: "We tend to believe that all recycling is good, both because it saves resources and because it avoids waste. We may not necessarily need to worry so much about raw materials, especially common ones such as stone, sand and gravel, but neither should we worry about wood and paper, because both are renewable resources."

The US is not running out of landfill space, but this does not invalidate concern with waste and recycling. Rather, it shows the error of collapsing our thinking about long-term problems into short-term crisis response. Several life-cycle analyses of material production, use and disposal (none of which Lomborg references) have found that extraction and processing of virgin materials accounts for far more environmental damage than landfilling of the same materials when they are discarded. The greatest benefit of recycling is not that it solves a non-existent landfill crisis, nor that it staves off any immediate scarcity of resources, but rather that it reduces pollution from mining, refining and manufacturing new materials.

There are similar shortcomings in many other areas of *The Skeptical Environmentalist*, of which I will mention just a few. Lomborg claims that there is little need to worry about trends in air pollution: "The achievement of dramatically decreasing concentrations of the major air pollutants in the Western world is amazing by itself. There is also good reason to believe that the developing world, following our pattern, in the long run likewise will bring down its air pollution." He endorses wholeheartedly the hypothesis that economic growth will first cause

air pollution to get worse, but then later will lead to improvement. This controversial idea, the so-called "environmental Kuznets curve" (EKC), was more widely accepted in the early 1990s, the period from which Lomborg's citations are taken. Recent research has cast doubt on this pattern, as he acknowledges in the second sentence of a footnote. Yet he has missed the most comprehensive critique of the EKC research, by David Stern ("Progress on the Environmental Kuznets Curve?," *Environment and Development Economics*, 1998). According to Stern, the EKC pattern - first pollution gets worse, then it gets better with economic growth - can be clearly detected only for a few air pollutants, such as sulfur, and then only in developed countries.

Rushing to critique environmental views in one area after another, Lomborg may not have had time to read all of his citations. In his introductory chapter, he maintains that the collapse of the indigenous culture of Easter Island was based on factors unique to that island, and did not suggest that an ecological crash caused by resource overuse could threaten other societies. The only source he cites on Easter Island reached exactly the opposite conclusion, speculating that ecological problems could have caused the decline of civilizations such as the Maya, early Mesopotamia and the Anasazi in what is now the southwestern US: "Easter Island may be only one case of many where unregulated resource use and Malthusian forces led to depletion of the resource base and social conflict," concluded James A. Brander and M. Scott Taylor in "The Simple Economics of Easter Island," (*American Economics Review*, March 1998).

In his concluding chapter, Lomborg relies heavily on studies by John Graham and Tammy Tengs. These studies purport to show vastly different costs per life saved, or per life-year saved, from different regulations. At one extreme, the federal law requiring home smoke detectors, flammability standards for children's sleepwear and the removal of lead from gasoline have economic benefits outweighing their costs. At the other extreme, controls on benzene, arsenic and radioactive emissions at various industrial facilities are said to cost from \$50 million to \$20 billion per life-year saved. The implication is that shifting resources from the more expensive to the cheaper proposals would be enormously beneficial, by one wild

calculation (which Lomborg uncritically accepts) saving 60,000 lives annually: "And the Harvard study gives us an indication that, with greater concern for efficiency than with the Litany, we could save 60,000 more Americans each year - for free." Graham and Tengs follow closely in the footsteps of John Morrall, who made similar claims in a related, earlier study.

A widely-cited article in the *Yale Law Review* ("Regulatory Costs of Mythic Proportions," 1998) by Georgetown University law professor Lisa Heinzerling explains the fatal flaws in the Morrall study. This, too, escaped Lomborg's notice. Heinzerling demonstrates that Morrall's long list of allegedly expensive regulations includes numerous items that were never adopted, and in many cases never even proposed. Moreover, many of the cheaper life-saving measures - removing lead from gasoline, for example - have already been done and cannot be redone for additional savings. Thus the reallocation of money that would putatively save thousands of lives would have to be from non-existent expensive regulations to already-completed cheaper rules. In more recent work, Heinzerling and I have shown that the same fundamental errors occur throughout the Graham and Tengs studies, including "the Harvard study" that Lomborg likes so well.

Finally, Lomborg cannot be allowed to speak for "old left-wing Greenpeace members" in general. I personally remain happy to support Greenpeace because, among other reasons, I admire its courageous and imaginative confrontations with the likes of nuclear weapons testers, the whaling industry, and oil companies drilling in ecologically fragile areas. I am of course disappointed, but hardly shaken in my worldview, to learn that Lomborg claims to have caught Greenpeace in a statistical error or two. Greenpeace doesn't rely on me to throw grappling hooks onto whaling ships, and I don't rely on them for quantitative research. On the strength of this book, I won't rely on Lomborg, either.

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