

EarthTrends: Featured Topic

Title: **WILL DEVELOPING COUNTRIES' CARBON EMISSIONS SWAMP GLOBAL EMISSIONS REDUCTION EFFORTS?**
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One of the concerns regarding the Kyoto Protocol has been that it exempts developing nations from targets to reduce greenhouse gas emissions. Accordingly, many people worry that developing country emissions will skyrocket as they develop economically, effectively swamping the expensive efforts of developed countries required to make large investments in lowering their emissions. However, evidence has shown that this is not likely.

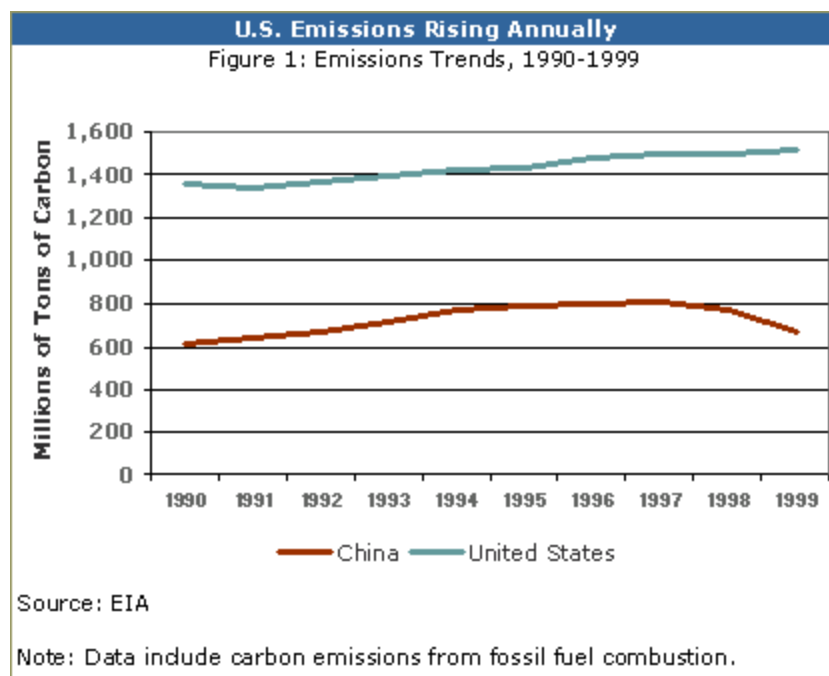
The view that developing countries should adopt legal emission commitments carries the implicit assumption that such actions would lead to a better global environmental outcome. Two factors make this assumption suspect. First, emission projections vary wildly for developing countries, confounding efforts to make reliable forecasts that could form the basis of legal commitments. According to the U.S. Department of Energy, China's emission levels in the year 2020 could range anywhere from 1,115 to 2,059 million tons of carbon (EIA 2001). Translating such vague projections to legally binding emission controls presents

substantial technical difficulties, as well as environmental and economic risks for the country in question (Baumert et al. 1999). Although uncertainties over emission projections are common in many developing countries, they are much smaller in mature industrialized countries, where economic and emission growth rates are steady and relatively predictable year to year (1).

Second, and perhaps more significantly, developing countries are already taking substantial actions to reduce emissions growth, even in the absence of international commitments (Biagini 2000). Although Mexico, India, Thailand, the Philippines, and Indonesia rely on coal and oil for electricity, they have all established national goals to increase renewable energy and improve energy efficiency. Thailand and Brazil have made comprehensive, successful national efforts at demand-side management. In Argentina, 10 percent of the automobile fleet runs on compressed natural gas. India has implemented natural gas use for heavy vehicles in its major cities and for most of New Delhi's public

transport system. Many countries—including Indonesia, an OPEC nation—are phasing out fossil fuel subsidies. These measures have required leadership and entailed political and economic costs, for which these countries deserve recognition.

China's actions are nothing short of remarkable. The world's most populous country reduced its emissions, in absolute terms, 19 percent between 1997 and 2000. This is simply unprecedented, especially considering that China's economy grew by 15 percent over the same period (EIA 1999). Although the exact causes of the emissions decline are not certain, China has been engaged in sweeping energy policy reforms over the last two decades to promote energy efficiency and conservation (2). Measures taken include the following: reductions in fossil fuel subsidies; research, development and demonstration projects; a national information network with efficiency service and training centers; tax reforms; equipment standards; and special loan programs, among other initiatives. These



measures represent emission savings equal to nearly the entire U.S. transportation sector, about 400 million tons per year (Zhang 1999).

The coordinated, economy-wide Chinese strategy differs remarkably from the U.S. one.

Over the past decade, the United States has undertaken many emission reduction programs. These programs, such as the One Million Solar Rooftops and wind power initiatives, are worthwhile and should continue. However, this

patchwork of efforts has, collectively, not led to actual emission reductions (Biagini 2000). Many measures are voluntary and they are not coordinated economy-wide. As a result, U.S. emissions have risen every year since 1991 (see figure 1).

Finally, notwithstanding their smaller responsibilities and capabilities, most developing countries accept the need for global efforts to restrain greenhouse gas emissions. Their current reluctance to take on legally binding emission targets is based in part of the lack of leadership evidenced by richer, developed countries in tackling climate change. Industrialized countries should discontinue using possible scenarios of emissions in the developing world as an excuse to avoid action at home.

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NOTES

1. For example, EIA projections for the United States in 2020 range only from a high of 2,193 to a low of 1,916 tons of carbon.
2. For more information on China's emission trends and causes, see ZhongXiang Zhang. 2000. Can China Afford to Commit Itself to an Emissions Cap? An Economic and Political Analysis. Pages 587-614 in *Energy Economics*. See also J.E. Sinton, M.D. Levine, and Wang Qingyi. 1998. Energy Efficiency in China: Accomplishments and Challenges. *Energy Policy* (September).