

**GLOBAL WARMING: NATIONAL AND
INTERNATIONAL POLICY DIRECTIONS**

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By Martha M. Ezzard¹

The East is looking to the West today, to market economies to solve problems.
But unless (we) deduct environmental costs from energy production revenues,
the free market will have absentees -- future generations, the rest of creation.

Jose Lutzenberger
Secretary of the Environment, Brazil
1990 Interparliamentary Conference on
the Global Environment, Washington, D.C.

A Threat of New Dimensions

Global warming, especially the threat of rapid climate change, poses an environmental challenge of new dimensions. It is a global threat that hovers over the planet in war and peace, arising in the fires of the Persian Gulf oil terror as surely as in the ongoing debate about the need for sustainable development to curtail further reliance on fossil fuels. It is a challenge which stretches the limits of all of the disciplines involved in defining the nature of it and in posing solutions from mitigating its potentially devastating effects: science, economics, law and public policy. No one nation and no one discipline will solve the global warming problem alone.

There are two reasons why America has a special responsibility to take the lead on the global warming issue: Americans consume more fossil fuel per capita than any other country in the world. And in the post Cold War world, more nations and peoples than ever before are looking to the free market, especially the American model,

to solve environmental as well as economic problems.

With the question of America's environmental leadership in mind, two tasks were undertaken in order to examine national policy directions. First, personal interviews were conducted with seven environmental leaders in Congress. Second, an analysis was made of the relationship, if any, between democratic institutions and the environmental ethic. The result of those two inquiries is a specific and pragmatic proposal for amending the U.S. Senate and House Rules to require an environmental fiscal note on legislation which contains positive or negative environmental savings or costs. In an era in which budget drives policy and short term results are primary, procedures which require accountability for the expenditure of public resources, including long-term environmental costs, must become a regular component of democratic policy making.

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In examining international policy directions, a study was undertaken of the development of international legal principles pertaining to the atmosphere -- from the 1941 Trail Smelter arbitration to the 1987 Montreal Protocol. International policy directions point to proposal of a global warming framework convention at the 1992 United Nations Conference on the Human Environment to be held in Brazil. Will the United States play a lead role in creation of such a convention? Will the current Administration continue to oppose a carbon dioxide (CO₂) Protocol? These are key questions in 1991.

The Science of Global Warming

Scientists attribute global warming primarily to the unprecedented build-up of greenhouse or heat-trapping gases in the earth's atmosphere. The earth's average temperature increased .5 degrees Celsius (C.) during the last century. Most of the policy debate focuses on stabilizing or reducing the increasing rate at which CO₂ -- the chief culprit among the greenhouse gases -- is being emitted into the earth's atmosphere as a result of the burning of fossil fuels.

There are five recognized climate change models, known as General Circulation Models (GCMs). They generally agree that a doubling of CO₂ will cause the earth's average temperature to increase from 1.5 to 5 degrees C. in the next 50 years. None of the models is able to predict regional impacts very well because of their lack of spatial detail. But the major weakness of the GCMs is their inability to consider the effects of clouds. Clouds are a negative feedback in the warming process because they reflect sunlight back into space, decreasing the amount of heating. There are also positive feedbacks, such as an increase in forest

respiration or the thawing of Arctic permafrost, that could cause more rapid warming. These and other uncertainties serve to confuse both the media and the policymakers as to the need for preventive action now.

Adding to the perceived scientific uncertainty is the George C. Marshall Institute Report issued in 1989. The controversial report claimed that increased solar activity rather than greenhouse gases caused the earth's previous warming. Although widely discredited by atmospheric scientists and criticized for its lack of peer review, the report caught the attention of key white House advisers and conservative leaders in Congress.

While warming is currently predicted only on the basis of circumstantial evidence, according to National Center for Atmospheric Research (NCAR) scientist, Dr. Stephen Schneider, the GCMs should be able to produce valid evidence of global warming in the next ten years. As Dr. John Firor, head of NCAR's Advanced Studies Program, points out, it is not global warming which is in doubt, but the exact rate of warming which can't be ascertained today.

Scientists have traditionally felt they should stay out of the political fray for fear of tarnishing their reputations as objective seekers of truth. But the policymakers interviewed for this study said sound policy on such a complex scientific issue as global warming cannot be accomplished without more involvement from the scientific community. Following the heated public debate over the Marshall Report, one of the suggestions made by Colorado Senator Tim Wirth was for the creation of a panel of scientific experts chosen by the National Academy of Sciences (the one source to which legislators attributed the greatest

credibility) as an ongoing resource for Congress in considering the global warming challenge.

The Economics of Global Warming

While leading scientists differ in their forecasts of the rate of global warming, few dispute the immediate need to respond to the global warming threat. By contrast, several leading economists suggest that immediate action would not be cost efficient. Using various economic models, some economists claim adaptation rather than prevention is the more economically prudent choice.

Yale University Economics Professor William Nordhaus, formerly a member of President Jimmy Carter's Council of Economic Advisers, wrote in a recent article in The Economist, "For the bulk of the (U.S.) economy...climate change over the next few decades is likely to have less effect than the reunification of Germany." Nordhaus argues there are currently no viable substitutes for fossil fuels, and, therefore, climate engineering or adaptation would be less economically drastic. Speaking on the subject to the American Association for the Advancement of Science last February, he said, "The long-run marginal cost of reducing (greenhouse) emissions is estimated to be about \$38 per ton (of CO₂) for a 25% reduction, and about \$119 per ton for a 50% reduction...(There is) no strong presumption that modest and gradual greenhouse warming will on balance be harmful." A similar conclusion was reached by three researchers in a 1989 study sponsored by the electric utilities industry. The report of the Electric Power Institute conducted by Manne, Richels and Hogan, proposed additional research on the safe use of nuclear power and the development of new technologies to remove and dispose of CO₂.

There are strong arguments and economic data on the other side, however, which indicate that an aggressive U.S. energy policy could not only counter global warming, but also result in greater domestic productivity.

Amory Lovins, who heads the Rocky Mountain Institute in Snowmass, has argued since the mid-seventies for a U.S. energy policy based on energy efficiency. Lovins, disputing Nordhaus' conclusions at the same scientific meeting last year, advocated his belief that the technology exists to reduce by one-fourth the electrical demand for lighting, motors, and appliances. The problem, he noted, is that no national policy or agency exists to review or enforce the redesign of electrical products.

The American Council for an Energy-Efficient Economy, an economic think-tank, published a study in 1988 that also concludes that aggressive energy-efficient policies can contain energy use at a constant level and still allow economic growth. The authors, Chandler, Geller and Ledbetter, point out that reasonable reduction in energy intensity -- the rate of energy used per dollar of economic output -- would make the U.S. economy more competitive with the economies of Japan or West Germany. Both of those countries use only half as much energy as the United States to produce goods and services.

Scientists warn the assumption Nordhaus and other economists make--that warming of the earth's surface may be gradual--is a risky one. Sudden and rapid climate change is a distinct possibility, one to which adaptation is not a viable response. Economists and scientists agree, however, that a 10 to 20% reduction in current U.S. CO₂ emissions would not

require unrealistic costs nor dramatic changes in lifestyles.

Moving from Science to Policy: Interviews with Policymakers

The seven members of Congress interviewed for this article were selected on the basis of two criteria: (1) they introduced or sponsored major global warming legislation; (2) they chair or are ranking members of committees or subcommittees that have held extensive hearings on such legislation. The two Senators were Senator Al Gore, D-Tennessee and Senator Tim Wirth, D-Colorado. The five Representatives were Representative Claudine Schneider, R-Rhode Island; Representative Sid Morrison, R-Washington; Representative Vic Fazio, D-California; Representative George Brown, D-California; Representative David Skaggs, D-Colorado. Aides to Republican Senators Rudy Boschwitz of Minnesota and John Heinz of Pennsylvania, both of whom have been involved in global warming issues, were also interviewed.

The purpose of the interviews was to gain insight from legislators in both parties about facts that prevent or encourage movement from science to policy. Three topics were explored in the interviews: (a) the obstacles to, and the incentives for, supporting or opposing proposed legislation on global warming; (b) views on the most important national and international strategies to mitigate or prevent global warming; (c) whether the United States should support an international global warming convention or a CO2 protocol, now, or in the future.

a. More Obstacles than Incentives to Enact Mitigation Strategies

Three obstacles were identified repeatedly by the legislators. The first was the perceived costly nature of most of the proposed solutions to the global warming threat. The second was the difficulty of dealing with the science of global warming -- including confusion about the certainty or uncertainty of the scientific data. The third was the lack of priority placed on the issue by the Administration or by the majority of the members of Congress.

Representative Schneider said, "The failure of decision-makers to know how to deal with science is as big a problem as the failure of scientists to make policy recommendations based on their scientific findings." Representative Brown said scientists need to connect better with policy. "Scientists tend to do the research," he said, "and say, 'Here it is' -- they should participate further than that." Senator Wirth said it is his impression that Senators do not sense a consensus on the scientific evidence relating to global warming.

Republican Representative Morrison and Democratic Representative Fazio, both major players on energy issues in the House of Representatives, noted that the budget drives policy at this time of unprecedented deficits and cited fiscal concerns as the chief obstacle to approval of proposed strategies to mitigate global warming. Representative Skaggs also believes economics are a chief obstacle to proposed solutions. "Those who support action on the issue listen to the scientists, and those who oppose action listen to the economists," he said.

Senator Al Gore pointed to Congressional inertia as the chief obstacle to support, even for those solutions termed "no risk" -- such as energy conservation, alternative fuels research, preservation of ancient forests, all good strategies for a number of environmental reasons other than just global warming. The lack of leadership by the Administration on the issue was recognized by Democrats and Republicans alike as a stumbling block. Specifically identified was Presidential Advisor John Sununu's refusal to consider any U.S. action other than additional research. Key Congressional committee chairman who represent oil, coal and auto manufacturing states were also named as obstacles.

All of those interviewed agreed that media attention to the global warming issue is a positive influence as are events such as the 1990 Earth Day. Innovative state programs relating to energy conservation and containment of greenhouse gas emissions can also have positive effects as indicators of public support for such strategies nationally. While several states have enacted energy conservation incentives, Oregon is the only state which has actually put into statute the goal of reducing greenhouse gases. The Oregon statute calls for emissions reductions of "20% below 1988 levels by 2005." [ORS 469.060 (3)(e)(1989)].

b. Domestic Energy Policy and Assistance to Developing Countries Are Most Important Strategies

There was uniform agreement among the legislators interviewed that the most important domestic strategy to mitigate global warming is a national energy policy containing incentives for conservation and the development of alternatives to fossil fuels. Senator Wirth and Representative

Schneider (who was defeated last November in her bid for the U.S. Senate in Rhode Island) introduced bills in the 1990 session of Congress containing similar provisions for a "least-cost national energy plan." Such a plan involves using the least amount of energy possible per dollar of economic output. (See Chandler, Geller and Ledbetter study, cited above.)

The Wirth bill, S. 324, establishes an Office of Climate Protection in the Department of Energy and authorizes additional funds for development of renewable energy sources. The Schneider bill, H.R. 1078, would have required the ranking of energy saving options that reduce energy per unit of Gross National Product (GNP) according to CO2 reductions resulting from each option.

Senator Gore proposes a Strategic Environment Initiative (SEI), calling the earth's fate the number one national security issue. Comparable to the military's well-known Strategic Defense Initiative (SDI), Gore says the environment deserves at least the same kind of focus and intensity.

When asked to name the single most important international strategy to curtail global warming, five of the seven legislators said their first priority was assisting Third World countries with sustainable development. Technology transfer was cited as the most important means of assistance. Other priorities included preservation of the rain forest and population control. Although developing nations account today for only 20% of all greenhouse gas emissions, with 80% of the world's population, they could -- without sustainable development assistance -- account for 60% of CO2 emissions in the future.

A Proposal: the Environmental Fiscal Note

Few Senators or Representatives in Congress have time to ponder the global environmental impacts of legislative policies. The costs of a rising sea level or desertification of the West in 2010 seem remote from daily constituent problems and the next Congressional election. As Representative Brown put it in an interview in his Washington office last spring; "You can't run on a platform with too many global issues -- you'll get busted!"

Policymakers will consider the environmental impact of legislation only if forced to do so on a regular basis. The proposal to enact a simple rule change for all Senate and House Committees will force consideration of environmental costs. The standing rules for both Houses currently require a five-year fiscal projection for each bill reported out of committee. Why not a five-year environmental cost-benefit assessment as well? For example, Standing Senate Rule XVI (11)(a), similar to House Rule XIII Section 7(a)(1), requires that the committee report accompanying each bill reported out contain:

II. (a)(1) an estimate, made by such committee, of the cost incurred in carrying out such bill or joint resolution in the fiscal year in which it is reported and in each of the five fiscal years following such fiscal year...; (2) a comparison of the estimate of costs made by any Federal Agency; or (3) in lieu of such estimates ... a statement of the reasons why compliance by the committee with the requirements of subparagraph (1) or (2), or both, is impracticable.

The Rule could be amended as follows: II. (a)(1) an estimate, made by

such committee of the cost, including the environmental cost, incurred in carrying out such bill or joint resolution...

A similar approach to amend fiscal note requirements that exist in state legislative rules would also be effective. In many states, such as Colorado, bills cannot be debated on the floor of either House without a written note of fiscal impact attached. In fact, an environmental fiscal note might be more carefully heeded at the state level than at the federal, since many state legislatures are more diligent about the costs of legislation because of their balanced budget requirements.

Certainly, there will be screams of "impractical" and "speculative" as well as the argument, not without some validity, that fiscal notes are ignored in Congress. Nevertheless, the current situation simply allows the environmental deficit -- whether increasing CO2 emissions in the atmosphere or adding to expensive toxic contamination problems -- to be placed "off- budget." For example, the fiscal note for revision of the Clean Air Act was calculated essentially on the basis of the increased costs to industry of meeting tougher standards. Savings in terms of health, productivity, or mitigation of the greenhouse effect, while articulated during floor debate, were not counted in the fiscal impact assessment. For example, the EPA estimates that the production of 40-mile-per-gallon cars could save three million barrels of oil per day, 43% or all of the oil used in the United States daily. If environmental dollars and cents were part of every bill's fiscal impact, perhaps it would not take a world crisis to get the attention of policymakers.

The International Challenge

Classic environmental law is horizontal, built on coexistence and the

requirement of evidence of direct interference by one state with another. But today's global warming challenge calls for dealing with indirect, even delayed, impacts, and necessitates affirmative obligations to act rather than just to coexist thought restraint. Although international environmental law has developed rapidly since the seventies, developments relating to air pollution lag behind toxics control and the now customary and accepted Law of the Sea (LOS).

One of the earliest air pollution cases involved a zinc and iron smelter in Trail, British Columbia which emitted over 300 tons of sulphur monthly, causing sulphur dioxide fumes to cross the border into the state of Washington. The International Arbitral Tribunal ruled in the now-famous Trail Smelter decision (3 U.N. Re. Int'l Arb. Awards, 1949) that "no state has the right to use or permit the use of its territory in such a manner as to cause injury...to the territory of another..."

A series of cases and treaties expanded that principle, and in 1972, the United Nations Conference on the Human Environment at Stockholm laid the foundation for the development of positive obligations of states towards each other in Stockholm Principle 21, probably the best known principle of international law in the world today:

All nations have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states of areas beyond the limits of national jurisdiction. (U.N. Doc. A/Conf. 48/14, June 5, 1972)

Landmark Air Pollution Treaties: Towards Prevention and Quantitative Obligations

Only two significant international treaties deal with protecting the air: the 1979 Geneva Convention on Long Range Transboundary Air Pollution, the first multi-lateral treaty to address air pollution control; and, the 1985 Vienna Convention for the Protection of the Ozone Layer, a framework treaty setting forth general principles for preventing atmospheric pollution.

Although the Vienna Convention does little more than call for scientific and legal cooperation in recognizing and preventing the deterioration of the ozone layer, it is viewed as the necessary predecessor to the Montreal Protocol on Substances that Deplete the Ozone Layer (Senate Treaty Doc. 100-10, Sept. 24, 1987) whose original terms were binding on states to reduce the production and use of chloroflourocarbons (CFCs) by 50% by the year 2000. The Treaty was also the first to grant special concessions to developing nations, granting them delays in meeting the emissions standards and pledging technological assistance from developed countries. The landmark Montreal Protocol, the first binding, quantitative treaty of a preventive nature, was negotiated before conclusive evidence of the hole in the ozone layer was released and before production of viable substitutes for CFCs. Supporters of a CO2 Protocol point to those factors with optimism.

Two other international agreements are noteworthy in considering the evolution of international legal principles as preventive instruments. The 1982 World Charter for Nature (U.N. Doc. A/37/51. 1983), Principle 11, sets forth an affirmative obligation of states not to risk environmental damage to others. The 1989

Declaration at the Hague (28 I.L.M. 1308), signed by 24 nations and five international bodies, went a step further and declared a healthy environment a human right. The United States did not sign the Hague Declaration.

While observers point to the Vienna Convention and the Montreal Protocol as a kind of two-step model to a global warming Convention and CO2 Protocol, an international agreement on global warming will be far more difficult to negotiate. The reason is that the world's economy is not dependant on CFCs as it is on fossil fuels. The major industrial powers, including the United States, have, so far, been stumbling blocks to any proposals for definitive cuts in CO2 emissions or even a freeze in current levels.

The Outlook for a Climate Change Convention

The International Panel on Climate Change (IPCC), which operates under the auspices of the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO), is the primary international forum for addressing the climate change issue. The Panel is already drafting a proposed Climate Change Convention for the twentieth anniversary meeting of the Stockholm Conference on the Human Environment to be held in Brazil in 1992. Draft language has been proposed by the Washington, D.C. based Climate Change Institute and other non-governmental organizations (NGOs) and by the Second World Climate Change Conference in which the IPCC participated last fall in Geneva.

Prior to the outbreak of the war in the Gulf, the Bush Administration was leaning towards supporting negotiation, at least, of a framework convention. In

contrast to America's leadership in negotiating the Montreal Protocol, the Administration remains adamantly opposed, to any CO2 Protocol, however. On a more hopeful note, last spring a bipartisan group of U.S. Senators, sponsors of the first Interparliamentary Conference on the Global Environment, joined in a Conference Resolution supporting a Protocol to cut CO2 from current levels by 20% by the year 2010.

Conclusion: Environmental Democracy and the Environmental Ethic

It is no accident that the Green Movement in Eastern Europe and the Soviet Union has emerged hand-in-hand with democratic reforms. When historians record 1989 as the year the Iron Curtain collapsed and the Berlin Wall came down, they will also record it as the year of emerging global environmental awareness.

Political freedom and environmental values are philosophically and politically grounded in democratic principles. The formerly Communist-ruled countries of Eastern Europe are examples of the environmental degradation that can occur when there is no public accountability for pollution, its health effects and its costs. Examples abound of East German doctors being forbidden to discuss the health effects of air pollution from coal-fired industrial plants.

As scientists refine the GCMs and economists their economic models, perhaps it will be up to the lawyers to insert the environmental ethic, the dimension that deals with the preservation of certain intangible values for future generations. Georgetown Law professor Edith Brown Weiss, in her recent book, In Fairness to Future Generations, notes that we are all trustees of the planet:

We, as a species, hold the natural and cultural environment of our planet in common, both with other members of the present generation and with other generations, past and future. At any given time, each generation is both a custodian or trustee of the planet for future generations and a beneficiary of its fruits.

Dr. Mostafa Tolba, Executive Director of UNEP, says we are at the beginning of a new era of environmental statesmanship. Senator Gore says we must change the way we think about man's relationship to nature if we are to solve global environmental problems such as global warming. Representative Schneider said last spring, "I think the world is watching the United States and looking for some action."

A number of countries, including Brazil, Chile, the Netherlands, Spain and Portugal, have express guarantees to a healthy environment in their constitutions. While the United States Constitution does not contain such a guarantee, perhaps the welfare clause, Article I, Section 8, includes it. The U.S. has the most sophisticated environmental laws in the world. And a 1990 poll conducted by USA Today showed 83% of Americans "fear for the environment" and are willing to pay more taxes to preserve it. But as other countries impose green taxes and enact programs to curtail CO2 emissions, the U.S. stands to lose its environmental leadership role.

In the words of the Soviet poet, Yevgeny Yevtushenko, who wrote "The Last Petals" for the 1990 Interparliamentary Conference on the Global Environment:

We live at the strange time of the moral autumn
Last petals of conscience
Last political peacocks

If environmental democracy is indeed to save the planet, it is the people, not the politicians, who will be the petals of conscience.