

SAVING EARTH'S ATMOSPHERE

A progress report on the complex strategy and hardball politics behind the international effort to rescue the atmosphere

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THE EARTH'S ATMOSPHERE IS BEING CHANGED AT AN UNPRECEDENTED RATE BY POLLUTANTS RESULTING FROM HUMAN ACTIVITIES, INEFFICIENT AND WASTEFUL FOSSIL FUEL USE, AND THE EFFECTS OF RAPID POPULATION GROWTH IN MANY REGIONS. THESE CHANGES REPRESENT A MAJOR THREAT TO INTERNATIONAL SECURITY AND ARE ALREADY HAVING HARMFUL CONSEQUENCES OVER MANY PARTS OF THE GLOBE.

THESE ALARMING WORDS, READERS MAY recall, were part of the statement of the Changing Atmosphere Conference, hosted by the Canadian Government, in Toronto immediately after the 1988 economic summit. Some three hundred senior scientists and politicians convened for sober discussion of the implications of changes in the earth's climate, decided to "outgreen" Greenpeace.

But is the remarkable consensus that developed at the Toronto Conference beginning to fray at the edges? Hardly a day goes by without some new group of boffins claiming that no global warming has taken place, or citing some exotic study of Antarctic ice cores or remote sensing data to challenge the basic assumptions. These debates have been seized upon by those politicians who wish to do little or nothing about the problem, at least not until the spate of elections due to be held in 1992 in a number of Western industrialized countries has passed.

The old American cry of "do nothing until research tells us more about the problem" which so frustrated action on acid rain is being heard once again, most recently from John Sununu, the White House Chief of Staff. Speaking at one of the briefings which accompanied the Houston economic summit, he even summoned up one of the other hoary old chestnuts of the Reagan presidency – the one known in the White House press corps as the "killer tree" theory after the famous Reagan notion that trees cause pollution.

But when the curtain is pulled back on the scientific debates, one critical observation remains unchallenged. In the words of the American climatologist Stephen Schneider testifying before an unprecedented joint session of eight committees of Parliament earlier this year:

"... while legitimate uncertainty remains, and will continue to remain for decades over precisely where and when changes will occur, the vast bulk of responsible experts believe that we have a substantial chance of unprecedented change." This view was reinforced by the recent report of the Intergovernmental Panel on Climate Change. The IPCC represents a consensus of some of the world's leading scientists. Their conclusions were that emissions of the so-called "greenhouse gases," if left uncontrolled, would result in global mean temperature increases of up to three degrees Celsius and sea level rises of up to three-quarters of a metre by the end of the next century.

ENVIRONMENTALISTS HAVE LONG BEEN accustomed to describing problems as "global," sometimes with dubious accuracy. But climate change is an issue that is of genuinely worldwide concern. Caused by all of us and affecting all of us, it has two aspects. First, the earth's thin layer of ozone which protects us from the worst of the sun's ultra-violet radiation, is being destroyed by the emission of chlorofluorocarbons (CFCs), previously thought of as benign chemicals used for refrigeration, for blowing insulating foam, and as solvents in the electronics industry. If not controlled quickly, this erosion of the ozone layer will lead to vastly increased numbers of skin cancers (this is now beginning to happen), reductions in crop yields, and perhaps most ominously, effects on the human immune system.

Second, the emission of carbon dioxide (CO₂) and the other greenhouse gases may profoundly alter the earth's climate in ways that we cannot accurately predict. But, in the

words of our sober Toronto participants: "Such high rates of change would be sufficiently disruptive that no country would likely benefit in toto from climate change." The poorer countries of the Third World, with the least resilience, are likely to fare very badly as their already fragile agricultural sectors are buffeted by changes in rainfall patterns and growing seasons, or as large portions of their coastal areas, along with valuable infrastructure and industrial investments, are threatened with inundation. As populations continue to grow and the climate begins to change, the world is bound to experience more conflicts over resources that will make today's Middle East water disputes or the floods of environmental refugees that already dominate parts of Africa, seem routine.

If the effects of climate change are global, so are its causes. The overwhelming majority of the greenhouse gases emitted as a result of development (i.e. industrialization) are emitted by the developed countries. The US alone contributes some twenty percent of man-made greenhouse gases. The remainder of the Organization for Economic Cooperation and Development (OECD) countries together contribute twenty percent while Eastern Europe and the Soviet Union chip in an additional one-fifth. Yet the developing countries are not without blame. When all greenhouse gas emissions (including those from deforestation and agricultural development) are added together, Brazil, China and India become the third, fourth and fifth largest producers.

THERE IS COMMON AGREEMENT THAT THE FIRST step in combatting climate change must be to eliminate the production and use of CFCs. Not only are they damaging to the ozone layer, they are among the most potent of the greenhouse gases, accounting for up to thirty percent of the total for industrialized countries. There has been substantial progress in this area already – Canada opened the batting on this issue in 1987, by hosting the meeting which led to the Montreal protocol. This agreement called for a halt to the production of CFCs by the end of the century. Before the ink was dry