## NVIRONMENTAL ISSUES HAVE grabbed the spotlight of public attention. Paradoxically, compared with all the doom and gloom scenarios, there has been little discussion, in practical policy terms, of what can or should be done to address environmental problems within the context of global security and international governance. In response to this lacuna, the Institute for Peace and Security assembled a wide range of decision makers and experts, on 11 and 12 April, to discuss the nature of climate change, its ecological, social, political and economic consequences, and possible policy responses at regional, national and international levels.

There was surprisingly little disagreement over the basic processes of climate change. It will have a range of geophysical impacts, including fluctuations in temperature, amount and distribution of precipitation, storm frequency and intensity, and sea level. But the focus of the conference was not on the geophysical effects of climate change, rather, it was on the political, social and economic impact.

An underlying theme was that the world's economy and ecology are now totally interlocked – as Jim MacNeill of the Institute for Research on Public Policy put it, "until death do them part." This raises fundamental questions about how policy decisions are taken and their implications for ecological sustainability. While the scope for possible action may grow with technological opportunity, it is very clear that the obstacles to sustainability are not technical or even economic; they are social, institutional and political.

The 1988 Toronto Conference on the Changing Atmosphere sponsored by the Canadian Government, the United Nations Environment Programme and the World Meteorological Organization, called for a twenty percent reduction in global carbon dioxide emissions by the year 2005. Since then, worldwide emissions have increased by approximately six percent and it is unlikely that the target will be met. As Christopher Flavin of the Worldwatch Institute pointed out in Ottawa, the twenty percent goal was formulated on the basis of what the climate needs, not what politicians are ready to accept or what economists are willing to put into their econometric models.

Because energy use is the principal source of atmospheric contaminants, energy is the crux of the problem. An effective response to climate change, Flavin argued, must recognize two things: energy politics is "hardball politics" dominated by a handful of powerful in-

## FACING UP TO CLIMATE CHANGE

An international conference in Ottawa considers fundamental questions of policy and action.

dustries and interests; and economic soundness and market forces must determine appropriate technologies and strategies. There was a strong call at the conference for a political and economic "levelling of the playing field," with subsidies attracting particular attention. According to Jim MacNeill, "When you compare \$40 to 50 billion a year [for subsidies] in North America to promote fossil fuels, and hence to promote acid rain and global warming, with the decreasing amounts spent on efficiency and alternatives to fossil fuels, it is simply no contest. Acid rain and global warming win hands down."

THE ARGUMENT THAT ECONOMIC SOUNDNESS and market forces should guide environmental policy raised the contentious question of whether subsidies should be a policy instrument at all and, if so, what activities should be subsidized. MacNeill reflected a view shared by a number of delegates when he argued that subsidies which encourage ecologically damaging production processes, such as the Organization for Economic Cooperation and Development (OECD) agricultural subsidies which reinforce the overuse of soils, wood, and other ecological capital, should be either scrapped or made ecologically sensitive. Others believed that levelling required they all be stopped. The debate, though animated, was inconclusive.

Peter Gleick of the Pacific Institute focussed the concern of the conference on the relationship between climate change and international conflict. He pointed out that while the impact of climate change will be fairly evenly distributed among nations, the ability to *respond and adapt* will not. This disparity is already causing some tension between rich and poor nations and may become a principal source of conflict in the years to come. Where international tensions already exist, the impact of climate change on resource availability and quality may trigger conflicts – the 1967 war in the Middle East was caused partly by the question of access to the Jordan River.

The further deterioration of North-South relations was another prominent theme of the conference. As the Cold War wanes, a new type of power logic may be emerging. Some developing countries have clearly come to the conclusion that the second wave of environmental concern now sweeping Europe, North America and Japan, provides them with political leverage, however negative, that they can use in bargaining for action on those things that concern them most. The fact of rapid population growth and increasing energy use by developing countries means that the industrial-

ized world cannot deal with global warming on its own. Rich nations will, therefore, have to begin to address issues of crucial importance to developing countries such as resource and financial burden sharing, debt reduction, trade access, and preferential access to intellectual property and technology, if meaningful international agreements on the environment are to be implemented.

THE POLICY CHOICES AND ACTION WE TAKE NOW, will be played out in future climate trends. There is an inescapable lag between societal action and global ecological reaction due to the sheer momentum of climate change. Concentrations of greenhouse gases will continue to build up in the atmosphere and the longer it takes to deal with them, the more the climate will change.

The broad scope of the ideas for action and policy options discussed in Ottawa is suggested by the following short-list: creation of new indices of climate change and sustainable development to measure progress in tackling environmental problems; the use of remote sensing as an early warning mechanism; an expanded role for international institutions; the creation of a world atmospheric trust fund; a tax on carbon emissions; use of regulatory and economic incentives; and reforestation. It was clear to most participants that the costs of action are far less than the costs of inaction.

The final statement of the 1988 Toronto conference warned: "Humanity is conducting an unintended, uncontrolled, globally pervasive experiment whose ultimate consequences may be second only to a global nuclear war." The response to the "unintended experiment" of climate change, if it is to be effective, must be rooted in the social, economic, and political as well as the scientific.

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