

THE CLIMATE FOR WAR

The economic and political consequences of climatic change will be a new source of conflict among nations.

BY FEN OSLER HAMPSON

SECOND ONLY TO NUCLEAR war, the greatest threat facing the human species is the unprecedented rate of climatic change that will occur during the next century. This was one of the major conclusions of an international conference on *The Changing Atmosphere: Implications for Global Security* held in Toronto, this past June. Involving more than three hundred scientists and policy makers from forty-eight countries, United Nations organizations, other international bodies, and non-governmental organizations; the conference was sponsored by the Government of Canada with the support of the United Nations Environment Programme and the World Meteorological Organization. The forerunners of the Toronto meeting were the publication of the Brundtland Commission Report on *Our Common Future* and the Ozone Protocol, signed by twenty-four countries in Montreal in September 1987.

The purpose of the conference was to discuss how climatic change will affect the future of humanity and to set policy goals based on scientific findings that could serve as a basis for urgent political decisions. The conference reaffirmed a growing consensus among scientists and environmental experts about man-made impacts on the atmospheric chemistry that increasingly threaten the survival of the species: the Earth's atmosphere is rapidly being polluted by the burning of fossil fuels, which emit carbon dioxide into the atmosphere, and the buildup of

other gases including ozone, nitrous oxides, chlorofluorocarbons (CFCs), and methane. The growing concentration of these "greenhouse gases" – which trap the Sun's radiation and raise surface temperatures – will result in a probable rise in the mean surface temperature of the Earth anywhere from 1.5 to 4.5 degrees Celsius before the middle of the next century. Pronounced regional variations in the level of warming are likely to be experienced. At higher latitudes the level of warming will be double that experienced in the tropics. Warming will also be accompanied "by changes in the amount and distribution of rainfall and in changes in atmospheric and ocean circulation patterns." The depletion of the ozone layer shield in the upper stratosphere from CFCs will also increase levels of damaging ultraviolet radiation, thus posing a direct threat to many biological species including humans who will suffer increased risk of skin cancer and eye damage.

The conference affirmed that the most far-reaching effects of global warming and ozone depletion will be changing precipitation patterns and a rise in sea levels which will threaten global security, the world economy, and the natural environment. The final conference report concluded that these changes, coupled with the effects of rapid population growth in many regions of the world, will:

- Imperil human health and welfare;
- Diminish global food security, through greater shifts and uncertainties in agricultural produc-

tion, particularly for many vulnerable regions;

- Increase political instability and the potential for international conflict;
- Jeopardize prospects for sustainable economic development and reduction of poverty;
- Threaten extinction of animal and plant species upon which human survival depends.

IT IS CLEAR THAT NOTHING SHORT of a new global ethic and an international mobilization of resources are required to deal with the looming threat of climatic change. Norwegian Prime Minister Gro Harlem Brundtland expressed the challenge to the delegates this way:

We need a new political approach to environment and development, where economic and fiscal policies, trade and foreign policies, energy, agriculture, industry and other sectoral policies aim to induce development that is not only economically but also ecologically sustainable.... There is need for a fresh impetus in international cooperation. Development aid and lending must be increased, and the debt crisis resolved. The ultimate goal must be to forge an economic partnership based on equitable trade and to achieve a new era of growth, one which enhances the resource base rather than degrades it. The mission must be to make nations return to negotiations on global issues after years of decline in real multilateralism.

Some of the immediate actions recommended by the conference were:

- Immediate ratification by all signatories of the Montreal Proto-

col on Substances that Deplete the Ozone Layer and additional measures to limit other ozone-destroying halocarbons;

- Energy policies to reduce markedly CO₂ emissions with an initial goal of CO₂ reductions by the wealthy industrialized countries of 20 percent of 1988 levels by the year 2005;

- Initiated development of a comprehensive global convention as a framework for protocols on the protection of the atmosphere;

- Increased funding for research on climatic change and for research, development and transfer of information on renewable energy sources particularly for developing countries;

- Policies to reduce deforestation and funds to ensure that the economic penalties of environmental change are not absorbed by developing countries

HOWEVER, THERE WAS A BIGGER message that came out of the conference. It was that climatic change represents a major threat to international security. The socioeconomic and political consequences of environmental change are such that they may well increase political and military conflict not only within states but also internationally. In papers prepared for the meeting and in conference working groups, some of the possible paths to conflict were identified.

This first is that environmental degradation in such forms as desertification, deforestation, and flooding will increase dramatically the number, as well as the social, political, and economic impact, of environmental refugees worldwide. Entire landmasses,