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# COMMENT

## NATO's Committee on Challenges in Modern Society

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NATO was established after the Second World War as an organization to co-ordinate the defense of the western nations against the possibility of attack by the Soviet Union. It is not generally well known, especially amongst the public, that from its inception the NATO alliance has included significant non-military activities. The science program funds research activities, study institutes and fellowships within the NATO countries — there are now 19 — and this work has been expanded to include the additional countries of the Euro-Atlantic Partnership, constituting most of the rest of Europe, and including the former republics of the Soviet Union, a total of 45 countries.

The Committee on Challenges in Modern Society (CCMS) was founded in 1969 as part of an initiative to address the non-military aspects of human security. Currently the committee's program director is Mrs. Deniz Beten of the NATO Scientific and Environmental Affairs Division at Brussels. Representatives to the committee are appointed from each NATO country, and the objective is to promote free discussion and inquiry, particularly in the areas of urban problems, health, and environmental issues. Military issues are a large, but not exclusive, part of the agenda. The committee commands only a small budget. Its function is not to carry out studies but to stimulate interest and international co-operation by groups of researchers in universities and government departments in participating countries. CCMS serves as a forum for the planning of workshops, pilot studies and special projects which, it is hoped, generate enough interest within the participating countries that the projects become self supporting through the securing of funding from national sources. There is plenty of scope here for the involvement of earth scientists in issues of environmental concern.

Canada's participation in CCMS traditionally has been provided through a contractual relationship between Foreign Affairs and the Royal Society of Canada, with liaison support provided through the Canadian delegation to NATO at its headquarters in Brussels. Until recently, Canada's representative was Prof. Howard Alper, a research chemist and senior administrator at the University of Ottawa. I succeeded him in March 2000. No particular significance should be read into the replacement of a chemist by an earth scientist on this committee but, given the importance of the earth sciences in many areas of environmental concern (for example: soils, water, natural hazards, geochemical cycles), it is to be hoped that the knowledge and networking skills that I can bring to the task will be useful. In October 2000, I attended my first meeting of the committee, held in Berlin.

Activities of CCMS have expanded well beyond the military sphere, to include such topics as coastal ecology, population movement in cities and consequences for environment and security, cancer risk assessment methods, studies of nutrient loads in rivers and estuaries, and clean products and processes. In the military realm, projects are studying the environmental impact and sustainable use of resources, such as land, buildings, fuels, *etc.*, in peacetime military activity. Specialists from many disciplines in the physical sciences, social sciences, and engineering, in universities and government departments of defence, natural resources, the environment, transport, and other related areas, have been involved in the work. Many environmental and security issues are global in scope (*e.g.*, climate change, AIDS), and debate continues within CCMS as to whether the committee is the appropriate forum for discussion of such global issues. An ambassador from Norway argued at a round table discussion meeting in Berlin for the broadening of NATO's concerns in these areas; however, most participants emphasize the unique skills and experiences of the NATO member countries, and the regional nature of the alliance, preferring to focus on problems of immediate concern to the NATO and partner countries.

Currently Canada is involved in several projects, including participation by officials from the Department of Defence in a study of sustainable military buildings, and a study of the transport of hazardous materials in the Black Sea region. John Reid, of the Department of Transport, represented Canada in a study, now completed, of the spill of toxic materials during the movement of military goods. Much of the work advocated by the committee has involved the remaking of the structures of organized civil society in eastern Europe, following the collapse of the Soviet Union. With the withdrawal of the Russians, many of these countries were left without administrative structures, workable environmental rules and regulations, or institutional experience in such areas as the environment and transportation. Simply establishing networks of researchers in neighbouring

countries, introducing them to the appropriate literature, and encouraging scientific and technical discussion free of the overseeing of political commissars has proved to be an enormously liberating experience for professionals in these areas, and helps to explain why they have enthusiastically welcomed association with NATO and other western organizations. The enthusiasm goes well beyond geopolitics to embrace the daily activities of the working-level professionals in government departments and technical organizations charged with responsibility for the daily functioning of their societies. John Reid's project has led to the production of a reference manual setting out recommended rules and procedures for handling spills that has been translated into several European languages (the Russian edition is the next to be prepared), a highly practical contribution to the reconstruction of administrative organizations.

In Ontario we have just experienced the Walkerton disaster, a tragedy brought about by administrative neglect and lack of investment in water research, monitoring and quality control at every level from the federal to the municipal. And this has happened within a supposedly well-developed, wealthy country with long traditions of well-regulated administrative structures. Imagine how much worse the situation is within the countries of the former Soviet Union. Even under the Soviet regime air and ground water pollution locally had reached catastrophic levels, and following the collapse of that regime the situation typically has become much worse. It is these kinds of problems that CCMS is well placed to address, through the development of working-level scientific and administrative contacts and networks, with the exchange of ideas and expertise taking place at workshops and through international pilot projects.

Within the military realm, environmental issues have become surprisingly important. A group from the British Ministry of Defence reported to the committee in Berlin on sustainable military activities, including concerns about environmental pollution, clean products and processes, alternative fuels, conservation, and recycling. Environmental protection of endangered plants and animals on military lands has become a major concern. The United States' representative stated that about half of the endangered species in the United States owe their protection to the fact that they occur on military lands, where protection from overexposure to human activity can be more easily enforced. A field trip to a military training site at Kleitz outside Berlin, following the plenary session of the committee, reinforced these ideas. The tank and artillery range there was taken over by the Bundeswehr (the German army) following reunification in 1990. They found that this area of sandy soils, between the Elbe and Havel rivers, had been largely turned into a desert by the destructive activity of unconstrained tank movements by the East German Army. Following a general site clean-up, considerable work on replanting of trees and heathy plants was undertaken, and training methods were re-designed to reduce environmental damage. As a result, the training area has become a sanctuary for many animals and plants that are threatened with extinction, while the necessary military training functions can be pursued under the constraints of some carefully designed rules about vehicle and personnel movements.

One of the main purposes of this comment is to alert Canadian scientists (especially environmental earth scientists), social scientists, and engineers to the range and scope of the work being undertaken under the CCMS umbrella. Although participation brings little financial support beyond seed money for workshops and fellowships, it does provide a framework for involvement in exciting international projects of considerable practical relevance and timeliness. The rule of the committee requires only that three countries agree to become involved in a project for it to become a CCMS project, and this involvement requires only that interested researchers in universities or governments express such interest through their national representative. Expressions of interest are now being solicited for a project proposed by the United States to work on environmental issues with the former Soviet republics of the central Asian region. It is also hoped that a Memorandum of Understanding to be signed between Russia and NATO in December 2000 will bring new opportunities for fruitful co-operation with that country. High hopes for this forthcoming agreement had been expressed within NATO several years ago, but were held in abeyance during the Kosovo conflict because of Russia's objections to the NATO bombing campaign. These proposals by no means encompass all of the possibilities. Any appropriate activities within the 45 member states of the Euro-Atlantic Partnership are to be encouraged, as a means to fostering greater international co-operation and the building of peaceful partnerships. Good science can get done too!

In Canada there is a wealth of environmental earth science expertise within the universities and within federal and provincial geological surveys and departments of the environment. Canada has a special knowledge of and interest in such issues as Arctic environmental problems (*e.g.*, soil stability, permafrost engineering, the concentration of pollutants under cold conditions), in studies of water quality, fresh water science, and many other topics. Interested readers may check NATO documentation at the organization's web site, including pages on CCMS and its "Clearing house for environmental technical information" at www.nato.int/ccms/. Anyone with ideas or specific proposals is encouraged to contact me at the addresses on the preceding page.