

Chapter 9

Scientific research

The increasing public realization that the effects of science and technology can be harmful as well as beneficial has created demands that science policy planning be integrated into general government planning to ensure compatibility with national goals and priorities. In Canada this has been reflected in the activities of the Senate Special Committee on Science and was a major factor in the establishment of the Ministry of State for Science and Technology to assist and inform the government on science policy matters.

Federal policies and decisions have a significant impact on the progress of science in Canada. The federal government is the principal funder of research and development in Canada and second only to Canadian industry as a performer. In 1973-74 more than \$1.4 billion, 6% of the total federal budget, was devoted to scientific activities.

Statistics Canada has collected data on the resources devoted to natural science activities by the federal government since 1959. The range and detail of information gathered has expanded substantially over the years in response to the increasing demand for policy and planning data. In 1970 a survey of federal government human science activities was begun. At the same time considerable effort has been expended to maintain the continuity and compatibility of the resulting data series to permit analysis and study of the impact of scientific activities.

9.1 Federal science policy

Responsibility for federal policy on science resides in the Cabinet. To exercise this authority a Cabinet committee known as the Committee of the Privy Council on Scientific and Industrial Research was established in the National Research Council Act. The Committee was chaired by the Minister designated in the National Research Council Act as responsible for that Council and its members were Ministers of other departments with significant science programs. The National Research Council for many years was responsible for advising the Committee on science policy, complemented after 1949 by a panel of senior officials from the science-based departments and agencies.

A Science Secretariat was created in the Privy Council Office in 1964, as a result of a recommendation of the Royal Commission on Government Organization. This Secretariat worked with the Cabinet Secretariat as part of the internal government structure to provide an accurate and comprehensive background to science policy decisions. Its responsibilities included monitoring new program submissions, initiating and formulating new policies and program thrusts and co-ordinating government participation in national and international science and technology activities. Later, in 1967, the Science Secretariat was given the responsibility of nominating Counsellors (Scientific) for certain embassies and missions abroad in consultation with the Department of External Affairs.

In 1966, the federal government established the Science Council of Canada, a Crown corporation charged with independently assessing Canada's scientific and technological resources, requirements and potential, and making recommendations thereon. The Science Council is concerned both with research and development and with the use of science and technology in the solution of Canada's social and economic problems. It draws its membership from industry, the universities and government and its views are independent of those of the internal government structure.

The Council has published several reports based on commissioned studies from consultants on different areas of science and has also published its own reports making recommendations on these subjects. Some of the topics include upper atmosphere and space; the proposal for an intensive neutron generator; water resources research; university research and the federal government; scientific and technical information dissemination; earth and marine sciences; research in fisheries, wildlife, forestry resources and agriculture; a Canadian STOL (short take-off and landing) air transport system; a communications network for computers; urban development; pollution problems; policies for basic biology and basic research; and policy issues in development of primary and secondary industries. In addition, the Council recommended that Canada focus its scientific and technological effort through the creation of "major programs" designed to help solve some of the country's