

The service provides assessments of human activities in the atmospheric environment and conducts research on the behaviour of the atmosphere, wind-wave mechanisms and the dynamics of ice.

About 23% of Environment Canada's funding for S&T was budgeted for environmental conservation which includes water resources development; water quantity and quality research; hydrometric data collection and the development of inventories of land capability and use.

Research in the forestry service took about 16% of the S&T budget on preservation, enhancement and wise use of forest resources; and on all aspects of forestry and assessing the potential of forests for energy, chemical and new products.

12.2.3 Energy, Mines and Resources Canada

The federal department of energy, mines and resources (EMR Canada) planned to spend about \$377 million on its S&T activities in 1984-85, 62% intramurally and 26% in the industrial sector. EMR operates several laboratories across Canada including an Atlantic geoscience centre in Nova Scotia and a Pacific geoscience centre in British Columbia; a Canada centre for mineral and energy technology (CANMET), a Canada centre for remote sensing and an earth physics branch in Ottawa; an institute for sedimentary and petroleum geology in Calgary; the Cordilleran geology division in Vancouver and coal research laboratories in Edmonton and Calgary, Alta. and Sydney, NS.

The department is responsible for geological surveys and the mapping of the Canadian landmass. The department also develops R&D policies to support national energy options, management and technical evaluation of the government's energy R&D program. See also Chapter 10, Mines and minerals, sub-section 10.9.1 *Research and technology*.

12.2.4 Natural Sciences and Engineering Research Council

The Natural Sciences and Engineering Research Council (NSERC) is the largest of the two university granting councils in natural sciences and engineering with planned expenditures of \$292 million in 1984-85. The second council is the Medical Research Council with expenditures of \$157 million. About 92% of NSERC's budget goes to Canadian universities and 2% to foreign performers with the bulk of the balance devoted to administration. NSERC has a small post-doctorate program in industry which amounted to \$4 million in 1984-85.

The council recently launched two new initiatives: the first involved spending \$16.5 million over three years to strengthen joint industry-university research and technology. The second involved spending \$7.5 million over two years to establish a nationwide network, university based and computer linked, of design and testing stations for very large integrated circuits. Responsibility for management of the

network was to be vested in a new organization, the Canadian Microelectronics Corp. funded by a block grant from NSERC.

12.2.5 Agriculture Canada

The federal department of agriculture (Agriculture Canada) with estimated spending of \$292 million is the fifth largest spender in natural sciences and engineering. The bulk of Agriculture Canada expenditures, 95%, was planned for R&D with 94% being performed intramurally. Only 3% of the department's expenditures were in the industry sector and 2% in the university sector.

The bulk of the department's S&T activities is in the research branch which operates 52 research units across Canada. These specialize in local problems. In addition Agriculture Canada operates six national research institutes: an animal research centre, a biosystematics research institute, a chemistry and biology research institute, a food research institute, a land resource research institute, and an engineering and statistical research institute.

S&T activities include research on soil properties; water use and water management; energy utilization; environmental quality research; research on production development including animal crossbreeding, feed lot systems and genetics; and research relating to processing distribution, retailing and consumer concerns.

12.3 Major participants in social sciences and humanities

Five federal departments and agencies fund 57% of the total expenditures in the social sciences and humanities. The scientific and technological endeavours cover a wide range of activities including collection and dissemination of information, funding of basic research in universities and research on third world social problems.

12.3.1 Statistics Canada

With estimated 1984-85 expenditures of \$250 million, Statistics Canada is by far the largest spender on social sciences and humanities (about four times that of the second largest spender). As the statistical agency of the federal government, Statistics Canada collects and provides statistical information needed for understanding the Canadian economy and Canadian institutions and for the development of economic and social policies and programs.

The four major technical fields in which the agency provides information are: national accounts; business and trade; institutions and labour; and informatics (the management of information processing) and methodology.

12.3.2 Social Sciences and Humanities Research Council

The estimated 1984-85 expenditures of the Social Sciences and Humanities Research Council (SSHRC)