

The role of NRC within the over-all Canadian research and development effort has been unique, and throughout the Council's long history this role has evolved continuously in response to new needs or opportunities. As an independent research agency with its own governing council, NRC was encouraged to develop a strong Canadian R&D capability and high quality scientific expertise available to governments, to the private sector and to Canadian citizens.

By the mid-sixties NRC had developed a highly competent group of laboratories and a multi-disciplinary research capability dedicated to national development. Through NRC leadership and support, university laboratories had developed strength in most scientific disciplines to the point where it was no longer necessary for Canadian students to seek high quality scientific training outside Canada. NRC also had made substantial progress in promoting and assisting research in industry.

During the last decade NRC policies have been directed toward greater and more effective utilization of this national research potential in support of Canadian needs and opportunities. In order to improve the effectiveness of Canadian research endeavours, continuing efforts were made to consolidate research programs and to promote closer research collaboration between industry, university and government sectors. Additional emphasis is now also being given to a number of long-term problems of national concern such as energy, food, transportation, building and construction.

Early in 1974 the federal government announced its decision to separate the University Grants and Scholarships Program from NRC and to set up a new granting Council to take over this function. In the past, NRC has from time to time "spun off" major activities it had developed, such as Atomic Energy of Canada Limited (AECL), Defence Research Board (DRB), Medical Research Council (MRC). However, the separation of the university grants function, which had been one of the corner-stones of NRC's broader science role in Canada, represents a more fundamental change. The present situation demands less emphasis on the general development of science and more emphasis on effective ways of using the demonstrated capability of NRC for national development. In future NRC activities will be largely centred around its laboratory programs and such extra-mural research programs as may be undertaken will be closely coupled so as to support or extend laboratory programs.

Program objectives have been reformulated and necessary modifications to program activities are being implemented. Three separate programs have now been defined, and each will be financially supported by a separate parliamentary vote.

#### **9.2.1.1 Program A: Natural sciences and engineering research**

The objective of this program is to provide a national foundation upon which to build for the creation, application and use of knowledge derived from the natural sciences and engineering. The program includes basic and exploratory research in the natural sciences and engineering; research on long-term problems of national concern; research in direct support of industrial innovation and development; research to provide technological support of social objectives; provision and management of common purpose national research and development facilities as a service to industry, governments and universities; and research and services related to standards.

Nine laboratory divisions are presently carrying out research activities in support of this program. The Atlantic Regional Laboratory on the campus of Dalhousie University in Halifax, NS, operates a marine station on the shore of the Atlantic Ocean at Sandy Cove, near Sambro, NS. The Halifax laboratory has facilities for growing and recovering microbial and algal cells, for isolating and identifying plant metabolites, for studying catalysis, and elucidating biological and chemical syntheses with radioactive and stable isotopes. Special equipment is available for studying the kinetics of the reactions of gases with liquid metals and chemical reactions at high temperatures. The Halifax Laboratory houses the Atlantic Regional Station of the Division of Building Research and, temporarily, the neutron activation equipment of the Department of Geology, Dalhousie University. The marine station consists of a small group for supplying flowing sea-water for the culture and study of marine plants.

Research in the laboratory is conducted by a multi-disciplinary group, consisting principally of physical and organic chemists working in association with biologists and biochemists. Instruments, such as infra-red and ultraviolet spectrophotometers, mass