

The President, who is the chief executive officer, is assisted by a number of Vice-Presidents and a Director General (Planning). The Director General (Planning), assisted by a small group of scientists, engineers and economists, is in charge of formulating long-range policies and plans, both for the research activities of NRC laboratories and for the support and encouragement of research in universities and industry; analyzing existing and alternative NRC projects and programs, taking into account both the scientific and economic aspects; and, in general, facilitating the task of identifying NRC priorities in terms of national needs.

One Vice-President (Scientific) is responsible for industrial research assistance and promotion, and another for the Council's awards program for support of university research. The laboratories and a number of administrative services of the Council come under the jurisdiction of a Vice-President (Laboratories).

Since April 1, 1970, federal research in astronomy has been consolidated under the National Research Council, which is now responsible for the operation of the Dominion Astrophysical Observatory, Victoria, BC, the Dominion Radio Astrophysical Observatory, Penticton, BC, the Time Service of Canada, the solar and meteor programs of the Dominion Observatory in Ottawa, and the Meteorite Observation and Recovery Project; the latter is a network of photographic stations with headquarters in Saskatoon, Sask.

The federal government has designated the National Research Council as the co-ordinating body for the further development of a national scientific and technical information system (STI), under the general direction of the National Librarian. The integrated national system, encompassing the natural sciences and engineering, will be decentralized and based on the existing resources and systems in industry, the universities and government.

9.2.1.2 Research activities

The NRC laboratories carry out long-term, applied and specific project research work, most of it industrially oriented although some programs are directed toward important national and regional problems and toward more basic and exploratory back-up research. A number of research projects are carried out on behalf of other government departments and agencies and a considerable amount of staff time is given to consulting on technical problems. In addition, some research projects are undertaken to solve a particular problem, or because of their potential for basically new technology. When successful, the desired result is the transfer of the new technology to productive channels in Canadian industry. New industries based on NRC-developed technology are beginning to be established, some located in large industrial centres and some in the Ottawa - Hull metropolitan area where they can maintain close contact with NRC laboratories and take advantage of the new technology generated by the laboratories of the Defence Research Board, Atomic Energy of Canada Limited, and the substantial research activities of several industrial firms in the area.

The Division of Biological Sciences was formed from the recent amalgamation of the former Division of Biology and the Biochemistry Laboratory. It provides greater flexibility and increased resources for achieving an integrated approach to significant biological problems. Problem orientation is facilitated by the formation of groups whose constitution may change as common interests develop or as new expertise is required. Such groups also include scientists in universities, industries and other governmental agencies.

Major research programs are under way in the study of: factors initiating or regulating proliferation of normal and malignant cells; the fate of persistent pollutants in flowing-water systems; the treatment of wastes from food-processing plants; the isolation and characterization of antigens from pathogenic organisms and the determination of structures of immunoglobulins as approaches leading to elucidation of the biochemical nature of the immune response in man; the application of spectroscopic techniques to the description of biological structures and mechanisms at the molecular level; patterns of nucleic acid-protein interactions; the production of useful metabolites from plant cells grown in submerged culture; radiation-induced lesions in organic molecules; and molecular structures of biochemical and other organic compounds as determined by X-ray crystallography.

The Division also houses the Environmental Secretariat serving the NRC Associate Committee on Scientific Criteria for Environmental Quality, whose function is to gather and evaluate the scientific knowledge of the effects of environmental contaminants. Documents listing scientific criteria derived from studies of cause-effect relations are in preparation.