Section 5.—The Defence Research Board

The Defence Research Board is the agency in the Department of National Defence responsible for scientific research. It was created in 1947 by an amendment to the National Defence Act. It provides, through the Chairman, scientific advice to the Minister of National Defence and scientific and technical assistance to the Canadian Armed Forces.

The Board consists of a full-time chairman and vice-chairman, five ex-officio members and a varying number of members selected from universities and industry appointed by the Governor in Council. The ex-officio members are the Deputy Minister of National Defence, the President of the National Research Council, the Chief of Defence Staff, the Vice Chief of Defence Staff and the Chief of Technical Services. The Chairman is the chief executive officer of the Board's research organization. He is a member of the Defence Council, which is the senior policy body of the Department of National Defence. The Vice-Chairman is an associate member.

The research organization consists of eight research establishments in which an intramural program of research specifically oriented toward military needs is carried out. The Board also conducts an extramural research program through grants in aid of research to universities. These investigations are usually basic in nature and seek to provide new knowledge in fields from which important military developments are likely to arise. Support is also provided to industry with the object of promoting and strengthening the research capability of Canada's defence industry. This is a program of applied research of defence interest. It is financed on a cost-sharing basis with industry with each (government and industry) providing 50 p.c. of the funds.

The Defence Research Board is active in international collaboration in defence science throughout the western world. A very active quadripartite organization with Britain, Australia and the United States has been built up to ensure full utilization of defence scientific knowledge, resources and facilities of these countries. In addition, bilateral agreements with several NATO nations serve to enhance the interchange of defence scientific and technical knowledge in areas of mutual interest. The Board represents Canada on a number of specialist committees through which NATO's scientific endeavours are processed and co-ordinated. The Board also provides representation on the Commonwealth Defence Science Organization which fosters and promotes scientific exchange between the countries of the Commonwealth. It maintains liaison offices in Washington, London and Paris.

Research on maritime warfare problems, particularly those relating to submarine detection and tracking, is carried out at the Defence Research Establishment Atlantic and at the Defence Research Establishment Pacific. Research and development of weapons and defence against various weapons is undertaken in co-operation with the Armed Forces at several establishments, the largest of which is the Canadian Armament Research and Development Establishment. Its principal activities include studies of defence against missiles, studies of the properties and application of infrared and other detection devices, exploration of the upper atmosphere with balloons and rockets, and the development of rocket propellants.

The Defence Research Telecommunications Establishment is concerned mainly with problems of communications which involve exploration of the ionosphere with ground-based equipment, with rockets and with satellites, and the applications of the science of electronics to military problems. Research on the defensive aspects of chemical, biological and atomic weapons is carried out at two Defence Research establishments—the Defence Chemical, Biological and Radiation Establishment at Ottawa, and the Defence Research Establishment Suffield at Ralston, Alta. The Defence Research Establishment Toronto is concerned with biosciences research, chiefly with raising the operating efficiency of men working in the military environment, including such subjects as human physiology, expriamental psychology and research on clothing. Defence Operational Research Establishment provides scientific evaluation and analysis of present and future weapons systems, tactical doctrine and other aspects of military operations.