

Supply—National Defence

aerophysics and explosive physics are being conducted jointly with the United States in an effort to close the gap between offence and defence in the ICBM era. The Prince Albert radar laboratory is one of the facilities being used jointly by Canada and the United States.

High priority is also being given to problems of anti-submarine warfare, particularly in the field of detection and tracking of submarines. Both the naval and air aspects of this difficult problem are being considered. The Canadian program is closely co-ordinated with the programs of the United Kingdom and the United States. It is of interest to note that the British admiralty has recently adopted a towed sonar developed by the defence research board naval research establishment.

Apart from the major problem of defence against the ICBM and the missile launching submarine, the defence research board is carrying out research in many fields which are of vital importance to defence. Many of the projects are directly allied to air defence, nuclear warfare and survival.

The enormous speed of the ICBM requires split second reaction time, long range detection and tracking. All of this is beyond the manual capacity of the human being. There is a continuing effort to develop fast, long range and automatic devices for detection, tracking and computing. These must be reliable and work at speeds far beyond those at which the human mind is capable of reacting. Operation must often be by remote control by means of electronic devices.

Electronics play a major part in a modern military force. There is a constant seeking to develop more reliable light weight devices to be fitted into aircraft, ships and vehicles to serve a host of purposes which the human has neither the time nor the resources to carry out. The human being himself is not free from development. New techniques of training are designed to develop latent capabilities which improve his efficiency and indeed his chances of survival. New and improved rations which are compact and nourishing, better and simpler methods of preparation, are being developed. Development of the large complex weapon systems of the future is not contemplated, but development of components for such systems is quite within Canadian capabilities on a co-operative basis with our larger partners.

Referring to the estimates directly, it will be recalled that the standing committee on estimates last year recommended a division of the main defence vote. That recommendation is carried out this year and there are now 15 parliamentary votes instead of one main vote, two votes for each service and the

defence research board, operation and maintenance, and construction or acquisition of buildings, works, land and major equipment. Separate votes are also provided for development and mutual aid. This new structure will give parliament tighter control over defence expenditures, as transfer of funds between services will no longer be possible without supplementary estimates being brought before the house.

It might be of interest to hon. members if I furnish a breakdown of this year's estimates according to the major functions. It should be noted that the amounts shown under ACLANT are for naval and maritime forces earmarked for assignment to this NATO command in an emergency. Since these figures represent functional cost estimates, the amounts in some cases do not correspond precisely with amounts shown in the 1959-60 estimates for the particular activity. For example, the figures for reserves and cadets represent estimated total costs of these forces, whereas the estimates provide for direct costs related to personnel of these forces only.

Contributions to NATO: In so far as SHAPE is concerned, we have allocated \$150 million or approximately 8.9 per cent of the total defence budget; to ACLANT, \$203.5 million or 12.1 per cent; for defence of the Canada-United States region, including all army field forces in Canada, \$398.8 million or 23.8 per cent of the defence budget; training forces, \$227.7 million or 13.6 per cent; logistics support forces, \$338.2 million or 20.2 per cent; command and administration, \$102.9 million or 6.1 per cent; reserves and cadets, \$53.6 million or 3.2 per cent; research and development, \$51.1 million or 3 per cent; search and rescue, \$11.4 million or 0.7 per cent; pensions, \$58.4 million or 3.5 per cent; mutual aid, \$21.8 million or 1.3 per cent; and various unallocated amounts, \$62.8 million or 3.6 per cent.

In conclusion, hon. members will have noted that the total estimates this year amount to \$1,680,194,006. For a country our size this is a very considerable sum and represents about 5 per cent of the gross national product and 27.3 per cent of total government spending for this fiscal year. Some critics, perhaps outside this house suggest we are spending too much. To do less would mean failure to live up to commitments we have made, and to run the risk of weakening the western alliance and invite disaster. I can assure these critics that every effort is being made on my part and on the part of the officials of the department to ensure that the funds voted are wisely spent and all extravagance removed.

Other critics complain that we are too dependent on our allies and presumably that we should spend even larger sums. To these