

PART V - CONCLUSIONS

Surveillance of Canadian territory and the approaches to it is needed for several different purposes. Electro-optical and radar sensors of several different types can take effective parts in such surveillance. There are advantages and disadvantages with each type of sensor, and for the placing of the sensors in ground installations, in aircraft, and in space. The effectiveness of surveillance is enhanced by the use of a variety of sensors placed in a complementary fashion on the ground, in the air and in space. It is unlikely that the future surveillance needs of Canada can be completely met by a single type of sensor or a single deployment method.

The most demanding types of surveillance are for the purposes of defence. Reductions in the stockpile of strategic nuclear weapons will not remove the need to preserve stable deterrence, and this requires reliable early warning of the approach of ballistic missiles, bomber aircraft, or cruise missiles towards North America. Maintenance of the Canadian contribution to this type of surveillance is clearly a role for the Armed Forces. It seems probable that the systems to provide warning of the approach of ballistic missiles, deployed and operated by the United States, will not need participation by Canadians. However the application of modern methods of surveillance to the functions of verification of arms control agreements and to peacekeeping could involve participation of Canadian Forces personnel far from North America.

The equipment, personnel, and organizations able to carry out surveillance for defence are also capable of performing other tasks of national importance. Some of these such as search and rescue, air traffic control, interdiction of drug traffic, and fisheries regulation involve surveillance and tracking of aircraft and ships, which should be a task added to that of early warning against military attack. Many of the aspects other than surveillance may be better managed by civil authorities.

Depending on the equipment procured and the organizations employed to carry out these roles, which are primarily ones of detecting and tracking aircraft and ships, it may be possible to take advantage of the same vehicles, organizations, and sensors (perhaps with some modification or addition) to carry out needed surveillance of other sorts, for