



COMMENTARY

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CANADIAN PARTICIPATION IN THE DEFENCE OF NORTH AMERICA

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Dr. George Lindsey was a civilian operational research scientist in the Department of National Defence, where he served for twenty years as Chief of the Operational Research and Analysis Establishment. He has continued to pursue defence matters as a member of the RCMI and the Canadian Institute of Strategic Studies, and is chairman of a Canadian Institute of International Affairs group that has been studying the security of North America against the threats of ICBMs and terrorism.

Defence Against ICBMs

The implications of Canada's recent decision to refrain from participation in the American program for defence against intercontinental ballistic missiles (ICBMs) should be judged with reference to two underlying principles. One is that Canada has a responsibility to play a significant part in the defence of the North American continent. The other is that, in deciding what that part should be, Canada should make her own judgement as to what the relative priorities of the various threats to the security of the continent are going to be in the coming decade.

While Canada realizes that the current US government is determined to acquire a limited capability for defence against ICBMs, and is investing enormous resources for that purpose, most Canadians consider terrorism to offer a far more imminent threat to both the USA and Canada than that posed by ICBMs.

Geography has determined that many of the air and sea routes of approach to the United States from Europe and Asia come over Canada's land and neighbouring oceans. During the Cold War, the threat posed by Soviet long-range bomber aircraft armed with nuclear weapons was

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countered by installations in Canada of three radar systems (the Distant Early Warning Line, the Mid-Canada Line, and the Pinetree Line), all-weather interceptor aircraft, and surface-to-air missiles. This air defence system was placed under the command of NORAD, a highly successful example of binational cooperation between Canada and the United States.

The performance characteristics of ICBMs, of the ground-based missiles being deployed to intercept them in the mid course of their trajectories, and of the necessary warning and control systems, do not require emplacement in Canadian territory. The next step in the US plan is to place interceptors in ships.

Extremely expensive research and development programs are under way with the objective of being able to complete

interceptions while the ICBM is still in the boost or early ascent phase of its trajectory. Boost phase interception would have certain important advantages (e.g. a larger more vulnerable target than the missile warhead, and without the problem of decoys), but it will be many years (if ever) before such a system could be deployed. It would require the interceptor weapons to be released from an aircraft, ship, or ground site located close to the launch site of the ICBM.

Another possible future development is to use shorter range weapons which would complete their interception while the ICBM was in the terminal phase of its trajectory, reentering the atmosphere. This would have the advantage of a long time to track the ICBM, and of atmospheric drag to separate decoys from the warhead, but the area that could be protected from any one interceptor site would be limited. Deployment of a continent-wide system could raise new problems regarding the

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placement of equipment in Canada.

With their many years of experience with the research and development of weapon systems exploiting the latest advances in technology, marked by unexpected discoveries, major breakthroughs and also major disappointments, the Americans would be very foolish and are not going to promise never to deploy weapons in space. If they decide to deploy a system to destroy orbiting satellites, the weapons will probably be launched from the surface or from aircraft, as is the case for the destruction of missiles, rather than from space. But if they do eventually choose to deploy weapons in space, whether for destruction of satellites or missiles, they are not going to be dissuaded by objections from Canada.

Defence Against Terrorism

Whatever damage may have just been done to Canadian / American relations can be repaired by explaining to them that we consider that the threat to North America from ICBMs is far surpassed by the threat from terrorism and by assuring them that Canada intends to undertake a bold initiative to protect the approaches to North America against the arrival of terrorists by air or by sea, and also the sparsely inhabited regions of Canada against preparations for or actual attack by terrorists who are already present there. Potential targets which are extremely vulnerable and of great significance for the prosperity of both Canada and the USA are the sources and transmission to the cities to the south of electricity, oil, and gas from the Canadian North and from Alaska.

A key part of this protection will be provided by surveillance of the sea and land, using satellites, aircraft, ships, and land-based radar, including the services already conducted by the present NORAD, and to be controlled by an

expanded NORAD. A typical sequence could be initial detection by a satellite of something unusual (a ship in an unexpected place, a heat source, movement, a sudden change) but lacking the high resolution necessary for satisfactory identification. If further information is desired, a large aircraft equipped with advanced air-to-surface sensors would be dispatched to investigate.

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The follow-up to detection of suspect activity by surveillance may require close inspection and possible use of force. The normal procedure should be for incidents in Canadian waters to be followed up by boarding or other actions by Canadian ships or helicopters, and for incidents on Canadian soil by the arrival of soldiers or police delivered by Canadian aircraft, helicopters, or land vehicles.

By-Products of Great Value to Canada

While the institution of a program to provide effective overhead surveillance of the Canadian North and the neighbouring seas would be a very worthwhile contribution to the security of North America, should strengthen the significance of NORAD, and improve Canadian / American relations, it would also offer a number of extremely important advantages for many national purposes.

Examples are development of the Canadian Arctic, maintenance of Canadian sovereignty, search and rescue (both on sea and land), defence of fishing rights, reduction of damage from floods and forest fires, detection of pollution, health of crops and vegetation, and assistance to prospecting.

Conclusions

Canada should demonstrate its recognition of its responsibility to contribute to the security of North America, state that we consider terrorism to deserve higher priority than defence against ICBMs, and undertake to create an effective system for the overhead surveillance of the sparsely inhabited regions of Canada and of our neighbouring seas, to be operated by NORAD, and organize the means to follow up suspect detections in Canadians territory and waters by Canadians.

Let's concentrate on what we can and should and will do, rather than what we won't do! ■

The views expressed are those of the author, and do not necessarily reflect the views of the Institute or its members.