



Aerial Readiness in the Defence of North America

Opening Statement to the Standing Committee on National Defence

Elinor Sloan, April 12, 2016

Thank you very much for the opportunity to appear before the House of Commons Standing Committee on National Defence on this important topic. Over the next 10 minutes I'll briefly discuss the emerging threat to North America and NORAD and Canada's aerial readiness in response to these threats. Then, of course, I'd be happy to take your questions.

Turning first to the emerging threat environment, the 9/11 attacks revealed an internal aerial threat to North America, prompting significant organizational, operational, and procedural changes at NORAD and at the U.S. and Canadian federal government levels. For example, NORAD's mandate was in large to look inwards. Northern Command was created. There's now a 24/7 NAVCAN and FAA feed into NORAD, and there was Operation Noble Eagle, etc. All of these different things took place in response to the internal aerial threat to North America and continue today.

In my view, NORAD has the capabilities and procedures it needs to address the internal aerial threat to North America. It's in the external threat environment that the most dramatic changes have taken place in recent years. A benchmark date is the summer of 2007 when Russia resumed its bomber patrols close to North America and planted a flag at the North Pole's ocean floor. Since that time and at an accelerating pace in recent years, Russia has been militarizing the Arctic region. It is opening new infrastructure in the Arctic and has begun building new ships, ice breakers, ballistic missile submarines, and has stepped up the number of bomber patrols.

Of particular concern is a new long-range conventionally armed precision cruise missile that Russia has developed that could easily reach North America from Russian air space or waters. The Kh-101 cruise missile is hard to detect on radar and is believed to have an intercontinental range of between 3,000 and 5,000 kilometres. Last fall, Russia launched the Kh-101 from strategic bombers against targets in Syria. The missile can also be launched from ships and submarines, and it comes in a nuclear armed version, the Kh-102. Russian submarines and aircraft carried cruise missiles during the 1980's, so that part is not new. But the difference today is that the new missile is much more precise and has longer range.



North Korea also poses a potential threat to North America. For many years, that country has been seeking to develop an ICBM that can reach North America, as well as develop miniaturized nuclear warheads that can be fitted to ICBMs. Reports indicate that it's getting ever closer to that goal. North Korea is also developing submarine launched ballistic missiles. Combined with an unstable leadership, North Korea's capability and behaviour present at minimum a medium-term threat to North America.

Other potential threats and challenges stem from the melting Arctic and the resultant interest in Arctic resources—lessened perhaps by the drop in gas and oil prices, but nevertheless still there—and also the interest in using Arctic shipping lanes. China, for example, has a long-standing and growing interest in the Arctic. In January, China commissioned its second polar class ice breaker despite the fact that it's territory lies thousands of miles from the Arctic.

Responding to these challenges requires surveillance and control. That is, it is necessary to be able to detect a threat and then to be able to address it. NORAD has the ability to detect ballistic missiles through long-standing space and land-based systems, all of them belonging to the United States, none of them being on Canadian soil.

More recently, as part of its ballistic missile defence system, the United States has deployed sensors on ships in the Sea of Japan and on a large barge in the north Pacific. Canada has access to all of this information and we'd know of a ballistic missile launch. That's why some people say we're already part of ballistic missile defence. To respond to a potential threat, the United States has deployed ground-based interceptors at bases in California and Alaska.

In 2005, Canada of course decided not to take part in BMD and, therefore, theoretically at least, would not have a voice in the response to a ballistic missile strike against North America. Canadian territory would be defended in the event of a strike if that territory happens to be part of what the United States defines as its defended area, the extent of which is classified. Canada's decision not to participate in the response part of ballistic missile defence is illogical and I hope, and actually I believe, is going to be addressed in the defence review.

Turning to the air breathing threat, NORAD gets surveillance and early-warning information about aircraft approaching North America from the north warning system of radars along the 70th parallel, as well as from radars on the east and west coasts of Canada. The north warning system was constructed in the late 1980s and early 1990s and will need to be upgraded or replaced in the next decade or so. One option is a space-based surveillance or detection system, and the RADARSAT constellation of three satellites scheduled to be launched starting in 2018 could well be suited to this mission.



Another option might be unmanned aerial vehicles, the high altitude ones like the Global Hawk UAV.

U.S. and Canadian fighter aircraft are dedicated to the NORAD mission to respond to potential airborne threats. Since 9/11 NORAD fighter jets have been scrambled thousands of times in response to internal and external situations. The statement of requirements for Canada's new land-based fighter will have to take into account an assessment of the number of fighters Canada needs to effectively carry out its air defence role. Air refuelling tankers also have to be part of the discussion.

Where there is a notable gap in the aerial surveillance and control of North America is in the ability to detect and respond to cruise missile threats. Cruise missiles fly low to the earth. They are hard to detect and harder to intercept. NORAD has only a limited detection capability against cruise missiles, likely involving airborne warning and control aircraft. It's classified information. America's concern with the new Russian cruise missile is such that it is pursuing a land-attack cruise missile detection system made up of giant radar blimps to be deployed around Washington, D.C. The radar system, which is in the early stages of development, would allow National Guard F-16 aircraft to shoot down low-flying cruise missiles.

For the general surveillance of its territorial approaches, Canada has a fleet of long-range patrol aircraft that travel over the Arctic and the east and west coasts on a periodic basis. That's the Aurora long-range patrol aircraft. Polar Epsilon is a surveillance capability on RADARSAT-2 that also gives images of the north as the satellite passes over. But as the Arctic continues to melt and traffic increases, Canada will want to move to a more persistent surveillance of the region. The RADARSAT constellation of satellites and high-altitude unmanned aerial vehicles that I mentioned a few minutes ago could best provide a persistent surveillance of the air and maritime space region, although it's possible that three satellites would not be enough in terms of the RADARSAT Constellation, that you would need perhaps five.

A final point on aerial capabilities around North America is that the traditional role provided by the Aurora maritime patrol aircraft, that is to say, the anti-submarine warfare that was the Cold War mission of the Aurora, is growing in importance in the new security environment. Many of our allies, including Britain, Australia, and Norway, are now investing in their maritime patrol aircraft fleets. Canada will want to prioritize the multi-mission aircraft that has been on the books for some time to replace Canada's upgraded but aging and relevantly limited in number long-range patrol aircraft

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