



CANADIAN GLOBAL AFFAIRS INSTITUTE
INSTITUT CANADIEN DES AFFAIRES MONDIALES

Rediscovering the Cost of Deterrence

by **Andrea Charron and James Fergusson**
September 2019

POLICY PERSPECTIVE

REDISCOVERING THE COST OF DETERRENCE

by Andrea Charron, CGAI Fellow and James Fergusson

September 2019



CANADIAN GLOBAL AFFAIRS INSTITUTE
INSTITUT CANADIEN DES AFFAIRES MONDIALES

Prepared for the Canadian Global Affairs Institute
1800, 421 – 7th Avenue S.W., Calgary, AB T2P 4K9
www.cgai.ca

©2019 Canadian Global Affairs Institute
ISBN: 978-1-77397-085-1



The Canada-U.S. Permanent Joint Board on Defence (PJBD) held its 238th meeting in Ottawa this June. Established in 1940, the PJBD¹ was created to provide study and recommendations to the governments of both Canada and the United States for the joint defence of “the north half of the Western hemisphere”. Of late, there has been more discussion than recommendations. The civilian co-chairs (currently, Canadian MP John McKay and retired U.S. Lt.-Gen. Chris Miller) and the other members are grappling with increasing geopolitical tension and great power competition. They are rediscovering the importance of deterrence and of defending North America – not unlike the original co-chairs in 1940 or, 40 years later, their fellow co-chairs during the Cold War. Now, as was the case in the 1980s, is the time to reinvest in the defence of Canada and the United States even though competing priorities and elections make it particularly difficult.

One solution to increased tensions in the 1980s was the PJBD’s decision to recommend a North American Air Defence Modernization (NAADM) program, which involved, among other things,² upgrading the Distant Early Warning (DEW) Line constructed in 1954. This series of manned radar stations that began in Alaska and stretched across the Canadian archipelago to Labrador needed upgrading. It had to meet the new threat posed by the development and deployment of long-range, air-launched cruise missiles (ALCMs) carried by a new generation of Soviet bombers. As the trip wire to detect air-breathing threats emanating from the northern approaches to North America, the DEW Line needed to see farther north and with greater acuity. It had to identify, track and direct NORAD fighters to intercept incoming Soviet bombers before they could launch their cruise missiles. While an upgraded DEW Line was central to the air defence of North America, it was also a key component in deterring a Soviet attack, and thus in the overarching Western strategy of deterrence to prevent a nuclear war.

The DEW Line was an incredible undertaking of its time. It required more than a half-million tonnes of material, enough gravel to build a road from Vancouver to Halifax, and 25,000 construction workers. It cost \$350 million – a large sum for the 1950s.³ The modernization of the DEW Line with the unmanned North Warning System (NWS) cost well over \$1 billion at the time and was completed just when the Soviet Union collapsed.

One might easily conclude that all of this was an enormous financial and environmental expense for nothing. The Soviet Union did not attack North America and the contribution of the DEW Line and its replacement, the NWS, in deterring such an attack is extremely difficult, if not impossible, to measure. Indeed, there is no definitive answer as to whether or not deterrence prevented a third world war. One cannot measure a non-event. Rather, one can only know when deterrence fails.

¹ The PJBD now meets annually rather than biannually alternating between the U.S. and Canada. The co-chairs are appointed by the prime minister and president, and report directly to them on all matters related to continental defence and security. The PJBD also includes Department of Homeland Security and Public Safety Canada representatives to consider critical security as well as military co-operation.

² Including the purchase of CF-18s and testing of U.S. cruise missiles in Canada.

³ Marina Devine, *As It Happens*, CBC, July 16, 1993. Available at <https://www.cbc.ca/archives/entry/dew-line-handed-over-to-canada>



The problem is a relatively simple, yet extremely complicated one. Deterrence is not just a mathematical calculation involving the number of military assets. Intentions are as important a consideration, if not more so, although capabilities and intentions are not easily, if ever, fully measurable. Nonetheless, the evidence from the Cold War strongly suggests that demonstrating a credible defence, which always comes at a considerable cost, is part of the calculus. The decision to upgrade the DEW Line is an example of that cost which may or may not have tipped the balance of intentions for the Soviet Union's leaders. At a minimum, Soviet strategic calculations could not have ignored the NWS as part of the broader U.S.-led Western policy of strategic deterrence that extended into NATO Europe.

Tense geopolitical times have now returned. Great power politics are dominant once again, and the actual intentions of Russia or China remain open to debate. It is no secret that the NWS is reaching the end of its serviceable life. If NORAD is to continue to contribute to North America's defence, and to strategic deterrence, it must be modernized. As in the case of the DEW Line and its successor, the NWS, a new generation of advanced Russian and Chinese ALCMs, along with other new military technologies, dictates a major overhaul of North America's continental defence. Failing to do so will leave Canada and the United States vulnerable to attack, creating a significant gap in the West's deterrence posture, which adversaries will exploit politically and possibly militarily.

The price tag for a revitalized defence of Canada and the United States will be considerable. Rather than just a land-based radar system, the NWS replacement alone will require a system-of-systems solution, likely entailing space, air, cyber- and land-based assets, and possibly naval as well, with the goal of ensuring all-domain awareness. To be effective, it will have to be combined with new systems for communications, command and control, particularly in the North, as well as new capabilities to detect, engage and defeat drones, missiles and aircraft which will also require a rethink of forward operating locations. Especially in Canada, critics will emerge to suggest not only that it is a waste of money, but that it will also contribute to increased tensions. However, there is little doubt that the U.S. – regardless of who is president or which party holds the balance of power in Congress after the 2020 elections – will spend considerable amounts to ensure homeland defence. For example, the U.S. has already spent more on one element of its homeland defence, the Ground-Based Midcourse Defense (GMD) against ballistic missiles, than the entire Canadian defence budget. Indeed, Canada and the U.S. have already agreed to share the costs of NWS modernization and replacement as per the terms of reference.⁴

It is highly unlikely that the issues of North American defence, NORAD modernization and NWS replacement will receive much, if any, attention in the fall federal election. The two primary competitors for government, the Liberals and Conservatives, generally agree on the need to modernize NORAD and replace the NWS. The Liberals are committed through the 2017 defence white paper, *Strong, Secure, Engaged*, even though no specific funding envelope exists to meet Canada's obligation. The Conservatives have long portrayed themselves as pro-defence, but may

⁴ Ensuring adequate funds for cleanup of the old system will be essential as will discussions with indigenous and territorial leaders. As well, this funding split could change. See the Memorandum of Understanding, especially paragraph 12 on the financial responsibilities of the partners, found at <https://www.treaty-accord.gc.ca/text-texte.aspx?id=101003>



be more interested in calling for NORAD modernization and NWS replacement than in funding it.

The only election wildcards are the NDP and Greens. While neither is likely to make NORAD and NWS an election issue, a Liberal minority government dependent on either or both of these parties could well pose a block to NORAD and NWS funding. Both will likely be at ideological odds with the costs and implications of NORAD modernization and NWS replacement.

Of course, a bigger worry is if the U.S. demands more funding from Canada and/or is unsatisfied with Canada's general military contributions vis-à-vis homeland defence and therefore presses for more resources and compromises from Ottawa. To date, Washington and more accurately, senior U.S. military leaders have recognized and accepted Canadian financial and political constraints. Saying no to the U.S. midcourse ballistic missile defence system and contributing limited numbers of Canadian aircraft and personnel to NORAD, as examples, have been taken in stride. But the current president's homeland-first stance at seemingly all costs, and growing attention to the borders (especially the Mexico/U.S. border) could put Canada in a more difficult position. On the one hand, NORAD has nothing to do with securing the U.S. southern border – while USNORTHCOM, NORAD's twin American command, has been deployed there to provide defence support to the civil authorities. On the other hand, NORAD is essential to monitoring the air and maritime approaches to both Canada and the United States. If the U.S. is unsatisfied with Canadian participation in NORAD or requires more financial support to modernize it and replace the NWS, Canada will be in a politically difficult position. The U.S. and Canada at odds is a gift for would-be adversaries. And lest one thinks this applies only to the current administration, think again. Considering the changing geopolitics and growing capabilities of near-peer competitors, U.S. homeland defence as a national imperative is here to stay regardless of which party is in power.

It could very well be that like the DEW Line upgrade, a modernized NORAD and NWS will precede a new era of detente. Many will argue the money spent was wasted – it could have been put to really important health and education initiatives. This line of argument is exactly what we hope for. It means an adversary was, or adversaries were, deterred. Deterrence, however, is not possible without spending on capabilities, training, hardware, software and personnel. Deterrence is also about supporting allies – especially Canada's most important ally. Therefore, when one considers simply the cost of NORAD modernization and NWS replacement, one discounts the many nuances of deterrence.

► About the Author

Andrea Charron holds a PhD from the Royal Military College of Canada (Department of War Studies). She obtained a Masters in International Relations from Webster University, Leiden, The Netherlands, a Master's of Public Administration from Dalhousie University and a Bachelor of Science (Honours) from Queen's University. Her research and teaching areas include NORAD, the Arctic, foreign and defence policy and sanctions. She serves on the DND's Defence Advisory Board and has published in numerous peer-reviewed journals. Dr. Charron worked for various federal departments including the Privy Council Office in the Security and Intelligence Secretariat and Canada's Revenue Agency. She is now Director of the University of Manitoba's Centre for Defence and Security Studies and Associate Professor in Political Studies.

James Fergusson is the Deputy Director of the Centre for Defence and Security Studies, and Professor in the Department of Political Studies at the University of Manitoba. He received his BA(Hons) and MA Degrees from the University of Manitoba, and his Ph.D. from the University of British Columbia in 1989. He teaches a range of courses in the areas of international relations, foreign and defence policy, and strategic studies. He has published numerous articles on strategic studies, non-proliferation and arms control, the defence industry, and Canadian foreign and defence policy.

► **Canadian Global Affairs Institute**

The Canadian Global Affairs Institute focuses on the entire range of Canada's international relations in all its forms including (in partnership with the University of Calgary's School of Public Policy), trade investment and international capacity building. Successor to the Canadian Defence and Foreign Affairs Institute (CDFAI, which was established in 2001), the Institute works to inform Canadians about the importance of having a respected and influential voice in those parts of the globe where Canada has significant interests due to trade and investment, origins of Canada's population, geographic security (and especially security of North America in conjunction with the United States), social development, or the peace and freedom of allied nations. The Institute aims to demonstrate to Canadians the importance of comprehensive foreign, defence and trade policies which both express our values and represent our interests.

The Institute was created to bridge the gap between what Canadians need to know about Canadian international activities and what they do know. Historically Canadians have tended to look abroad out of a search for markets because Canada depends heavily on foreign trade. In the modern post-Cold War world, however, global security and stability have become the bedrocks of global commerce and the free movement of people, goods and ideas across international boundaries. Canada has striven to open the world since the 1930s and was a driving factor behind the adoption of the main structures which underpin globalization such as the International Monetary Fund, the World Bank, the World Trade Organization and emerging free trade networks connecting dozens of international economies. The Canadian Global Affairs Institute recognizes Canada's contribution to a globalized world and aims to inform Canadians about Canada's role in that process and the connection between globalization and security.

In all its activities the Institute is a charitable, non-partisan, non-advocacy organization that provides a platform for a variety of viewpoints. It is supported financially by the contributions of individuals, foundations, and corporations. Conclusions or opinions expressed in Institute publications and programs are those of the author(s) and do not necessarily reflect the views of Institute staff, fellows, directors, advisors or any individuals or organizations that provide financial support to, or collaborate with, the Institute.