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Editors Note:

In this issue we are focusing on two topics- China's Increasing efforts to expand its influence and how the arctic is becoming everyone's backyard. Interestingly we noted that the later this has also become something that China feels it has rights to.

We hope this more focused issue expands the depth that we can explore topics.

Of interest -An email was sent out on Nov 3rd by Scott Usborne as follows:

“Attached is some introductory commentary and an excellent attached slide presentation on the RCAF in the Cold War presented by BGen Jurkowski (Ret'd) at the University of Ottawa in October. A lot of excellent detailed information... well worth hanging onto as a summary of RCAF Nuclear Operations in Germany during the Cold War. FYI. “

This was commented on by Nigel Brodeur about the RCN involvement in the Cuban Missile crisis. If you haven't seen this check your inbox. Two good exchanges that provide detail that many may not be aware of.

See the RUSI Calendar of
Events on last page.

Five Eyes Intelligence Alliance Builds Coalition to Counter China

Noah Barkin · Thomson Reuters · Posted: Oct 12, 2018 2:47 AM ET | Last Updated: October 11

Canada part of broadening international front against Chinese influence operations, sources say.

The five nations in the world's leading intelligence-sharing network have been exchanging classified information on China's foreign activities with other like-minded countries since the start of the year, seven officials in four capitals said.

The increased co-operation by the Five Eyes alliance — grouping Australia, Britain, Canada, New Zealand and the United States — with countries such as Germany and Japan is a sign of a broadening international front against Chinese influence operations and investments.

Some of the officials, who spoke on condition of anonymity because of the sensitivity of the talks, said the enhanced co-operation amounted to an informal expansion of the Five Eyes group on the specific issue of foreign interference.

While China has been the main focus, discussions have also touched on Russia, several said.

China rejects influence claims

"Consultations with our allies, with like-minded partners, on how to respond to China's assertive international strategy have been frequent and are gathering momentum," a U.S. official told Reuters. "What might have started as ad hoc discussions are now leading to more detailed consultations on best practices and further opportunities for co-operation."

All the governments involved, including Germany and Japan, declined to comment.

China, faced with a growing backlash from Washington, Canberra and other capitals, has rejected accusations that it is seeking to influence foreign governments and that its investments are politically driven.

The enhanced co-ordination by the Five Eyes network suggests that, despite signals from U.S. President Donald Trump that he is prepared to go it alone in the confrontation with China, members of his administration are working hard behind the scenes to put together an informal coalition to counter Beijing.

Talks 'below the radar'

It also represents another blow to China's fading hopes of convincing European countries, unsettled by Trump's "America First" policies, to distance themselves from Washington and move closer to Beijing.

The officials who spoke to Reuters said the talks have been taking place "below the radar" and mainly bilaterally. Two sources said France was also involved, but on a less regular and comprehensive basis.

None suggested that Germany, Japan or other nations outside the Five Eyes network had been invited to meetings of the intelligence alliance, which was set up after World War Two to counter Soviet influence.

But a statement issued after a Five Eyes meeting on the Gold Coast of Australia in late August hinted at closer co-ordination. It said the group would use "global partnerships" and accelerate the sharing of information on foreign interference activities.

Australia, U.S. have new laws on foreign influence

International co-ordination has accelerated in parallel with a wave of national measures to limit Chinese investments in sensitive technology companies and counter what some governments view as a growing campaign, under President Xi Jinping, to sway foreign governments and societies in China's favour through a mix of pressure and inducements.

Last December, citing concerns about Chinese influence, the Australian government unveiled a package of new laws that tightened rules on foreign lobbying and political donations, while broadening the definition of treason and espionage.

The United States has pushed through a law, known as FIRRMA, which gives Washington new powers to block certain types of foreign investments.

The text of that legislation mandates Trump to conduct a "more robust international outreach effort" to convince allies to adopt similar protections.

Germany may introduce new measures

Earlier this month, in a scathing attack on China's foreign activities, U.S. Vice-President Mike Pence accused Beijing of interfering in the domestic arena by "rewarding or coercing American businesses, movie studios, universities, think-tanks, scholars, journalists and local, state and federal officials." Beijing has denied the charges.

The German government, which tightened its rules on foreign investments last year only to determine months later, after a fresh wave of Chinese acquisitions, that they were still inadequate, is poised to lower the threshold at which it can intervene.

Last year, Berlin quietly launched an inter-ministerial drive to assess the broad range of Chinese activities in the country. Government sources say that analysis is broadly complete and new policy measures could follow, although they say far-reaching steps like those taken by Australia are unlikely.

The U.S. official said the foiled takeover of German semiconductor firm Aixtron in 2016 had underscored the need to build a broader coalition of countries to share information and co-ordinate responses to China.

'We are living in a new world'

Two years ago, the German government approved a Chinese investment fund's acquisition of Aixtron, only to reverse course a month later when U.S. officials raised security concerns that Berlin had overlooked.

The officials who spoke with Reuters described a "flurry of consultations" in recent months, with Washington driving co-ordination on the investment side and Canberra taking a lead role in raising awareness about political interference.

Talks have taken place between diplomats, intelligence officials and heads of government, they said.

"We are living in a new world," said a person from a Five Eyes country who has traveled extensively to other capitals over the past year to discuss China's foreign activities.

"The sudden shock from authoritarian regimes is prompting closer co-ordination and a real expansion of intelligence sharing," this person said.

Canada will hold off on trade deal with China until its behaviour is 'more reasonable,' says ambassador

Elise von Scheel: 2018-10-26 CBC News

Canada's ambassador to China says a trade pact with Canada likely won't be reached until China caves on certain controversial policies.

John McCallum says most of the work he is doing in Beijing right now is focused on bridging policy gaps between Canada and China on agricultural market access, wages and gender equity, and on addressing issues with the Asian nation's human rights record.

"We are doing our best to persuade China to behave in what we would regard as the more reasonable way," McCallum told Chris Hall, host of CBC Radio's *The House*, on Thursday.

Prime Minister Justin Trudeau and members of his cabinet spent time in China in December working toward a free trade agreement but left empty-handed.

Renewed efforts are now underway. Finance Minister Bill Morneau and Trade Diversification Minister Jim Carr will be attending high-level business meetings in Beijing next month with Chinese political and business leaders.

But those efforts alone won't be enough to make a deal, McCallum said.

The meetings next month should be treated as "building blocks," he said, because even though Canada wants an agreement, it needs to see improvements in China's human rights record before signing any papers.

McCallum added there's potential in the future for China to join the [soon-to-be-ratified Comprehensive and Progressive Trans-Pacific Partnership](#) (CP-TPP) trade deal.



Damir Sagolj/Reuters : Chinese President Xi Jinping shakes hands with Prime Minister Justin Trudeau during the G20 Summit in 2016. China's state-owned enterprises complicate efforts to reform the WTO

Troublesome, uncontrollable

McCallum said he's had conversations with other ambassadors in recent days about the challenges posed by China's approach to human rights and other issues.

This fall, the UN blasted China over "deeply disturbing" allegations of large-scale re-education camps in Xinjiang province, where up to a million ethnic Uighurs have been detained, and a Human Rights Watch report that shed light on the Chinese suppression of Turkic Muslims in that same province.

However upsetting China's actions are, McCallum acknowledged that "at the end of the day, China will do what China wants to do.

"China has to be a very important part of our strategy because China is so huge."

In the absence of a formal free trade deal, McCallum said, the government is touching base with Chinese officials to talk about how Canadian companies can get involved in infrastructure projects in their nation.

After the new United States-Mexico-Canada Agreement (USMCA) was announced, China criticized a clause in the trade deal limiting the leeway given to USMCA nations to negotiate trade deals with China, calling it a political dominance move by the U.S.

Section 32.10 of the USMCA requires the signatory countries to notify each other if they enter into trade talks with a "non-market" economy. Some experts argue the clause gives the Americans veto power to stop Canada from signing a free trade deal with China.

Trudeau has said Canada is open to doing more business with China now that a trade agreement with the United States and Mexico has been finalized.

A Global Arctic? Chinese Aspirations in the North

From Canadian Global Affairs Institute

by Petra Dolata October 2018

On Jan. 26, 2018 the Chinese government released a white paper announcing its first Arctic policy. Presenting China as a “near Arctic state”, the paper outlined Chinese interests in the region. According to the document, these interests are based on China’s existing involvement in the Arctic through scientific research, resource exploration and shipping a



activities. The white paper also explained how the impacts of climate change on the Arctic would affect the entire world and the reasons why China should be concerned. As a responsible international actor, China argues that it should be involved in addressing these global challenges. The white paper frequently mentions co-operation, and the Chinese government envisages increasing its involvement in Arctic governance structures as well as bilateral projects to be funded by Beijing. Recent examples include the Yamal LNG project in the Russian Arctic, an LNG pipeline in Alaska³ the Kouvola-Xi’an freight train railroad connecting Finland and China, and infrastructure and mining investments in Iceland and Greenland. The paper also mentions the Chinese Communications Construction Company International Holding Ltd.’s attempted acquisition of Aecon, Canada’s largest construction company.

China's new Arctic policy is the latest addition to its Belt and Road Initiative, which Beijing touts as an economic initiative but which many see as a strategic move to acquire influence throughout the region. Steeped in historical references to the ancient Silk Road connecting China and Europe, the initiative was introduced in 2013 to connect China and Central Asian countries. The 2015 One Belt, One Road (OBOR) Initiative promises to connect Asia, Europe, the Middle East and Africa through infrastructure projects both on land (the Belt) and at sea (the Road). These two silk roads (the Silk Road Economic Belt and the 21st Century Maritime Silk Road) are more than routes; they are infrastructural networks. To realize this ambitious network, the Chinese government plans to invest US\$900 billion in infrastructure projects including railways, pipelines, ports and power plants. According to the Mercator Institute for China Studies, China had already invested more than US\$25 billion by 2018. The initiative was put on a more permanent footing through its introduction into the Chinese Communist Party's constitution in late 2017. China experts interpret the expansion of the Belt and Road Initiative's geographical reach to include the Arctic, as an indication of how this economic and trade initiative has become an integral part of China's overall foreign policy.

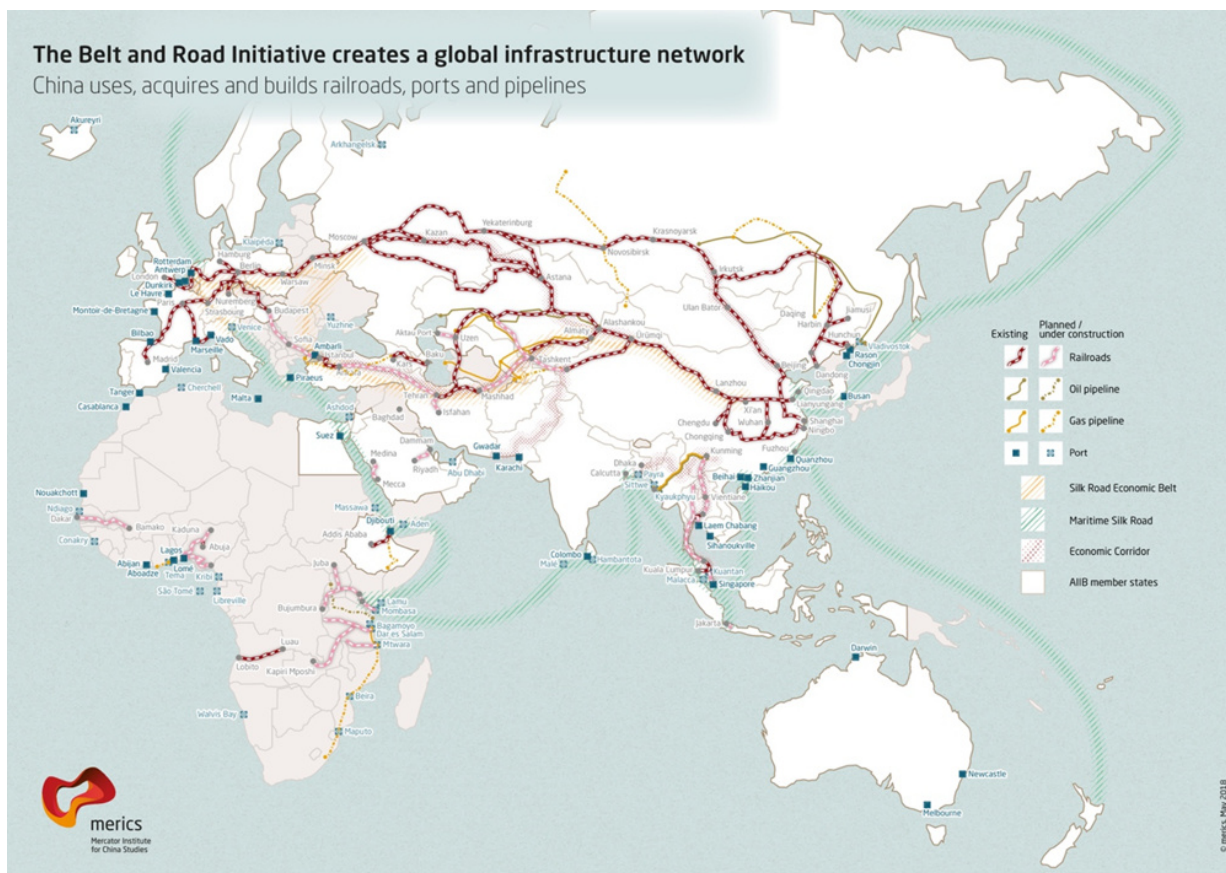


Figure 1: A map illustrating China's ambitions for the Belt and Road Initiative. (Source: Mercator Institute for China Studies, Berlin [<https://www.merics.org/de/bri-tracker/mapping-the-belt-and-road-initiative>])

China's new Arctic policy adds a polar Silk Road to the grand scheme. Chinese media also like to refer to this northernmost addition to the Belt and Road Initiative as the "Silk Road on Ice". This vision has led many observers to warn of China's attempt to get a stronger foothold in the Arctic. However, it is rather the policy manifestation of existing Chinese activities in the Arctic. Already in 2013, Beijing became an observer to the Arctic Council. In 2014, President Xi Jinping announced in a speech that China wanted to become a "polar great power". For years now, Chinese companies have invested in numerous infrastructures, mining and drilling projects in the Arctic. In the summer of 2017 Beijing tested the commercial viability of the Northern Sea Route along the Russian coast and the Northwest Passage. The

Chinese research icebreaker MV Xue Long (Snow Dragon) traversed through Canadian and European Arctic waters supporting scientific research but also collecting knowledge that will be useful for future cargo shipments. The state-owned China Ocean Shipping Company (COSCO) is already shipping goods through the Russian Arctic to European consumers.

For Canada, the significance of the polar Silk Road initiative does not lie so much in the potential threat of Chinese commercial shipping through the Northwest Passage nor the purchase of Canadian Arctic ports. Experts agree that the Northern Sea Route along the Russian coast with existing port facilities and the geographical proximity between Russia and China will always make that route a more attractive one for China. It should also be mentioned that, even though China's Arctic investment nowhere near matches the billions that Beijing spends in Africa or Latin America, no other outside player is investing so much money in the Arctic, as the region is characterized by high costs and slow payoffs. There are a number of northern communities that welcome any capital, especially independence-minded political actors such as the Partii Naleraq in Greenland, which would prefer such investment over money from Denmark. Of course, the Canadian government should be vigilant about any future Chinese large-scale infrastructure investment in the North, not least because the United States may be actively opposed to such activities within its continental security perimeter.

In terms of foreign policy, it will be more important for Canada to interpret China's Arctic policy as yet another articulation of interest in Arctic matters by a global player. The EU did so much earlier using similar language. A closer reading of the white paper reveals these similarities. The Chinese argued in 2018 that "the Arctic is gaining global significance" and that changes in the region have "a vital bearing on the interests of States outside the region and the interests of the international community as a whole, as well as on the survival, the development, and the shared future for mankind". This echoes the arguments that the European Union put forward in its policy documents in 2008: "In view of the role of climate change as a 'threats multiplier', the Commission and the High Representative for the Common Foreign and Security Policy have pointed out that environmental changes are altering the geo-strategic dynamics of the Arctic with potential consequences for international stability and European security interests calling for the development of an EU Arctic policy." In both cases, increasing accessibility of energy and mineral resources, as well as climate change, have been used as justifications for conceptualizing the Arctic as a region that has attained global political meaning beyond its limited geographical space. Ottawa will have to accept that any state which sees itself as playing a role in international politics will want to be somehow involved in Arctic matters. This is not dissimilar from China becoming a contracting party to the Svalbard (1925) or Antarctic Treaty (1983). The Arctic's global significance over the past 10 years means Canada must avoid other conflicts spilling over into the Arctic. So far, tensions between the United States or Canada and Russia over the annexation of Crimea have not substantially affected co-operation in the Arctic Council.

Usually, Canada's foreign policy within the hemisphere is very much influenced by its relations to its neighbor to the South. Due to the current U.S. administration's latent disinterest in Arctic matters – especially since the shale revolution diminished the lure of oil and gas resources in the Arctic – international governance and politics in the Arctic will be driven by discussions of global challenges including energy security and climate change and facilitating the entry of non-Arctic states into these debates. This development will only intensify as climate change further impacts the Arctic region.

Is the Canadian Arctic More Secure Now?

BY PIERRE LEBLANC

Vanguard August/September 2018

Although there is no perceived military threat to the Canadian Arctic at the moment, a number of sovereignty issues have yet to be resolved: the maritime boundary in the Lincoln Sea between Denmark and Canada, Hans Island, the Alaska-Yukon border extension into the ocean, the extension of continental shelves, and more importantly, the recognition of the strait baseline method to define the internal waters of Canada in the Arctic. The latter affects the status of the Northwest Passage. The government must make sure that it exercises its full sovereignty over these waters. That requires the ability to monitor increasing human activities on and below the surface and to enforce our regulations and laws.

Strong Secure Engaged, Canada's Defence Policy of 2017 clearly highlights the Arctic as a sector of priority. The word Arctic appears 77 times in the document. The policy provides the cornerstone document that will guide the Canadian Forces' efforts to monitor the Canadian Arctic and act as required.

2017 was the second warmest year on record. The ice in the Canadian Arctic was also at its second-lowest point since satellite tracking began in the 1970s. The shipping season in the Arctic is getting longer and is allowing greater and easier access throughout the Arctic Archipelago. During the summer of 2017, over 178 ships made more than 400 trips in the Arctic.

There are more mineral exploration and exploitation taking place now that access all year around is made easier. The Baffinland Iron Mines Corporation's Mary River mine on Baffin Island is a prime example. In 2017, 55 trips of bulk carriers shipped over four million tons of iron ore from the northern tip of Baffin Island to Europe.

Arctic tourism is becoming more popular. Several cruise ship companies are in the process of building an additional 22 ice-capable cruise ships. Silversea Cruises Ltd is even planning an Arctic circumpolar voyage for 2019.

The number of polar flights over the Arctic has also increased. These are flights that connect New York to New Delhi directly over the North Pole for example. Those flights are possible today because aircraft have longer legs and Russia has opened its airspace to commercial traffic. Although the airlines find these routes more convenient and economical, they represent both a risk and a responsibility in terms of air traffic management and search and rescue. Canada did commit to improving its capability to execute search and rescue missions under the Arctic Council's Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic.

Present strategic assets

In 2000, Canadian Forces Northern Area (CFNA), the precursor of Joint Task Force North (JTFN), raised the alarm about the future security impact of global warming and the increasing access to transportation routes and natural resources at a time when the limited Canadian Forces assets were being reduced.

Much has changed since then, and there is more change on the way. First, let us review the major strategic assets that the Canadian government presently has to meet its sovereignty responsibilities in terms of security. These assets are not limited to those of the Canadian Forces.

The Canadian Forces has improved its ability to better monitor activities in the Arctic through its headquarters based in Yellowknife. The JTFN headquarters is responsible for the coordination of many military activities in the Arctic. Headquarter detachments in Whitehorse and Iqaluit, the Area Support Unit (North), the reserve company of the Loyal Edmonton Regiment in Yellowknife, the 1st Canadian Ranger

Patrol Group and 440 Squadron provide JTFN a permanent physical presence in the Arctic. The Arctic Security Working Group, which was formed in 2000 by CFNA, continues to provide an excellent vehicle to share information and coordinate some of the efforts of the federal departments in the true fashion of the “whole of government” approach, which is essential in the Arctic given the cost of operation and the paucity of federal infrastructure.

Over the years, the JTFN headquarters has seen a solid growth in its ability to monitor activities in its area of responsibility, coordinate operations and support training of southern units such as the Army’s Arctic Response Company Groups. Through various annual exercises under the umbrella of Operation NANOOK, JTFN maintains its planning and command and control capabilities, while at the same time contributing to the federal government’s presence throughout the Arctic Archipelago.

There is also the Canadian Armed Forces Arctic Training Centre in Resolute Bay that provides a good support base for operations in the High Arctic, the Canadian Forces Station Alert which provides weather data and signals intelligence, and the North Warning System which provides alert to the Canadian Air Defence Sector and forms part of NORAD. There are three Forward Operation Locations (FOL) for the CF-18 in Yellowknife, Inuvik and Iqaluit. These FOLs support air defense operations by CF-18 based in Canadian Forces bases Cold Lake and Bagotville.

In a significant decision reinforcing our sovereignty, the Royal Canadian Air Force has recently modified the Canadian Air Defence Sector Identification Zone to include that portion of the Arctic Archipelago above the line of radars of the North Warning System. Until now, the northern tip of the Arctic Archipelago had received little attention in terms of monitoring air activity north of the North Warning System. Our capability to monitor such activity is still limited, but this is about to change through the modernization of the North Warning System.

MacDonald Dettwiler and Associates Ltd. (MDA) RADARSAT 2 provides a reasonable capability to monitor maritime activity. It’s synthetic aperture radar, day and night, and through cloud capabilities make it a powerful system. The data it provides, when cross-referenced with the information provided using space-based Automatic Identification System, the Northern Canada Vessel Traffic Services (NORDREG) and other sources, assists with the identification of targets of interest.

Access to ship Automatic Identification System (AIS) data from commercial suppliers such as exactEarth and ORBCOMM allows the government departments to tap into this resource. The AIS requires certain categories of ships to transmit data such as speed and direction to improve marine safety. Those signals can be picked up from space and provide a degree of maritime situational awareness. This is especially useful in the Arctic. The fleet of CP-140 Aurora aircraft, with their upgraded sensors and mission systems, provides another layer of maritime surveillance when deployed to the Arctic.

The establishment of the Canadian High Arctic Research Station (CHARS) in Cambridge Bay furthers the federal presence in the Arctic and will provide better science to guide stewardship decisions in the Arctic. It will complement the operations of the Polar Continental Shelf Project operated by Environment Canada in Resolute Bay. In Eureka, there is a Natural Resources Canada weather station as well as a Canadian Forces support facility for the maintenance of the High Arctic Data Communications System on Ellesmere Island.

The new road from Inuvik to Tuktoyaktuk will allow supplies, equipment, and personnel to be moved by road all the way to the Arctic Ocean in case of an emergency. It provides one more option for federal agencies to deploy assets and resources to the western Arctic.

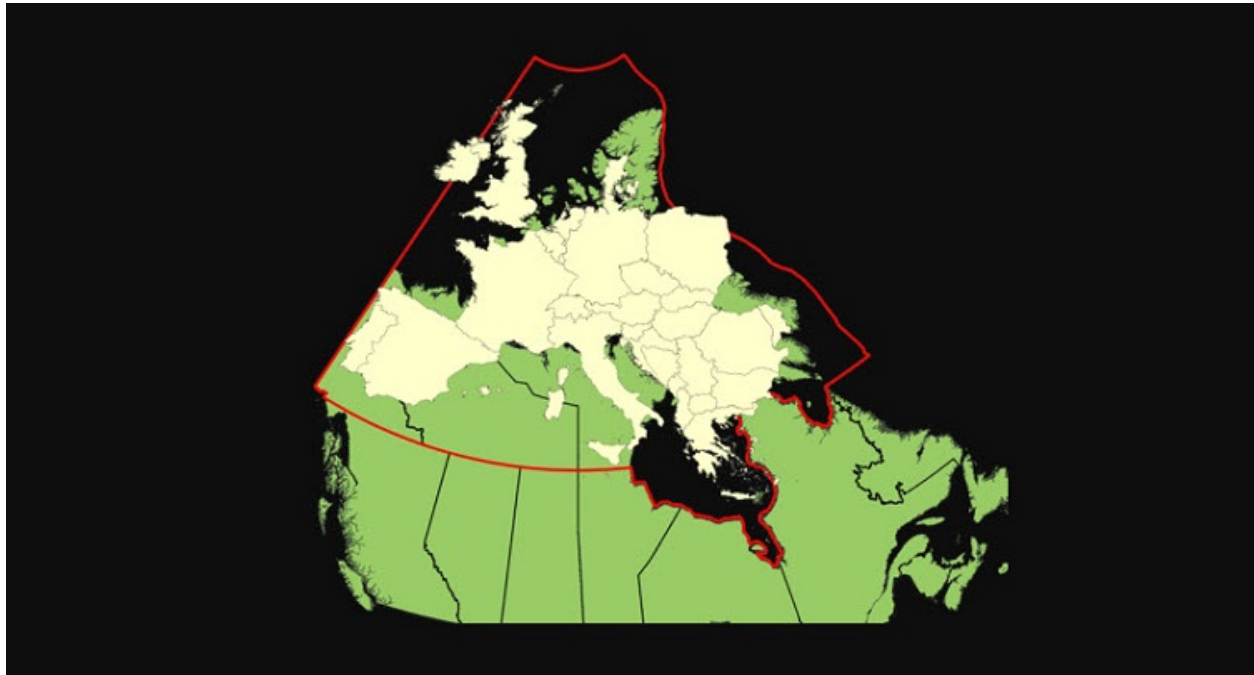
There is a new fiber optic communication line to Inuvik. It allows a high capacity communication link to the south. It provides the RCAF FOL in Inuvik with access to high-speed internet connection. It has also allowed greater support to the Inuvik satellite antenna farm supporting federal government services, as well as other international operations.

There are a number of airports and airfields throughout the Arctic to support operations. However, many of those are small and made of gravel.

The present assets provide a limited capability to deal with security situations or emergencies.

Approved future assets

Although the present assets are important, one must take into consideration the fact that the Canadian Arctic is immense (as shown on the following map).



Continental Europe over the Arctic (Image: Taken from CFNA presentation)

Most Canadians are unaware that the center of mass of Canada is actually in the Arctic near the Nunavut community of Baker Lake.

The MDA RADARSAT Constellation Mission, led by the Canadian Space Agency, will eventually replace RADARSAT 2. The satellites' launch is planned for November 2018. This set of three modern satellites should ensure data continuity, reliability and enhanced operational use of their all-weather synthetic aperture radars. The Constellation will provide daily revisits of Canada's Arctic. It will provide a high-resolution capability of 3 meters in the spot mode.

The Arctic and Offshore Patrol Ship (AOPS) project, which is under construction now, will shortly deliver the first of five ice-capable ships, with an option for a sixth ship. The ships are designated as the Harry DeWolf Class. These ships, with a capability to deal with new-year ice of up to one meter, will be able to increase the federal government's presence as well as improve its situational awareness in the Arctic during the active shipping season. They will vastly increase the capability of the government to deal with search and rescue, scientific research and support to other federal government departments in the Arctic. They will provide outstanding platforms to manage a crisis in their arctic area of operation.

Canada is looking at acquiring three icebreakers and converting them for their ice-breaking needs, which will improve the Canadian Coast Guard's ability to maintain its presence in the Arctic Archipelago. The red and white ships with the large maple leaf on their sides are the most visible federal presence from a sovereignty point of view up to now. The Canadian Coast Guard has also established a number of Canadian Coast Guard Auxiliary stations in the Arctic which will improve Canada's ability to do marine search and rescue as committed under the Arctic Council's Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic. The Inuvik Canadian Coast Guard Auxiliary is receiving two search and rescue Sea-Doos.

Under the Ocean Protection Plan, the federal government will be seen to be better governing the Arctic Ocean in line with its sovereign responsibility. Transport Canada and the Canadian Coast Guard are developing a series of shipping corridors through the Arctic. Such corridors, if made compulsory, would

minimize the risks to marine life and the Inuit communities. They would also allow the concentration of limited resources, such as mapping of the seabed for safer navigation, in this vast area. In April 2016, the Pew Charitable Trusts produced a report titled “The Integrated Arctic Corridors Framework: planning for responsible shipping in Canada’s Arctic waters”. It produced a number of charts that suggested corridors to minimize such impacts.

A new port in Iqaluit will begin construction in July 2018, and it should be completed by November 2019. It will be the first and only port in the Canadian Arctic. This asset will augment the federal capabilities significantly. The port of Churchill in Manitoba is not located in the Arctic and, at the moment, is lacking a reliable rail line with the south. The Canadian Forces are in the process of finalizing the development of a refueling capability at Nanisivik.

Future potential systems

The Royal Canadian Air Force (RCAF)’s Remotely Piloted Aircraft Systems (RPAS) project, formerly known as the Joint Unmanned Surveillance and Target Acquisition System (JUSTAS) project, has moved into the options analysis phase. That system would bring a cost-effective way to patrol the vast expanses of the Arctic and provide another layer of surveillance capability to add to the other systems in place.

Communications in the Arctic have been a significant challenge over the years. This is mainly due to the lack of land base connectivity through fiber optics or microwave links. Communications to support military operations and the Canadian Coast Guard have traditionally been provided through geostationary satellite links, which are expensive. As one progresses further north, communications through those links with geostationary satellites become increasingly unreliable. Other satellite communications providers like Inmarsat or Iridium do not have the high bandwidth capabilities required by modern networks and sensors.

But this is about to change when Telesat, a Canadian company headquartered in Ottawa, completes the development of a constellation of 100+ low-earth-orbit satellites with an in-service date of 2022. “The global network will deliver fiber quality throughput (Gbps links; low latency) anywhere on earth.” In addition to providing better communications anywhere in the Arctic to support security operations, the control of the system will be in Canadian hands, and it will provide a degree of communication redundancy through the large number of satellites. Geostationary satellites are vulnerable to various forms of attack. They would likely be targeted early in a conflict. The Canadian Forces Enhanced Satellite Communications Project – Polar (ESCP-P) has just completed its Request for Information (RFI). It has an in-service date in the 2028-2029 timeframe.

The Qikiqtaaluk Corporation is hoping to build a port in Qikiqtarjuaq. This addition would augment the facilities that can be used for refueling, repairs, search and rescue and dealing with an environmental emergency in the eastern part of the Arctic.

The proper monitoring of underwater activities has long been a gap in our all domain situational awareness. As far back as the 1987 White Paper on Defence, there have been efforts to deploy sensors to monitor submarine activity in the Arctic. Recent efforts were done under the Northern Watch Technology Demonstration Project run by Defence Research and Development Canada (DRDC). For a number of years, various combinations of systems which included surface radar and remote weather monitoring were tested at the Gascoyne Inlet of Nunavut. That project ended in 2016. In 2015, a new program was stood up: the All Domain Situational Awareness Science & Technology Program with funding over \$100 million. The program counts several initiatives to explore various elements of surveillance technologies and knowledge required to monitor sub-surface activity like autonomous underwater vehicles with towed arrays and the investigation of how sound propagates through Arctic waters.

Options for the replacement of the North Warning System are now being explored. The present line of radars which was installed in the late 1980s is largely obsolete, especially when considering Russian supersonic cruise missiles. There is presently a Request for Proposal for the installation of a polar over-the-horizon radar somewhere in the High Arctic. It is probably one of the various options being considered by NORAD to improve long-range detection of threats.

The Coast Guard fleet of icebreakers is 39-years old on average, and ships are reaching the end of their design life. Although there is a refurbishment and life extension program in place and the recently

announced intention to purchase three modified icebreakers, there is a need for a fully funded program to replace those vessels. We are aware that there is a plan for the replacement of the CCG Louis St-Laurent with the CCG Diefenbaker, but this ship will only likely see service in 2023, and the plan for the replacement of the rest of the fleet is not entirely clear. “At this time, with the exception of the new polar icebreaker CCGS John G. Diefenbaker, no new building plans have been approved for the replacement of these icebreakers.”

In 2000, I recommended the deployment of high-frequency surface wave radars (HFSWR) to monitor the approaches to the choke points in the Canadian Arctic Archipelago. We need to know what is coming into our waters before they reach them. Such a system was developed and deployed by the Department of National Defence to monitor Canada’s East coast in 2003. It can monitor maritime traffic to long distances depending on conditions. In 2011, Defence Research and Development Canada (DRDC) contracted for the development of a 3rd generation HFSWR capable of operating 24/7 without causing interference to other users. This system was tested in Nova Scotia in 2013. It is my understanding that DRDC is exploring the possibility of such a system in the Arctic.

The Army for its part has a project to improve its mobility in the Arctic. The Domestic Arctic Mobility Enhancement project will be a combination of tracked, articulated and amphibious all-terrain carriers, as well as snowmobiles and all-terrain vehicles for tactical and operational mobility and to support logistical resupply.

It is fine to have multiple layers of surveillance in the Arctic, but there is also a need for a capability for opposed boarding of ships in the Arctic. Given the increase in maritime traffic, it is only a matter of time before an unscrupulous player enters the Arctic Archipelago or does something in our exclusive economic zone that requires the ability to do an opposed boarding of that ship. The Royal Canadian Navy (RCN) has a great deal of experience in doing such boarding given their experience in the Persian Gulf. However, until the AOPS are fully deployed, doing the same in the Arctic will be more challenging given the vast distances involved, weather and the lack of infrastructure.

A Canadian Forces boarding party or Royal Canadian Mounted Police assigned to a Marine Security Emergency Response Team and their equipment would have to be flown to the airfield closest to the offender. From there the team would have to sail some distance to the ship in uncertain weather. It is a capability that needs to be planned for and exercised.

A demonstration of this capability took place during one of the summer Arctic visits of Prime Minister Harper. That demonstration was planned months in advance and the required assets were prepositioned ahead of time. What is required is a capability that can be deployed at 24 hours’ notice. That capability would need to be exercised at least yearly. It could be done under the umbrella of the NANOOK series of exercises.

A paved runway in Resolute Bay to support RCAF surveillance and operations and the mandate of various federal departments would go a long way to increase the capabilities of the federal government, as Resolute is central to the Arctic Archipelago and sits squarely on the Northwest Passage. A port in Resolute Bay would be a tremendous strategic asset that would support Coast Guard and Royal Canadian Navy operations in the Arctic.

Although the Canadian Forces will receive new fixed-wing search and rescue aircraft, none of them will be based in the Arctic. Their slower speed compared to the present CC-130 means longer response times in the Arctic where time is usually critical. Deploying some in the Arctic would make them more responsive.

Only ships of 300 tons and above are required by regulations to report on NORDREG. Reducing the threshold to 30 tons would increase the maritime situational awareness.

Conclusion

Although more is being added to the present capabilities and even more could be done, the security of the Canadian Arctic has improved over the last few years and will continue to do so for some years to come as more and more strategic assets become operational to cope with the disappearing ice and increasing levels of human activities.

Colonel (Retired) Pierre Leblanc is a former Commander of the Canadian Forces in the Canadian Arctic.
www.arcticsecurity.ca

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THE LAST POST

- **MGen Herb Pitts, MC, CD**
- **SLt Sheila Davis**

PRESIDENT'S MESSAGE

China has seen itself as the centre of the civilized world for over 2,000 years, but from 1840 to 1949- what the Chinese call The Century of Humiliation- it was an isolated and backward hermit kingdom. Now, in only two generations China has risen to be the second largest economy in the world. To the Chinese Communist Party, and the Chinese people this is as it should be.

A newly emboldened China pays only lip service to the current international world order created after the Second World War by the Western powers. This world order was built on Western cultural ideals, global institutions- such as the United Nations and the World Trade Organization, democracy and international law.

China presents new security challenges, as it strives to re-create its old regional hegemony in Asia and the Western Pacific. To do so, however it must undermine and replace US and even Japanese power and influence. It is no longer a question of integrating China into the current world order, but accommodating the new reality, or opposing it.

As Victoria is Canada's gateway to the Pacific it seems only appropriate that RUSI-VI should be a gateway to understanding the challenges presented by this geopolitical change. Consequently, this November newsletter is focused on some of the security challenges China presents in the Pacific and even in the Arctic. RUSI-VI plans to include future luncheon speakers that are experts on aspects of these challenges.

Scott Usborne
Vice-President
RUSI VI

AND FINALLY, TO SHOW THE GROWING APPETITE TO BE ENGAGED IN THE ARCTIC:

UK DEFENCE SECRETARY ANNOUNCED A NEW DEFENCE ARCTIC STRATEGY

October 2018 Naval News

POSTED ON THURSDAY, 04 OCTOBER 2018 10:10

UK's Defence Secretary Gavin Williamson has announced this week a new Defence Arctic Strategy, acknowledging the increasing opportunities and threats the Arctic region presents.

The strategy will enhance the Ministry of Defence's focus on the Arctic, underlined by our current commitments in the region and future deployments.

Defence Secretary Gavin Williamson said: *As the ice melts and new shipping routes emerge, the significance of the High North and Arctic region increases. Russia, with more submarines operating under the ice and ambitions to build over 100 facilities in the Arctic, are staking a claim and militarising the region. We must be ready to deal with all threats as they emerge.*

The change in the natural environment in the Arctic and High North is driving a change in the security environment and, as the region becomes more accessible, there has been an increase in military activity. The new Defence Arctic Strategy will put the Arctic and the High North central to the security of the United Kingdom.

Currently, the Royal Marines conduct cold weather training in Norway on an annual basis, with around 800 due to deploy in 2019. As part of the new Arctic strategy, the Marines training will become joint with Norway on a long-term basis and integrated into Norway's defence plan, providing UK troops a unique opportunity to train alongside a key ally.

The strategy will also complement our NATO commitments and in 2019, four RAF Typhoons will for the first-time patrol Icelandic skies. This will allow the UK to work closely with allies to deter aerial threats to Euro Atlantic security. The mission will also provide the RAF with unique opportunities to test its skills in different environments.

In 2020 we will also increase our operational commitments in the area with the introduction of new P-8 Poseidon aircraft. Based out of RAF Lossiemouth, the sub-hunters will help combat a range of intensifying threats, not least increasing submarine activity in the Arctic.

This increased submarine activity poses a new threat and is something the Royal Navy is ready to combat. In 2018, a Royal Navy submarine took part in ICEX with the US Navy for the first time in ten years and as part of the new Defence Arctic Strategy, the Navy will mount regular under-ice deployments in the years to come.

Mark your Calendar

16 Dec 2018 - *RUSI VI Christmas Cocktails*

Enjoy the festive season on this date 1400 – 1600 with your RUSI Chums – Cash bar. Finger food covered by entry fee. Bring your friends and partners. Cost: \$15.00 per person (Pay at the door).

9 Jan, 2019 - *The Cinderella Campaign: 1st Canadian Army's Battles for the Channel Ports*

Speaker: Mark Zuelhke

13 Feb, 2019 - *Who Killed the Avro Arrow?*

Speaker: Dr. Chris Gainor

13 Mar, 2019 - *Are We Strong, Secure, and Engaged? An Assessment of Canada's 2017 Defence Policy*

Speaker: BGen (Ret'd) Don McNamara