

THE WATCH

THE ARCTIC AND HOMELAND DEFENSE



v4

STRATEGY

ARCTIC ACTIVITY HEATS UP

OPERATIONS

TRAINING IN SUBZERO

ALLIES

UNITING FOR PEACE

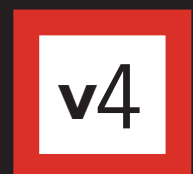
THE WATCH // THE ARCTIC IS OUR PRIORITY



The actions taken by strategic competitors in the Arctic necessitate a response. The National Defense Strategy outlines the importance of campaigning to strengthening deterrence capabilities and attaining military advantages through enhancing joint force capabilities. Both of these elements are essential toward achieving the National Defense Strategy’s goal of a stable Arctic region where threats to the U.S. homeland are deterred.”

— **GEN. GLEN D. VANHERCK**

Commander, North American Aerospace Defense Command
and U.S. Northern Command



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ABOUT THE COVER

Melting sea ice is changing the environment in the Arctic, making it more navigable and development friendly. This illustration by The Watch depicts how strategic competitors of the United States such as the People's Republic of China and Russia want to exploit the Arctic's natural resources to gain economic and military advantage.

DEAR READERS:

Welcome to Volume 4 of The Watch, a professional military journal on homeland defense published by U.S. Northern Command (USNORTHCOM). The Watch strengthens U.S. security partnerships and provides an international forum to address homeland defense issues and challenges. The publication is for our allies and partners, including senior military leaders, high-ranking government officials and academic professionals.

Homeland defense is a global endeavor. Advanced threat capabilities that the Russian Federation and People's Republic of China (PRC) bring to the Arctic reduce key leadership decision-making space and erode deterrence options. These threat capabilities necessitate a response. USNORTHCOM will deter, detect and defeat threats against North America. USNORTHCOM, the North American Aerospace Defense Command and the Canadian Joint Operations Command work with our Nordic allies and partners to build a seamless globally integrated layered defense network to monitor, track and contest Russian and PRC out-of-area military operations in North America and the Arctic.

This edition focuses on the Arctic and homeland defense. Section 1 discusses the new National Strategy for the Arctic Region, Russian and PRC Arctic threats, and the August 2022 opening of the Ted Stevens Center for Arctic Security Studies in Anchorage, Alaska. Section 2 highlights U.S. Arctic operational capabilities such as the F-35 fighter plane, Special Operations Forces, Operation Noble Defender, Operation Polar Dagger, and Arctic search and rescue. The new National Strategy for the Arctic Region emphasizes that the U.S. will deepen cooperation with Arctic allies and partners. Section 3 features articles from our allies that discuss Canada's Joint Task Force North, the Kingdom of Denmark and the defense of North America, Greenland's alignment with the West, Norway's lead on Nordic defense cooperation, Finland's NATO membership, the United Kingdom's Joint Expeditionary Force, and concludes with allied messaging in the Arctic.

We hope you find this issue of The Watch insightful. To keep the conversation flowing, please reach us at <https://thewatch-journal.com/contact>.

Regards,
Robert D. Davis
Brigadier General, USAF
Director of Operations, NCJ3
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THE WATCH

Homeland Defense

Volume 4 2023

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The Watch is a professional military journal published by United States Northern Command (USNORTHCOM) for foreign partners and allies to include senior military leaders, government officials and academic professionals. The goal of the publication and website is to strengthen U.S. security partnerships and provide an international forum to address global homeland defense issues and challenges.

The opinions expressed do not necessarily represent the policies or points of view of USNORTHCOM or the United States government. The Secretary of Defense has determined that publication of this journal is necessary for conducting public business as required by the Department of Defense by law.

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STRATEGIC OVERVIEW



THE U.S. ARCTIC STRATEGIC EVOLUTION

ADVANCING REGIONAL CAPABILITIES AND INTENT

TROY J. BOUFFARD AND DR. RYAN BURKE

The White House in early October 2022 released its new National Strategy for the Arctic Region (NSAR), a significant update since the 2013 inaugural edition. A few days later, the 2022 National Security Strategy (NSS) was released with Arctic-specific priority language included for the first time. Near the end of the month, the U.S. Department of Defense (DOD) released an updated National Defense Strategy (NDS) with updated Arctic-specific content, marking October 2022 as a pivotal moment for U.S. Arctic-related strategic guidance. Additionally, 2023 will see the release of both the Implementation Plan for NSAR and DOD's next iteration of its Arctic strategy.

What was long considered tomorrow's security challenge is no more. The Arctic is the challenge of today. Of the four pillars in the NSAR, security leads with purpose to "develop capabilities for expanded Arctic activity" with three strategic objectives: 1) improve our understanding of the Arctic operating environment, 2) exercise presence to support priority goals and 3) maximize unity of effort with allies and partners. Whether hard or soft security, such objectives effectively provide appropriate national guidance and intent for both foreseeable needs as well as looming uncertainties. Moreover, the security pillar deliberately and meaningfully synchronizes with the other national strategies and policies while providing executive-level guidance to whole-of-government efforts. The security pillar clearly emphasizes the necessity of homeland defense — the need to deter threats to the homeland while protecting the people of the United States and defending sovereign territory. The NSAR's emphasis



The National Oceanographic and Atmospheric Administration Ship Fairweather docks in front of Hubbard Glacier off the coast of Alaska. The hydrographic survey vessel primarily maps coastal waters to update nautical charts and mainly operates in Alaskan coastal waters. LT. CMDR. DAMIAN MANDA/NOAA

on developing capabilities aligns with U.S. Northern Command's (USNORTHCOM) unprecedented pursuit of operational relationships with federal partners such as the National Oceanic and Atmospheric Administration (NOAA) for improved understanding of the operating environment and greater Arctic presence. Establishing liaison and coordination with Arctic-present agencies and critical providers of environmental intelligence such as NOAA is a bold and necessary move indicating USNORTHCOM's unwavering commitment to meeting national objectives in the flurry of recent Arctic strategies and policies. The NSAR is just the start.

The 2022 NSS is a paradigm-shifting moment for the Arctic in terms of national priority direction and opportunities. For the DOD, the articulated Arctic language in the 43-page 2022 NSS provides enough latitude and intent to ensure that requirements can be identified, defined and developed while anchored to tangible national authority. Moreover, the NSS guides development and



Exercise Arctic Warrior tests the ability of the 4-25th Infantry Brigade Combat Team — the Spartans — and supporting units to be combat-ready in extreme weather.

U.S. NORTHERN COMMAND



implementation of the NDS, which guides development and implementation of the National Military Strategy (NMS) — all of which form the triad of national military guidance for the U.S. that provides directions for development and implementation of critical constituents such as campaign plans, conceptual plans, operational plans, and other joint- and service-component products.

Section VI of the 2022 NDS lists the Arctic as one of the six priority regions for defense, emphasizing homeland defense, deterrence and enhanced maritime domain awareness in the Arctic as among the key themes. The DOD NDS Arctic priorities clearly compete with others and risk being subordinated to areas of greater perceived significance. However, given current global threats, continued proactive Arctic defense approaches are necessary to maintain stability. The current — yet stable — regional competition in the Arctic can be preserved through articulating the issues, advocating awareness and advancing the discussion to prevent the evolution of unconstructive, or even conflict-level, circumstances.

Until a crisis occurs in the Arctic, any effort — deterrence or otherwise — to make security gains in the region is certainly worthwhile. Such priorities complement

U.S. troops train with their Canadian counterparts during Arctic Edge, a joint force and international training exercise hosted by Alaskan Command. U.S. NORTHERN COMMAND

the work by many others in the region throughout the recent decade and beyond. The U.S. is also known for its unmatched suite of Arctic, defense-related strategies, which include current versions of departmental, joint and service-component products. These strategies highlight geopolitical and other nonoperational issues in attempts to lean forward on U.S. Arctic equities and opportunities. While NSAR signals the commander-in-chief's Arctic vision, the NSS and NDS provide a pathway for the new DOD Arctic Strategy and subsequent updates with operational purpose and unity of effort.

The Arctic is not just about deterrence and homeland defense requirements. Force projection and combined-arms capabilities must be achieved to ensure total-force Arctic development. To that end, the U.S. has the opportunity and ability to achieve such demanding Arctic security goals for the competition today, while ensuring our role as a partner and ally to like-minded Arctic nations in the event of crisis tomorrow. ■



— THE LONG-TERM MILITARIZATION OF — **PUTIN'S RUSSIA**

ROB HUEBERT/UNIVERSITY OF CALGARY

Many have treated Russia's renewed attack on Ukraine in February 2022 as if this is new behavior by the Russian state. Several Western leaders acted as if the invasion took them by surprise.

Yet nothing could be further from the truth.

Russian militarization, especially within its Arctic region, is traceable to at least 2005 if not earlier. Russia's recent actions in Ukraine are only part of a long-term approach that includes public pronouncements, military action and procurement decisions, and must be understood as such.

Russian President Vladimir Putin notified the Western world of his ambition to rebuild Russia as a great power as early as 2007, when he made his intentions public at a security conference in Munich. Speaking directly to German Chancellor Angela Merkel and U.S. Secretary of Defense Robert Gates in the audience, Putin declared that Russia would no longer accept Western domination. The Russian government followed this announcement with plans to increase defense spending and to modernize nuclear deterrence as well as conventional forces.

The Russians also began to use their military capabilities to prevent the expansion of NATO. The 2008 Georgian war had several causes, but one of the most important was Moscow's use of military force to prevent Georgia from becoming a NATO member. This rationale arose again in 2014 when the new Ukrainian government took steps to seek membership in NATO. In this instance, the Russian response was to use military force to prevent Ukraine from doing so.

Russia has been confronted by several major challenges in rebuilding its nuclear forces but still has continued its efforts. Much of it has been directed to responding to improvements and advancements in U.S. weapons technology. Until recently, most Western observers ignored or



A convoy of Russian armored vehicles moves along a highway in Crimea in January 2022 as Moscow concentrated forces near Ukraine in what proved to be the prelude to its invasion.

THE ASSOCIATED PRESS

dismissed these efforts. In retrospect, it is now clear that the Russians were determined to develop new delivery systems for their nuclear forces to counter U.S. weapons such as the Patriot anti-missile system. This has included rebuilding Russia's nuclear submarine force, which is the most important element of its deterrent capability. Russia has also been extensively rebuilding air bases within its Arctic to protect its forces and to allow it to have extensive power-projection capabilities — both in conventional and nuclear terms. These include the Avangard hypersonic glide vehicles, the Kinzhal air-launched cruise missile and the Poseidon autonomous underwater vehicle, which are the best-known of these new systems. While debate remains as to whether these weapons — with their focus on stealth and speed — are as lethal as the Russians claim, there can be no doubt they have made extensive attempts to have a military that can act as a major deterrent. But the capabilities of these weapons also point to the possibility of them being used



A personnel carrier loaded with Russian troops enters the town of Gori during Russia's 2008 invasion of Georgia, a precursor to current events in Ukraine. AFP/GETTY IMAGES

In this image from video released in 2022, a Zircon hypersonic cruise missile is launched from the frigate Admiral Gorshkov in the Barents Sea. RUSSIAN DEFENSE MINISTRY VIA THE ASSOCIATED PRESS

in an offensive manner. That is, it appears the Russians are thinking beyond deterrence and are looking to have forces who can fight with nuclear weapons.

Evidence of this can be found in Moscow's defense policies and in statements made by senior leadership. The Russians have also developed policies that clearly indicate their intention to use nuclear weapons in the future. The Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence announced in June 2020 emphasizes what Western observers have now termed "escalate to deescalate." This policy specifically states that Russia reserves the right to use nuclear weapons

if it feels threatened. Putin has made it clear that the Russians see the first use of their nuclear forces as a viable option. While some Western observers suggest this is only rhetoric, the reality is that Russia has been focused on rebuilding its military capability to allow it to deploy a powerful nuclear deterrent and to possibly use those weapons in a conflict if it decides the state is threatened.

The conflict in Ukraine has heightened concerns over what Russia may do if it believes that it's losing the war and feels threatened. What Western observers need to fully appreciate is that the situation was not the result of recent events. Russia did not accidentally find itself in this conflict in 2022. Instead, it has been developing the capabilities and the policies to respond to the West since the early to mid-2000s. ■



A Chinese paramilitary police border guard trains in Heilongjiang province on the border with Russia.

AFP/GETTY IMAGES



RUSSIA'S WAR ON UKRAINE STALLS PRC'S ARCTIC MOMENTUM

MARC LANTEIGNE/UIT THE ARCTIC UNIVERSITY OF NORWAY

Although the Russian invasion of Ukraine in February 2022 did not directly affect the geopolitics of the Arctic, strategic spillover from that conflict into the High North has been easy to detect. With the Arctic now being more directly incorporated into NATO's strategic interests and with the alliance expanding to include Finland and potentially Sweden, there has been a de facto bifurcation of the Arctic into Western and Russian zones. The Arctic Council remains in near-abeyance, and questions remain about whether any revived cross-regional cooperation will be possible. Norway took over the chairmanship of the group from Russia in May 2023.

As the largest non-Arctic country, and one which has often referred to itself as a near-Arctic state, the People's Republic of China (PRC) finds itself in a more precarious position in the region as compared to five years ago when it launched its ambitious white paper, which proclaimed Chinese interests in being a key stakeholder in the far north. Beijing's plans for the Arctic assumed that the region would be open and amenable to the development of three main pillars of Chinese Arctic policy, namely scientific diplomacy, economic partnerships and participation in regional governance initiatives. All three of these pillars are now under pressure, which has underscored the PRC's limitations in the Arctic and will inevitably force a rethinking and likely a retrenchment of the country's far-northern interests.

Nonetheless, there remain two widespread assumptions concerning the PRC's status in the Arctic. These need to be carefully unpacked; namely, that the country's presence in the Arctic is looming and increasing, and that polar cooperation between the PRC and Russia will inevitably deepen to the point that a formalized Arctic strategic partnership will be created. The events of the past year, however, have called both suppositions into question.

Despite hopes in Beijing that the PRC's Polar Silk Road initiative would emerge as an integral part of the overall Belt and Road framework, many centerpiece projects of



Gao Feng, the People's Republic of China's Arctic ambassador, speaks at the Arctic Circle Forum in Torshavn, Faroe Islands, in 2018.
ARCTIC CIRCLE ASSEMBLY

The People's Republic of China's first domestically built icebreaker, the Xuelong 2, launched in September 2018. In addition to being an icebreaker and a research vessel, Xuelong 2 serves as a supply vessel for Chinese research facilities in the Arctic and Antarctic. AFP/GETTY IMAGES



the infrastructure initiative have either failed or are in doubt because of financial constraints, political opposition or some combination thereof. These include, but are not limited to, Chinese investments in the Kuannersuit rare earths and uranium mine and the Isua iron-extraction projects in Greenland; the Kami iron-ore project and the purchase of TMAC Resources, a mineral exploration and development company, both in Canada; and the oft-discussed Arctic Railway project in the Nordic region. Chinese concerns have also been pushed out of plans to construct an undersea fiber-optic cable in the Arctic Ocean. Even before the invasion of Ukraine, the PRC's maneuvering room in the Arctic was being reduced after Beijing's diplomatic relations chilled with several Arctic governments, including Canada, Denmark, Sweden and the United States. The PRC's economic momentum in the Arctic was further stalled by the pandemic, Russian actions in Ukraine, and questions about the near-term health of the Chinese economy.

Concerning Sino-Russian relations in the far north, attention was justifiably paid to the joint statement between Chinese President Xi Jinping and his Russian counterpart, Vladimir Putin, mere weeks before Ukraine

The Vladimir Rusanov, a tanker that carries liquefied natural gas, arrives at a terminal in Nantong in eastern China's Jiangsu province in 2018 after its journey from Russia's Arctic Yamal peninsula. Russia is partnering with Chinese and French companies to produce liquefied natural gas on the peninsula. AFP/GETTY IMAGES





was attacked, which affirmed a “no limits” partnership that included “practical cooperation for the sustainable development of the Arctic” and the further opening of regional maritime trade. Beijing has also been an enthusiastic buyer of Russian oil (at discount prices) and has repeatedly deferred from condemning the Ukraine invasion. Yet, a closer look suggests growing Chinese apprehension about a too-close political and economic relationship with Moscow, including in the Arctic. Chinese firms have been sporadic at best in their engagement with the Arctic liquefied natural gas (Arctic LNG-2) project in Siberia, and no China-flagged cargo vessels transited the Northern Sea Route connecting Asia with Europe via the Siberian coast in 2022, reflecting Chinese concerns over being subject to Western sanctions for assisting the Putin regime.

With the PRC’s economy facing domestic travails caused by draconian “zero-COVID” restrictions and the

Chinese President Xi Jinping and Russian President Vladimir Putin meet by teleconference in December 2022. Russia’s invasion of Ukraine has complicated its partnership with the People’s Republic of China in the Arctic. WIKIMEDIA COMMONS

health risks created by their rapid removal late in 2022, as well as external pressures from Sino-American trade competition, a Russia-first diplomatic approach makes less sense. Moreover, with Moscow seeking to augment its Arctic defenses and NATO expanding its own presence in the Nordic region, Beijing will find it much more difficult to engage in both scientific and economic diplomacy to the lengths it envisioned when the white paper was published.

The PRC will not be abandoning the Arctic as a region of strategic concern, but it will be crucial for the United States and others to recognize restraints in Chinese interests in the far north as many governments try to navigate the drastically changed political mosaic of the region. ■



Gen. Glen D. VanHerck, commander of the North American Aerospace Defense Command and U.S. Northern Command, attends the opening of the Ted Stevens Center for Arctic Security Studies with Air Force Maj. Gen. (Ret.) Randy A. Kee, senior advisor for Arctic security affairs.

TED STEVENS CENTER



TED STEVENS CENTER STRENGTHENS U.S. ARCTIC INVESTMENT AS SOFT-POWER COMPLEMENT

MAJ. GEN. (RET.) RANDY A. KEE/U.S. AIR FORCE

The Ted Stevens Center for Arctic Security Studies (TSC) officially opened in an August 11, 2022, ceremony at Joint Base Elmendorf-Richardson, Alaska, marking an important milestone in a U.S. Department of Defense (DOD) push to develop a network of leaders who promote its Arctic policies. Dignitaries included political and appointed leadership from the National Capital Region and Gen. Glen D. VanHerck, commander of the North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM).

The center, which celebrates the legacy and service of the late Alaska senator, was established in statute through the 2021 National Defense Authorization Act. It is the first new regional center in more than 20 years and joins the George C. Marshall European Center for Security Studies in Germany; the Daniel K. Inouye Asia-Pacific Center for Security Studies in Hawaii; and three in Washington D.C.: the William J. Perry Center for Hemispheric Defense Studies, the Africa Center for Strategic Studies and the Near East South Asia Center for Strategic Studies.

As DOD's regional center for the Arctic, the TSC is a tool of policy and security cooperation and is working to develop solutions to support the department's Arctic priorities ranging from the geophysical to the geostrategic. The TSC's mission is to build strong domestic and international networks of security leaders and promote and conduct focused research on Arctic security to advance DOD priorities. In accordance with congressional authorization and guided by "experimentation and innovation," the center conducts executive education, research and analysis, as well as strategic engagement domestically and internationally. As described in the TSC's charter, the center's curricula includes new concepts in condensed tabletop exercises, workshops, seminars, and field programs for engagement and outreach.

The TSC is assigned to the Office of Arctic and Global Resilience and is principally aligned to USNORTHCOM.

The Stevens Center is conducting a strategy of "building while doing" as it continues to develop from initial capacity in July 2022 to planned full capacity by the summer of 2023. FOC will include an approximately 50-person multidisciplinary team of civilian and military professionals. As a DOD regional center, the TSC receives administrative support from the Defense Security Cooperation Agency.

In 2022, while still small and growing, the TSC made an Arcticwide impact through its education and outreach missions. Its accomplishments included graduating 550 U.S. and international students; providing a multidisciplinary Arctic symposium for some 400 participants; producing two well-attended webinars; developing the Journal of Arctic and Climate Security Studies; and conducting engagement programs in Canada, Germany, Greenland and Iceland. TSC also participated in several U.S.-hosted Arctic or Arctic-included events.

The TSC is developing a "hub and network" approach for strategic engagement that will bring its programs and activities across the Arctic — from the Bering Strait in Western Alaska to Arctic Finland — through in-person and hybrid activities.

In the spirit of the Arctic raven, the TSC is respectfully incorporating aspects of the Indigenous cultures and perspectives and honoring the people of the Arctic whose history is foremost to the region. The center also celebrates the legacy of service of Sen. Stevens. Guided by new national and department strategies, the TSC is working closely with USNORTHCOM leaders to support the commander's theater missions to analyze risks, provide solutions, and strengthen U.S., allied and partner Arctic capabilities. While it is still in the early days for the center, the small but growing team is honored to support USNORTHCOM in those efforts for the North American Arctic while also serving DOD mission needs in policy and security cooperation across the trans-Atlantic Arctic with U.S. allies and partners. ■

ARCTIC OPERATIONS



THE F-35 DELIVERS UNMATCHED GLOBAL DETERRENCE

THE WATCH STAFF

The barren and unforgiving Arctic terrain of the Joint Pacific Alaska Range Complex (JPARC) is where the United States military and its allies train in extreme conditions.

High above the vast landscape that is the size of the U.S. state of Indiana, the world's most advanced warplane — the F-35A II Lightning stealth fighter — conducts operations.

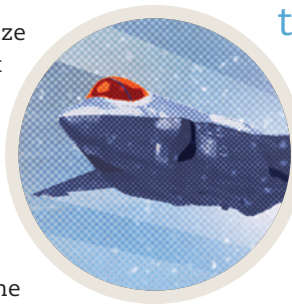
The multirole F-35A II rules its domain no matter the environment.

“We have a motto that ‘we’re ready to go at 50 below,’ ” and it does get that cold sometimes, Col. David Berkland, commander of the 354th Fighter Wing at Eielson Air Force Base (AFB) in Alaska, said during an August 10, 2022, event at the base, according to the Insider news website.

The U.S. released its new Arctic strategy in October 2022 that makes countering the moves of Russia and the People's Republic of China (PRC) in the region a priority as the sea ice melts and shipping lanes open. The Pentagon seeks to increase its presence through military exercises with allies and by modernizing air defenses. The F-35A will play a key role in this deterrence.

Eielson AFB was the first cold-weather U.S. Department of Defense (DOD) installation to get the fighter, which manufacturer Lockheed Martin had subjected to Arctic

The long-range supersonic fighter can reach anywhere in the Northern Hemisphere in one sortie.



temperatures during its development. Alaska is a strategic gateway to both the Polar Arctic and to the Indo-Pacific.

But the F-35A has the capability to deter potential adversaries far beyond the foreboding environment of JPARC. From Eielson, the long-range supersonic fighter can reach anywhere in the Northern Hemisphere in one sortie.

When the 54th F-35A was delivered to Eielson AFB in April 2022, the state became the nexus of fifth-generation fighter operations. The 354th Fighter Wing's two squadrons of F-35As are complemented by two squadrons of F-22s stationed at Joint Base Elmendorf-Richardson. That is the world's largest concentration of advanced warplanes.

Gen. Charles Q. Brown Jr., the U.S. Air Force chief of staff, has called the F-35A the “cornerstone of air supe-



“The plane’s shape [and surfaces are] designed to deflect radar energy away from the source like a slanted mirror.”

~ Paul Poitras, director of survivability
Lockheed Martin’s Skunk Works

riority” for the U.S. and its allies and partners. Currently, more than a dozen nations either operate the F-35A and its variants — F-35B (short takeoff/vertical landing) and F-35C (aircraft carrier operations) — or have ordered the single-seat warplane.

Brown said the F-35A’s capabilities outpace those of potential adversaries.

Of those, its primary advantage is stealth.

“The plane’s shape [and surfaces are] designed to deflect radar energy away from the source like a slanted mirror,” Paul Poitras, director of survivability at Lockheed Martin’s Skunk Works, said in a story from the aerospace manufacturer published by The Washington Post newspaper. “Its surface is also blended and smoothed to



The F-35 fighter represents a new model of international cooperation, ensuring the security of the U.S. and its partners well into the 21st century.

TECH SGT. ADAM KEELE/
U.S. AIR NATIONAL GUARD

enable radar energy to smoothly flow across it — similar to water ... across a smooth surface.”

Then there is the F-35A’s “sensor fusion,” which Lockheed Martin calls the most advanced in the world. This suite of electronics lets pilots draw on information from all onboard sensors to create a single integrated battlefield picture that enhances domain awareness. This view critically allows F-35A pilots to see first and shoot first.

“The plane’s computer system synthesizes and prioritizes the information and tells me who the good and bad guys are,” Billie Flynn, a senior experimental test pilot with Lockheed Martin, said in the Lockheed Martin story. “That makes my workload less than was ever the

case in any generation of fighter before.”

The pilots see those bad guys on state-of-the-art helmets that seem more akin to virtual-reality headsets. The helmets cost an estimated \$400,000 each — more than four times as much as those of the previous-generation F-16 — according to a 2015 report in the USA Today newspaper. All the information pilots need to carry out missions — airspeed, heading, altitude, targeting data and warnings — is projected onto the visor, rather than a traditional heads-up display in the cockpit. “I am never overwhelmed by data,” Flynn said.

That allows the F-35A to overwhelm its adversaries, whether it is operating in air defense, close air support, tactical bombing or in one of its many other roles.



An F-35A Lightning II does a “dedication pass” during a performance in 2021 at Eielson Air Force Base, Alaska.

CAPT. KIP SUMNER/U.S. AIR FORCE



The advanced weapons systems of the F-35 outmatch those of potential adversaries.

AFP/GETTY IMAGES

On September 29, 2022, the Air Force Nuclear Weapon Center approved the initial nuclear design certification for the fighter.

“The pilot sees everything that’s of concern to him on the ground and to the horizon, even to the point where he can look ... underneath the airplane and see all the way to the ground,” Flynn said of sensors embedded in the F-35A that through its Distributed Aperture System and infrared cameras give pilots a 360-degree view outside the cockpit on their helmet visors.

This sensor integration helps bring unparalleled situational awareness, information-sharing and connectivity to NATO members and other U.S. allies and partners who fly the F-35A. This capability is critical in joint domain operations.

The F-35 nests its weapons internally in stealth configuration and can also carry them externally if the environment allows. All variants can deliver the Joint Air-to-Surface Standoff Missile or Long Range Anti-Ship Missile, which give the fighters reach against heavily protected targets and deterrence against potential adversaries. The F-35A is also armed with a 25mm GAU-22/A rotary cannon for ground targets during close ground support.

The F-35 uses an Active Electronically Scanned Array radar, which provides long-range intelligence. Lockheed Martin says the F-35 serves as an “information and communications gateway” that can share its operational

picture with U.S. and allied land, sea and air forces. It can also engage in electronic warfare with adversaries through its ability to track enemy forces, jam radar and disrupt attacks.

Recently, the F-35A became even more lethal. On September 29, 2022, the Air Force Nuclear Weapon Center approved the initial nuclear design certification for the fighter, the service said in an email to The Watch. Once it receives operational nuclear certification, it will be able to deliver the B61 thermonuclear bomb, according to the Sandia National Laboratories. A 2020 U.S. DOD publication calls for the initial deployment of such dual-capable F-35As in 2025.

The PRC and Russia are seeking to match the F-35A’s capabilities now that it has become the “global standard for tactical air power,” according to a March 4, 2021, story in the National Interest magazine. The adaptable F-35’s technology, however, is frequently upgraded as new threats appear.

As Air Force Lt. Gen. Scott Pleus, the former director of the F-35 integration office, summed up the warplane in 2016 to the Insider news website:

“This is an absolutely formidable airplane,” he said, “and one our adversaries should fear.”





SPECIAL OPERATIONS FORCES SECURE THE HIGH NORTH

DR. JAMES R. MORTON JR./UNIVERSITY OF ALASKA FAIRBANKS

The rear ramp of the C-130 drops down, allowing a stinging minus 70-degree wind to overwhelm the aircraft cabin as a handful of U.S. Navy SEALs prepare to conduct a military free fall (MFF). The SEAL team's objective is to link up with a U.S. Navy submarine that is breaching the ice cover on the Arctic Ocean. They have learned how to protect themselves from such extreme cold weather and ensure their equipment is operational in such blistering conditions. Within minutes, the SEAL MFF team is in free fall in the Arctic cold and lands to successfully connect with the submarine below. This exercise exemplifies the ongoing commitment the United States and its allies have to secure the western portions of the Arctic. Special operations forces (SOF) are advancing their capacity and effectiveness to operate with precision in the rapidly changing Arctic.

To better understand how SOF are contributing to the overall effort to secure the Arctic, consider the following four dimensions: rein-

force effective part-

nerships, exercise regularly and in varying conditions, enhance SOF development, and foster a persistent presence in the North American Arctic. These perspectives provide a lens by which to understand how SOF are improving their preparedness to secure and fight in the Arctic.

Partnerships among allies, Indigenous people, Arctic communities and businesses are just a few examples where

Partnerships among allies, Indigenous people, Arctic communities, and businesses are just a few examples where shared interests are being leveraged for symbiotic outcomes.

Naval Special Warfare operators perform a high-altitude low-opening jump during operation Arctic Edge 2022 in Alaska.

U.S. DEPARTMENT OF DEFENSE



A sniper team assigned to the 10th Special Forces Group (Airborne) observes a target during Arctic Edge 2022 in Alaska.

STAFF SGT. ANTHONY BRYANT/U.S. SPECIAL OPERATIONS COMMAND NORTH



Green Berets with the 10th Special Forces Group (Airborne) offload their vehicles in Deadhorse, Alaska, as part of a U.S. exercise to counter external threats to the Alaskan oil fields.

STAFF SGT. TRAVIS FONTANE/10TH SPECIAL FORCES GROUP (AIRBORNE)

shared interests are being leveraged for symbiotic outcomes. The Arctic is secured and will remain so when such relationships emphasize a shared purpose of defending homelands while improving self-interest. For example, protecting sovereignty is one shared interest. Indigenous communities have long occupied Arctic lands and have a vested interest in mitigating vulnerabilities, improving economic opportunities and securing subsistence ways of living. Partnership with military forces provides an array of mutually beneficial outcomes. SOF units, for example, can learn from Indigenous people how to thrive in Arctic conditions while Native communities benefit from economic opportunities tied to forces training in the region.

Military exercises foster collaborative relationships, improve operational capabilities and support interoperability among SOF commands. One instance is the annual U.S. Joint exercise Arctic Edge, conducted by U.S. Northern Command (USNORTHCOM) and hosted by Alaskan Command (ALCOM). Special operations forces from the U.S. and allied nations work together during this winter tactical exercise



Naval Special Warfare operators free fall during Operation Noble Defender over Alaska in 2022. LT. MATT CECALA/U.S. NAVY

to improve operational effectiveness, become more familiar with the region and meet training objectives tied to defending the homeland. This and like exercises foster familiarization with the ways U.S. Special Operations Command and the Canadian Special Forces Command operate in extreme cold weather conditions, and further develop procedures to improve interoperability. Exercises in the Arctic serve as a vehicle for SOF and supporting units to effectively secure and defend the North American Arctic.

By focusing on securing the North American homeland, SOF planners and leaders can identify how to better organize, train and equip SOF units to be mission-ready. Such exercises identify lessons to be learned and suggest solutions; allow for practice in operational maneuvers to improve tactics, techniques, and procedures; and explore and refine future equipment needs. These steps improve SOF development and contribute to SOF's capabilities to meet the rigors of an ever-changing Arctic environment.

Lastly, Special Operations Command North is "beyond the watch" by persistently focusing on

how to best secure and defend the North American Arctic by way of SOF operations in service to the USNORTHCOM commander. This requires an ongoing presence in the Arctic to allow for the conditioning of SOF operators, positioning operational support elements, and enhancing familiarization with commands on the subtle and nuanced attributes of the Arctic. With a regular presence in the Arctic, SOF units can refine and adjust to climate changes, address organizational shifts to adapt to conditions, and make force adaptations for improved operational capabilities.

In sum, SOF have a vital role in securing and defending the North American Arctic. In partnership with allies and those who live and thrive in the Arctic, SOF commands can exercise and enhance SOF capabilities and forecast needs to best defend the Arctic. Having a persistent and ongoing presence in the Arctic facilitates the learning and conditioning of SOF operators to optimize their effectiveness. Again, these four dimensions (partnerships, exercises, force development, and presence) illustrate how U.S. and allied SOF commands are at the ready. ▣



OPERATION NOBLE DEFENDER

DEFENDING NORTH AMERICA FROM ARCTIC AVENUES OF APPROACH

THE WATCH STAFF

At the top of the world, the United States and its allies are enforcing a bottom line: They will deter and defend North America from threats.

The North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM) conducted Operation Noble Defender from January 15 through January 31, 2023. Noble Defender is a series of operations that demonstrate the capability and intention to defend North America from attacks along the Arctic avenue of approach. Noble Defender demonstrated that the U.S. and Canada are capable of deploying to austere Arctic forward operating locations (FOL) at high latitudes and developing a globally integrated layered defense (GILD) network across the North American Arctic.

It was the first time the F-35A Lightning II, the world's most advanced fighter aircraft, was deployed to Pituffik Space Base in Greenland in support of the operation, according to a NORAD news release. During Operation Noble Defender, Russia launched its annual polar mission with TU-160 bombers.

Greenland, an island country more than four times the size of Ukraine, is part of the Kingdom of Denmark.

Pituffik Space Base, formerly Thule Air Base, has once again become increasingly important to the U.S. and its allies as Russia continues to expand its Arctic footprint. Pituffik is the northernmost U.S. military installation and is strategically positioned to defend against incoming threats — aircraft or missiles — over the Arctic region that could threaten North America. The base is about 750 miles north of the Arctic Circle and about 950 miles from the North Pole, according to archives of the U.S. Air Force Space Command. In October 2022, the U.S. released the National Strategy for the Arctic Region that makes countering the moves of Russia and the People's Republic of China (PRC) a priority as the sea ice melts and shipping lanes open. The Pentagon seeks to increase its presence with allies through military operations such as Noble Defender. The F-35 and other platforms will play a key role in deterring potential threats, especially in the High North. The U.S. intent is to ensure a secure and stable Arctic where all parties respect the rules-based international order.

Pilots and ground crew prepare F-35A Lightning II aircraft to participate in Operation Noble Defender at Pituffik Space Base in Greenland.

Pituffik Space Base has once again become increasingly important to the U.S. and its allies as Russia continues to expand its Arctic footprint.



NORAD



Cpl. Jeff Gonthier of the Royal Canadian Air Force works on the Fix Aircraft Arresting System at Iqaluit airfield in Nunavut, Canada, during Operation Noble Defender.



CANADIAN NORAD REGION PUBLIC AFFAIRS

“Our ability to operate in the Arctic is critical to our ability to defend our homelands,” Gen. Glen VanHerck, commander of NORAD and USNORTHCOM, said in a news release.

The four Air Force F-35s deployed to Pituffik Space Base for the operation are well suited for the extreme weather mentioned by VanHerck. In testing during the warplane’s development, the stealth fighter was subjected to a range of conditions, including temperatures of minus 40 degrees, according to manufacturer Lockheed Martin. The F-35 is designed to operate in air defense, close air support, tactical bombing and in many other roles. The F-35s participating in Operation Noble Defender are based out of Eielson Air Force Base in Alaska and often operate in the Arctic conditions at Pituffik.

U.S. allies Canada, Denmark and Norway are among the nations buying F-35s as their future mainstay fighters.

This Operation Noble Defender, which NORAD calls a “flexible-response option, dynamic force-employment operation,” also took place in multiple locations in the Arctic, and the coasts of Canada and the U.S. About 225 U.S. and Canadian personnel, as well as aircraft, from all three NORAD regions deployed to Pituffik: Iqaluit Forward Operating Location, Nunavut; 5 Wing Goose Bay, Newfoundland and Labrador; Joint Base Elmendorf-Richardson (JBER), and Eielson Air Force Base, Alaska, according to the NORAD news release. Search and rescue forces

Royal Canadian Air Force CF-18 Hornets were among the air assets taking part in Operation Noble Defender.

honed all aspects of personnel recovery — from testing Arctic recovery equipment to rehearsing the recovery and repatriation of an isolated person, including providing first-aid.

The stealth jets were joined in the operation by Royal Canadian Air Force (RCAF) CF-18 Hornets, according to a January 31 report by the military news website The War Zone. The site reported that CF-18s from the RCAF’s 3 Wing Bagotville, operating out of Iqaluit Airport in Nunavut in the Canadian North, participated in Noble Defender.

Other air assets involved in Noble Defender included refueling tankers and an E-3 Airborne Warning and Control System plane, and CH-149 rescue helicopter, the news release said.

Finally, NORAD fighters conducted an intercept of a U.S. Strategic Command B-52H bomber simulating a threat to demonstrate the command’s ability to conduct real-world GILD operations. RCAF’s 4 Wing from Cold Lake escorted the Stratofortress as it was transiting through northern Canada and the central United States, according to the news release.

“Operation Noble Defender successfully demonstrated our willingness and capability to conduct operations above the Arctic Circle in even the harshest weather conditions,” VanHerck said, “and proved a concept of integration with key Arctic partners to defend northern approaches to North America.” ■



POLAR DAGGER

Rapidly deploying and exercising
Special Operations Forces

THE WATCH STAFF

Navy SEALs aboard black-rubber raiding boats skim across a choppy sea off Alaska under the watchful eye of an F-22 Raptor. Later, they parachute from high above their target zone near an isolated coastal town. The commandos conduct reconnaissance in the fog using drones equipped with the latest in artificial intelligence technology. They operate from an expeditionary camp of Quonset huts supported by heavy-lift CH-47 Chinook helicopters from the Alaska National Guard.

Called Polar Dagger, the operation was part of an ongoing series of events known as Operation Noble Defender, which demonstrate the ability of the binational North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM) to defend Canada and the United States against threats. The mid-September 2022 operation featured West Coast-based Naval Special Warfare units testing capabilities, including military free fall and personnel recovery. It also showed how the U.S. and its allies can count on Special Operations Forces to strengthen a vital layer in the defense of the homeland — rapid deployment in the face of multiple and complex threats.

These commandos, having honed their skills during more than 20 years of combat in the Middle East, are turning their attention now to operating at Arctic latitudes. They got a taste of the unique demands of the region when a devastating storm hit during Operation Noble Defender. The SEALs continued training through the rough seas of



Over Canada's Pacific Coast, a U.S. Air Force F-15C Eagle from the Portland Air National Guard refuels beneath a KC-135 Stratotanker from Fairchild Air Force Base in Washington during Operation Noble Defender.

AIRMAN 1ST CLASS JENNA A. BOND/U.S. AIR FORCE

Typhoon Merbok as it produced waves higher than any seen in the region for seven decades. They even paused to help recovery efforts in Nome and other storm-damaged communities along the Alaskan coastline.

Their operation was centered on St. Lawrence Island, less than 40 miles (64 kilometers) from the Russian coast and home to about 1,400 largely Indigenous Alaskans. The island is at the southern approach to the Bering Strait, the narrow body of water separating Russia from Alaska and the only maritime link between the northern Pacific and the Arctic Ocean. The strategic importance of the Arctic is growing as the melting of sea ice opens potential new shipping routes there and as Russia, despite international condemnation, dramatically expands its military presence along its 24,000 kilometers of Arctic coastline.

Even as Operation Noble Defender was underway, nuclear-powered Russian submarines were firing anti-ship cruise missiles at targets 400 kilometers away during a military exercise in the Chukchi Sea north of the Bering Strait. The exercise was dubbed Umka-22, a name for polar bear in Russian. Russia has indicated it hopes to use the Bering Strait as a routine passageway to connect its Arctic naval fleet, based near the Russian border with Norway, and its Pacific fleet with headquarters on the Kamchatka Peninsula and in Vladivostok. At its narrowest point, the Bering Strait is little more than 80 kilometers wide. Two Russian ballistic submarines



Children outside the town of Savoonga, Alaska, speak with U.S. special operators after a free-fall jump during Operation Noble Defender in mid-September 2022. At left is a member of an Air Force Special Operations Surgical Team and at right, a member of a Naval Special Warfare unit. PETTY OFFICER 1ST CLASS ALEX SMEDEGARD/U.S. NAVY



Naval Special Warfare Command personnel operate a SkyRaider drone on Alaska's isolated St. Lawrence Island during Operation Noble Defender in September 2022.

PETTY OFFICER 1ST CLASS ALEX SMEDEGARD/U.S. NAVY



Beach landings were part of Operation Noble Defender conducted in September 2022 near Alaska's Bering Strait.

PETTY OFFICER 1ST CLASS ALEX SMEDEGARD/U.S. NAVY

For two years, through seven Operation Noble Defender events, the U.S. and its allies have been answering concerns about threats from adversaries.

made the Bering Strait passage following Umka-22. Russia has continued conducting military exercises in the Arctic region even as most of the nation's land forces fight its war in Ukraine.

"Russia's geographic proximity to the Arctic makes it the most acute security concern to North America," Gen. Glen D. VanHerck, commander of NORAD and USNORTHCOM, wrote in an October 3, 2022, article for the service's Journal of Indo-Pacific Affairs. "Russia's irresponsible behavior in Ukraine highlights why all Arctic nations should be concerned with Russian activities in the region."

For two years, through seven Operation Noble Defender events, the U.S. and its allies have been answering concerns about threats from adversaries by developing and demonstrating the air-land-sea capabilities necessary for a holistic, 360-degree defense of North America. The September operation was the latest example, conducted largely at high altitudes over sparsely populated Arctic and Pacific areas including St. Lawrence Island, Inuvik, Yellowknife, King Salmon, Ketchikan and west of Vancouver. All three NORAD regions sent military aircraft to carry out defensive maneuvers along the

northern and western approaches to the continent while USNORTHCOM ground forces demonstrated their abilities to operate in the austere Arctic environment. The exercise involved military personnel and equipment from Alberta, Canada; Washington; Oregon; Colorado; and Joint Base Elmendorf-Richardson and Eielson Air Force Base in Alaska.

Most Operation Noble Defender events have centered on Alaska. In Alaska alone, the U.S. military has 27,000 personnel, active duty as well as guard members and reservists. In a signal of the Arctic region's importance to homeland defense, Alaska hosts a number of cold-weather military exercises by the U.S. and its allies, including the large-scale Joint Pacific Multinational Readiness Center Exercise near Fort Greely in March 2022, involving more than 8,000 Soldiers.

Conducting military operations with allies in the northern latitudes "exhibits credible deterrence," VanHerck wrote. "Campaigning requires close work with regional allies, partners, organizations, and institutions in the pursuit of shared objectives. We are stronger together, and our competitors know they do not benefit from the same relationships." ▣





An Alaska Air National Guard HH-60 Pave Hawk helicopter played an integral role in a search and rescue demonstration.

ALEJANDRO PENA/U.S. AIR FORCE



SEARCH AND RESCUE

SAVING LIVES BY ENHANCING OPERATIONAL CAPABILITIES

THE WATCH STAFF

The mission of Arctic search and rescue at its most basic is saving lives. But when the United States military trains for combat search and rescue and personnel recovery (SAR/PR) with allies, it also strengthens operational capabilities.

“The ability to operate and succeed given the ... harsh Arctic operating environment forever complicates any rescue, which is why it is so very important to exercise and reinforce rescue skill sets and capability,” said U.S. Air Force Col. Joseph Alkire III, deputy commander of the 611th Air Operations Center based at Alaska’s Joint Base Elmendorf-Richardson (JBER).

Alkire’s comments came in a January 2021 news release after the 176th Wing from the Alaska Air National Guard (AKANG) participated in a SAR/PR event during Operation Noble Defender, an annual North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM) event. The wing’s Guardsmen are detailed full time to the Air Force’s 11th Air Force.

To reinforce the “rescue skill sets and capability” that Alkire mentioned, the U.S. and its allies continuously train — from Alaska to Greenland — in Arctic SAR/PR through joint operations such as Operation Noble Defender (NORAD and USNORTHCOM), Dynamic Mercy (NATO) and Exercise Argus (Danish Defence). These collaborations help USNORTHCOM build a globally integrated layered defense (GILD) and are integral in enhancing domain awareness and operational capacity to support the defense of North America.



DOD PHOTO



PETTY OFFICER 2ND CLASS TREVY HUTCHESON/U.S. NAVY

Arctic Edge 2022 personnel train in search and rescue techniques, from locate — U.S. Army Special Operations Forces, top, on snowmobiles — to Naval Special Warfare operators, above, practicing a free-fall infiltration technique — to recovery.

The U.S. military’s joint doctrine defines five steps for personnel recovery: report, locate, support, recover and reintegrate. SAR/PR training rehearses all of those steps, including medical care and even humanitarian-assistance missions.

To borrow a sports aphorism, the U.S. armed services “practice like they play” when it comes to SAR/PR events with allies and partners. U.S. SAR/PR response is available to any nation that requires assistance in the Arctic region.

“A lot of the folks that are up here now [off Greenland for Exercise Argus 2022] would be the same people that could potentially be deployed for a real-life event,” U.S. Coast Guard Cmdr. Daniel Schrader said in a July 20, 2022, story by the website Arctic Today. “Making those connections and working alongside everyone now — it’s a lot easier if we have to come back [for an emergency].”

SAR/PR responders from Denmark, France and Greenland, as well as the U.S. Coast Guard cutter Oak, participated in Argus. Those partnerships build the foundation for saving lives and are part of GILD, which helps counter common threats.

Although U.S. Arctic territory is on the region’s Pacific side, the Atlantic side is also a priority for both strategic and commercial reasons, according to Arctic Today.

“All the other Arctic nations, except for Russia,” Schrader said, “have territory on the Atlantic side, so being able to coordinate with all of them is key to any success we have.”

That coordination also gives the U.S. and its allies an advantage over a strategic competitor such as Russia, especially in the wake of Moscow’s 2022 invasion of Ukraine. The action caused Arctic Council (AC) members Canada, Denmark, Finland, Iceland, Norway, Sweden and the U.S. to suspend their work. Norway is the body’s current chair, but AC activities are paused due to the war in Ukraine.

Even with the pause, the U.S. Coast Guard (USCG) continues emergency cooperation with Russia in the Bering Strait, according to a March 2022 Reuters story. “But other partnerships with Russian counterparts have been put on hold, while collaboration with other Arctic nations has gained force, particularly as Sweden and Finland work to join the North Atlantic Treaty Organization,” Reuters said.

NATO’s SAR/PR exercise, Dynamic Mercy, is also held in the Atlantic region — including the Norwegian Sea — under the auspices of its Allied Maritime Command. Dynamic Mercy is designed to evaluate and improve SAR collaboration and communication with members and partners. Besides the U.S., 2022 participants included Belgium, Denmark, Faroe Islands, France, Germany, Iceland, Netherlands, Norway and the U.K.

THE ‘TYRANNY OF DISTANCE’

In 2011, the eight Arctic States signed the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic. This accord defines the Arctic area in which each has the lead responsibility. In the Alaskan Arctic, that task falls on AKANG and the USCG.

The region stretches 650 miles in width from the Bering Strait to the Canadian border (roughly the width of Texas) and extends 1,350 miles from the Brooks Range in the south to the North Pole (roughly equivalent to the distance from the southern tip of Texas to the northern border of North Dakota), according to a 2017 analysis published by the Pardee Rand Graduate School.

Alkire calls that the “tyranny of distance.”

“In the Arctic, time and distance are the greatest enemies,” the commandant

SAR/PR responders from Denmark, France and Greenland, as well as the U.S. Coast Guard cutter Oak, participated in Argus. Those partnerships not only build the foundation for saving lives, but also are part of a globally integrated layered defense that helps counter common threats.

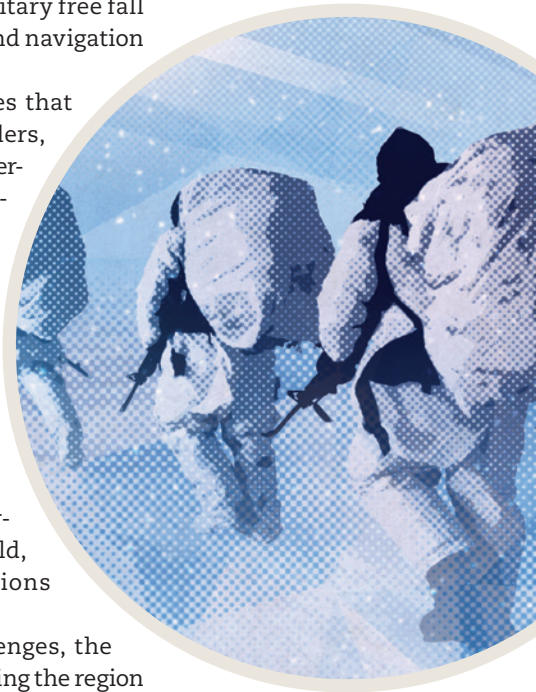
of the Canadian Forces School of Survival and Aeromedical Training, Maj. Brian Noel, said during a 2021 Arctic SAR/PR seminar, according to a news release from Canadian NORAD Region. “Those hours that are spent transiting to a location are the difference between life and death.” To cover these distances in the search for isolated persons, PR forces employ various methods of infiltration — including military free fall and long-range movements and navigation over harsh frozen tundra.

Such distances are hurdles that the region’s primary responders, AKANG and the USCG, must overcome. The closest USCG air station to Utqiagvik, the largest community in the Alaskan Arctic, is in Kodiak, some 820 nautical miles to the south.

For maritime operations, the distance from the closest deep-water port (Dutch Harbor) to Utqiagvik is even greater. Responders must contend with mountainous terrain, rough seas, extreme cold, ice and spotty communications infrastructure.

Compounding such challenges, the Arctic’s melting sea ice is opening the region to increased maritime traffic, which also is forecast to increase SAR/PR operations involving both civilians and the military.

“Rescue is a key element,” Alkire said in the news release, “in sustaining the morale, cohesion and fighting capability of friendly forces.” ■



ARCTIC ALLIES AND PARTNERS





JOINT TASK FORCE ENHANCES SECURITY THROUGH REGIONAL COLLABORATION

BRIG. GEN. PASCAL GODBOUT/COMMANDER JOINT TASK FORCE NORTH

Canada's Arctic is immense, making up more than 40% of the country's landmass and 75% of its coastline. Sparsely populated, with limited infrastructure and challenging weather, this beautiful yet austere region is of great strategic importance. The impact of climate change, increased activity and an evolving geopolitical environment has heightened interest in this area.

Joint Task Force North (JTFN) is the Canadian Armed Forces (CAF) headquarters responsible for the three territories that form the majority of the Canadian Arctic.

While the threat of an overt military incursion is assessed as low, Canadian sovereignty may be challenged through below-threshold activities. Increased interest and activity in the Arctic have resulted in nontraditional threats that include heightened risks of undeclared activities by foreign actors, transnational criminal activities, environmental disasters, and disinformation and cyberattacks. Other threats in the Canadian Arctic include the increasing frequency and severity of natural disasters, as well as aging critical infrastructure and risks of catastrophic failure.

Canada must be prepared to defend against threats

through, to and in the Canadian Arctic. The defense of North America begins with the North American Aerospace Defense Command (NORAD), the binational command of the United States and Canada responsible for aerospace warning, aerospace control and maritime warning. This long-standing agreement enables JTFN to zero in on our area of operations and concurrently support national strategic objectives.

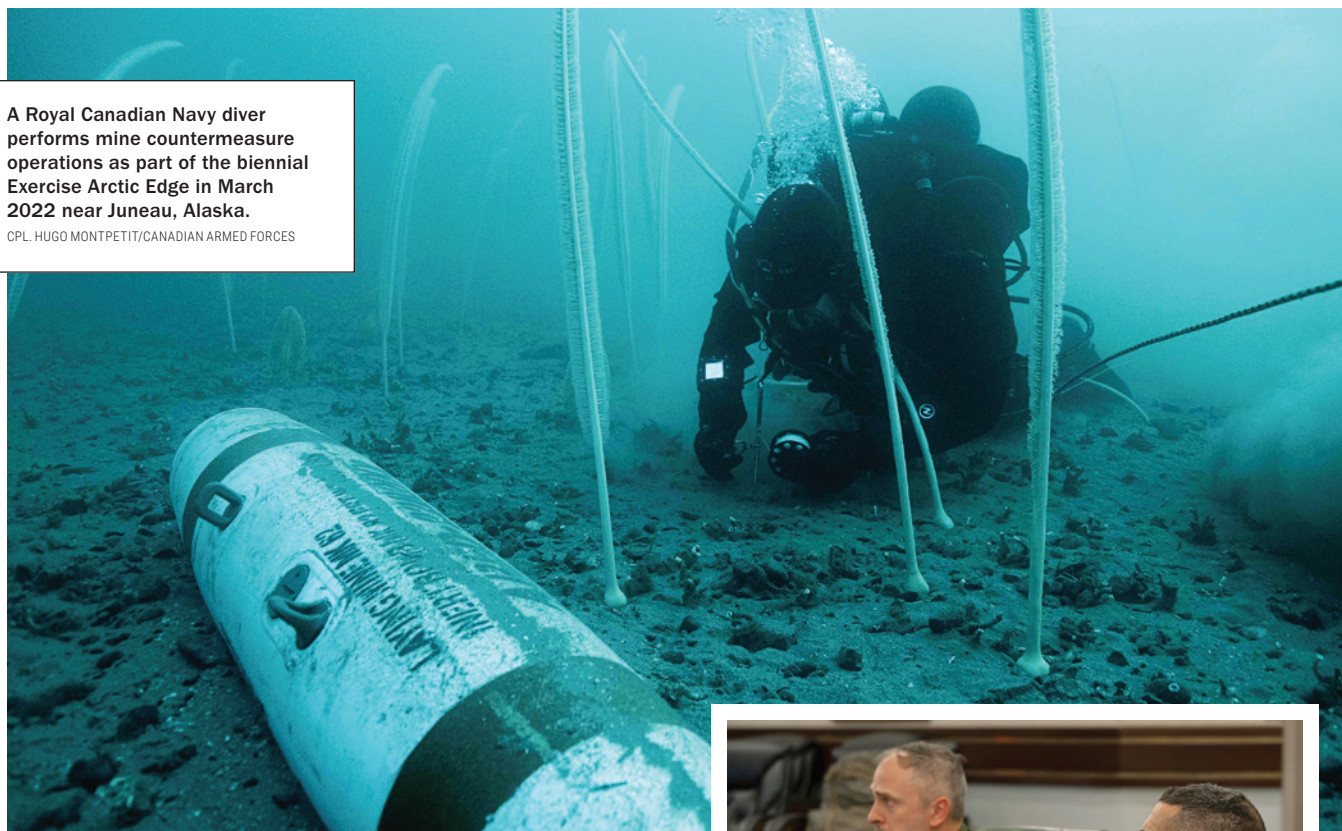
Canada must be prepared to defend against threats through, to and in the Canadian Arctic. The defense of North America begins with the North American Aerospace Defense Command.

U.S. Northern Command (USNORTHCOM), NORAD and the Danish Joint Arctic Command (JACO) are key partners in ensuring Arctic safety and security across our adjoining and interconnected areas of operations. This ongoing and deepening collaboration forms a strong multidomain capacity in the Arctic, enhancing our all-domain situational awareness and ensuring our collective readiness to respond to threats.

We work closely with allies, federal, territorial and Indigenous government partners as well as

A Royal Canadian Navy diver performs mine countermeasure operations as part of the biennial Exercise Arctic Edge in March 2022 near Juneau, Alaska.

CPL. HUGO MONTPETIT/CANADIAN ARMED FORCES



academia and the private sector to enhance awareness and security in the North. In many instances, the CAF may not be the lead agency to respond to security threats to or in the Arctic. However, we may be part of a whole-of-government coordinated response or be requested to assist territorial governments. Mitigating the risks associated with these threats requires close coordination and intimate knowledge of the terrain, both human and physical. Many of these threats span borders, and Canada has robust agreements in place with our neighbors who augment our role in the defense of North America. These include the Canada-U.S. Civil Assistance Plan, the Combined Defense Plan among Canadian Joint Operations Command, NORAD and USNORTHCOM, as well as a memorandum of understanding on Arctic Defense, Security and Operational Cooperation between the CAF chief of the defense staff and the chief of defense of Denmark.

JTFN also contributes by participating in key information-sharing forums such as the Arctic Security Forces Roundtable that includes Canada, Denmark, Finland, France, Germany, Iceland, Netherlands, Norway, Sweden, United Kingdom and U.S. JTFN co-chairs two northern partner forums: the Northern Interdepartmental Intelligence Working Group and the Arctic Security Working Group. The latter includes representation from federal departments, territorial governments, Indigenous governments, allied forces,



Brig. Gen. Pascal Godbout of the Canadian Air Force, left, commander of Joint Task Force North, speaks during a briefing in September 2022 at Joint Base Elmendorf-Richardson, Alaska. Also attending is U.S. Air Force Lt. Gen. David Nahom, right, the head of Alaskan Command.

AIRMAN 1ST CLASS SHELIMAR RIVERA-ROSADO/U.S. AIR FORCE

northern communities and academia. While these working groups focus primarily on Canadian Arctic security concerns, the participation of Alaskan Command, U.S. law enforcement agencies and JACO ensure shared awareness of broader issues given our shared borders.

JTFN plans and executes Operation Nanook, the CAF's signature operation focused on increasing our ability to operate in a challenging environment and respond to safety or security issues specific to the North. This annual series of operations ensures CAF presence, surveillance and control across the North throughout the year. In addition to our domestic partners, previous Nanook operations have included participation from nations including Belgium, Denmark,



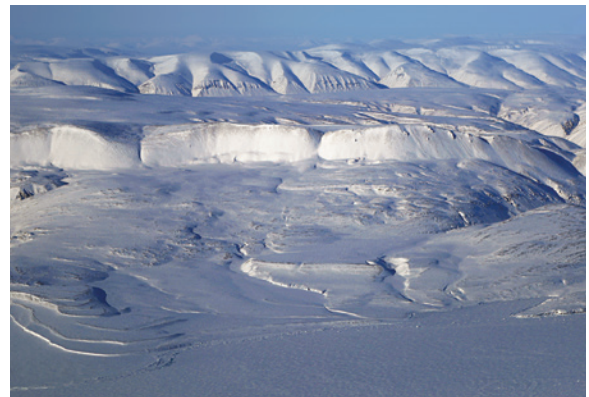
Divers from the Royal Canadian Navy's Fleet Diving Unit-Pacific conduct a mine survey during Arctic Edge 2022 near Juneau, Alaska. The divers got support from the Canadian coastal defense ship Brandon.

PETTY OFFICER 2ND CLASS DAN BARD/U.S. NAVY

Finland, France, Norway, Sweden, the U.K. and the U.S. This enables us to validate current and new Arctic capabilities, ensure interoperability and share best practices to operate in the toughest conditions, thus enhancing our readiness.


Other key operations involving JTFN include Operation Limpid, focused on keeping a routine watch over Canada's air, maritime, land and aerospace domains through space-based sensors, radars, Automated Information System transponders, air surveillance, naval patrols, operational activities, and the Canadian Rangers, a subcomponent of the Canadian Armed Forces Reserve who provide a limited military presence in Canada's sparsely populated northern, coastal and isolated areas. JTFN also has the capacity to coordinate contingency operations across the Territories, such as Operation Lentus, the CAF's response to requests from provincial and territorial governments for support in responding to natural and human-caused disasters in Canada. Finally, upon request, JTFN activates the Canadian Rangers for ground search and rescue when community and territorial efforts require support.

In addition to NORAD and JTFN operations, Canada



A photograph from a NASA research aircraft shows the melting ice fields of Ellesmere Island, Canada. Melting ice creates navigational opportunities and resource exploitation possibilities. Joint Task Force North is tasked with providing security in the ever-changing Canadian Arctic. AFP/GETTY IMAGES

regularly participates in international exercises in the Arctic with our allies. Recent participation includes U.S.-led activities such as ICEX, Exercise Arctic Edge, Joint Pacific Multinational Readiness Center and Exercise Arctic Eagle-Patriot.

The coordination and close collaboration among JTFN, NORAD, USNORTHCOM and JACO continues to ensure regional security and continental defense capabilities, reinforces the NATO alliance and ensures Canada does its part to secure and defend NATO's western flank. 



THE KINGDOM OF DENMARK AND THE DEFENSE OF NORTH AMERICA

LT. COL. MIKKEL PERLT/DANISH DEFENCE



When most people think of North America, they probably think of the United States, Canada and perhaps Mexico, but few would instinctively name the Kingdom of Denmark as one of the continent's countries.

Still, Denmark is increasingly mentioned when it comes to the security of North America and, when looking at the map from the top of the world, the reason becomes clear.

The commander of the North American Aerospace Defense Command (NORAD) and U.S. Northern Command (USNORTHCOM), Gen. Glen D. VanHerck, has identified geography as one of three parts of a globally integrated layered defense (GILD). GILD contains forward regions, approaches and homeland layers. Greenland, as a forward region and an approach to North America, is an obvious candidate for integration into this concept.

The Kingdom of Denmark is a constitutional monarchy made up of Denmark, the Faroe Islands and Greenland. The latter two have extensive self-government under Danish law, with their own legislative assemblies and representation in the Danish Parliament. Security and defense, however, fall within the jurisdiction of the central authorities in Copenhagen and Danish Defence is responsible for defense of the kingdom, including Greenland and the Faroes.

As a founding member of NATO, Denmark is firmly embedded in a European security context as the Danish straits guard the exit from the Baltic Sea. Denmark has

The Danish military maintains a continual all-domain presence in and around Greenland, which is the front line for defending Canada and the United States from potential threats.

DANISH JOINT ARCTIC COMMAND



View from Klakkur mountain over the city of Klaksvik and the Atlantic Ocean in the Faroe Islands

Greenland has a population of 56,000 people and limited infrastructure, mostly concentrated around small towns along the southwestern coastline.





been active in the Baltic region following the admission of the three Baltic countries into the alliance and will also, together with Norway, partner closely with new NATO member Finland and Sweden, which awaits accession into the alliance.

The Faroe Islands straddle the so-called GIUK Gap — stretches of ocean between the landmasses of Greenland, Iceland and the United Kingdom — and thus are vital in controlling this important gateway from the Arctic to the Atlantic Ocean. From the early 1960s to 2007, a NATO-funded radar on the islands provided aerial domain awareness in the Faroese sector. The Danish government decided in 2022 to fund and reinstall a long-range air defense radar on the islands to close the GIUK Gap.

Greenland, though, is geographically part of North America, bringing us back to the initial assertion. When looking at potential threats to the United States and Canada, Greenland is difficult to ignore. The United States also has a permanent presence in Greenland, where the 12th Space Warning Squadron provides space

awareness and advance missile warning to NORAD from Pituffik Space Base.

Greenland has a population of 56,000 people and limited infrastructure, mostly concentrated around small towns along the southwestern coastline. At the same time, the vast stretches of uninhabited and sometimes hostile territory present a challenge for surveillance and defense. Danish Defence maintains a continual presence in and



The Sirius Dog Sled Patrol, an elite Danish special forces unit, conducts long-range reconnaissance and enforces Danish sovereignty in the Arctic wilderness of northern and eastern Greenland.

ROYAL DANISH NAVY

This Arctic patrol vessel is an example of the maritime capabilities Denmark employs in the region. ROYAL DANISH NAVY

around Greenland, with the Danish Navy patrolling the waters, the Danish Air Force operating maritime surveillance aircraft and the Danish Special Operations Command deploying the Sirius Dog Sled Patrol in the uninhabited northeastern national park of Greenland, where the two-man teams patrol with dog sleds for up to three months at a time in the Arctic winter.

These units in Greenland and the Faroe Islands are controlled and coordinated by the Danish Joint Arctic Command (JACO) in Nuuk, the capital of Greenland.

The continual presence of Navy, Air Force and Army units in and around Greenland, coupled with satellite surveillance, provide JACO with domain awareness and enable rapid response to contingencies, both military and civilian. Because Denmark does not operate a separate coast guard, JACO is also responsible for search and rescue in the region and represents the kingdom in the Arctic Coast Guard Forum.

Denmark has recently committed \$1.5 billion Danish crowns (U.S. \$200 million) in additional funding toward increased surveillance in the Arctic, with purchases of radars, long-endurance drones, additional satellite surveillance and improved datalink systems among the planned investments. Additionally, increased outreach in the form of permanent liaison officers with major allies in the Arctic is being pursued.

During the Cold War, Greenland, situated between the superpowers, played an important strategic role. As a forward ally in an obvious threat direction, the Kingdom of Denmark continually strives to be a credible partner in developing sustained domain awareness for the defense of North America. ■



GREENLAND'S ALIGNMENT WITH WEST A WIN FOR DENMARK, GREENLAND AND THE U.S.

SARA OLSVIG/UNIVERSITY OF GREENLAND



The longstanding defense relationship between Greenland and the United States has strengthened in recent years. As their self-government evolves, Greenlandic politicians have been increasingly vocal about their position on the country's role in North American defense and security, and the messages are clear: Firstly, Greenland sees itself as an integral and important ally to the U.S. and NATO, and secondly, Greenland wishes to engage more directly with the U.S. on matters relating to trade and business development and defense and security.

Recently, the Russian invasion of Ukraine has resulted in clear positioning by Naalakkersuisut, the government of Greenland. An unambiguous alignment with the Western alliance came early and promptly when Greenland joined the sanctions against the Kremlin, while pulling out its government-owned fisheries businesses in Russia. As Greenland's fish exports make up 93% of its total exports, according to Statistics Greenland, with rising numbers sent to Russia, the prompt reaction by Naalakkersuisut should be noted as an important and unmistakable message from Greenlandic politicians toward their allies.

Greenland is a nation in transition, from its colonial past with limited self-determination to the contemporary wide degree of self-governance. The current constitutional arrangement, with Denmark continuing to hold sovereignty over Greenland, is constantly tested. Throughout its political history, Greenland has pushed for greater autonomy, which has resulted in the Home Rule arrangement of 1979, establishing Greenland's parliament and government, as well as the Self-Government Agreement in effect today. Currently, Greenland has decision-making power across virtually all areas of legislation, including trade and business-related foreign policy, while security and defense, as well as sovereignty and citizenship matters continue to be under Danish authority.

However, the mere act of implementing self-governance within various legislative areas is creating more gray zones of decision-making, as decisions taken in Greenland's parliament often have wider foreign policy, security and defense

The Joint Arctic Command's office in Nuuk housed the U.S. consulate from 2020 to 2022. The consulate is now based in a building near the command.

FOREIGN SERVICE JOURNAL



Greenland Prime Minister Múte Bourup Egede speaks at the opening of the European Union's Arctic Forum in Nuuk, Greenland, in February 2023. AFP/GETTY IMAGES

implications. Examples include changes to Greenland's infrastructure, such as airports and fiber-optic cables for internet connectivity as well as mining and industrial projects, which attract foreign investments and foreign workers.

Throughout Greenland's political history, it has elbowed its way onto the international stage, acting as a nation-state that wishes to speak on its own behalf. This has given its politicians the tools to act successfully on their own behalf, while being recognized by international partners such as the European Union, various East Asia business entities, and by other Nordic and Arctic partners. Thus, Greenland has actively tested its foreign policy autonomy toward Denmark, as well as the U.S.

In recent years, Greenland's push for a closer, more direct relationship with the U.S. has succeeded; the U.S. has engaged with Greenland by establishing a consulate and signing agreements bilaterally with the self-governing nation, while settling a longer dispute on the



Pituffik Space Base, Greenland, the Department of Defense's northernmost installation, is located 750 miles north of the Arctic Circle. Operated by the 821st Space Base Group under Space Base Delta 1, Pituffik SB hosts the 12th Space Warning Squadron. U.S. SPACEFORCE



base maintenance contract at Pituffik Space Base. In the process, Greenland’s request to speak more directly with the U.S., while still involving Denmark when necessary, has been met. This can be interpreted as a paradigm shift in Greenland’s foreign policy — one that requires a large level of trust between Greenland and Denmark and between Denmark and the U.S.

Being fully aligned with broader foreign and security policy is what makes this shift possible. Therefore, Greenland’s clear alignment with the Western alliance with respect to Russia’s aggression in Ukraine is a precondition to make Greenland’s increased independence possible. This does not come easily, or without costs, however. Testing the foreign policy action space has taught Nuuk and the diplomatic corps in the nation’s capital valuable lessons. All in all, Greenland maintains a strong hand toward Denmark. Its role within the Danish kingdom helps define Denmark as an Arctic state, and increasingly, the U.S. seems to recognize Greenland as playing a more important role in U.S. and North American security. The latter was affirmed in the October 2020 agreements among Greenland, Denmark and the U.S. that included recognition of “Greenland’s key role in Greenlandic, U.S.,

U.S. Secretary of State Antony Blinken (third from left) visits Greenland in May 2021 with Greenland Prime Minister Múte Bourup Egede (right of Blinken) and Danish Minister for Foreign Affairs Jeppe Kofed (behind and to the right of Blinken) after a trip to the inland ice on an Air Greenland search and rescue helicopter. LEIFF JOSEFSEN/SERMITSIQAQ.AG

and transatlantic security.” In conclusion, Greenland’s growing bilateral relationship with the U.S. has also resulted in greater alignment with the Western alliance in matters of overall global security. That Greenland, in its continued insistence for self-determination, proactively seeks stronger ties with the U.S. can be seen as a positive step. This development should not be seen as diminishing Danish control of Greenland, whose power over Greenland was initiated by colonization three centuries ago. Rather, it should be seen as a natural development following Greenland’s widening self-determination realized through Greenland’s own agency during the past five decades. The growing U.S.-Greenland partnership is an inevitable development of a democratic and peaceful transition of decision-making powers to the small statelike Greenland, building further capacity and knowledge of its role in the northeastern flank of U.S. and North American security. ■



ARCTIC ALLIES AND PARTNERS

NORWAY LEADING

NORDIC DEFENSE COOPERATION

SVEIN EFJESTAD/NORWEGIAN INSTITUTE OF FOREIGN AFFAIRS



AFP/GETTY IMAGES



Norwegian F-16s fly in formation during the Arctic Challenge Exercise (ACE) in 2017. ACE is organized by the air forces of Finland, Norway and Sweden and rotates among the Nordic countries' northernmost air bases.

FINNISH AIR FORCE

Norway chaired the Nordic Defense Cooperation (NORDEF) organization in 2022, a year dominated by the Russian attack on Ukraine. Russia's war spurred Finland and Sweden to apply for NATO membership, while all Nordic countries continue to provide substantial military and civilian assistance to Ukraine.

It is difficult to assess how the war will affect Arctic security. If the current regime in Moscow continues, the Arctic likely will be dominated by the adverse relationship between Russia and the West. If there is a new regime in Moscow, that also could lead to fundamental changes.

The warming in the Arctic continues to accelerate. More natural resources are discovered, including oil, gas, metals, coal and ingredients for fertilizer production. Climate change makes it easier to produce and develop these resources. Western sanctions have a substantial effect on the Russian economy in the Arctic, so Russia is becoming more dependent on trade with China and other non-Western countries. This cannot compensate for access to Western markets in the long term.

Telecommunications domes are stationed in the Svalbard archipelago of the Norwegian Arctic.

Many Russian ground forces have been employed in Ukraine and have suffered huge losses. Military tension in the High North has not increased, but the

level of contact and cooperation is at an all-time low. Norway continues to maintain a hotline between the Northern Fleet and the Norwegian Joint Headquarters, and it cooperates with the Russian border guard and coast guard. Norway thinks it is vital to maintain control of the fisheries in the area and to provide search and rescue capabilities.

Russia continues to modernize its strategic nuclear submarine forces in the region. It also is building a modern submarine force to challenge allied ambitions in the High North. Currently, it seems unrealistic that a situation dominated by

The cooperation in NORDEF, a defense organization that consists of Denmark, Finland, Iceland, Norway and Sweden, has already provided substantial military results.

low tension, stability and cooperation in the Arctic can be reestablished in the short term.

The cooperation in NORDEF, a defense organization that consists of Denmark, Finland, Iceland, Norway and Sweden, has already provided substantial military results. The Nordic forces have displayed a high level of interoperability, and military exercises and training operations have proved that



British Soldiers engage in a mock firefight with parts of the German Mountain Infantry Battalion during the NATO military exercise Trident Juncture in 2018 in Elval, Norway.

AFP/GETTY IMAGES



Norwegian forces take part in Cold Response. The ongoing exercise brings together NATO allies and partners, testing the militaries' ability to work together in extreme conditions across domains in Norway.

JARAN GJELAND STENSTAD/SOLDATNYTT

both air and ground forces can operate effectively together and with NATO countries. Finland, Sweden and Norway have agreed to coordinate operation planning in the North Calotte, a cross-border area that includes parts of all three countries. Finland and Sweden do not have a coastline along the Arctic Ocean, which makes it more complicated to coordinate naval operations. Together, the Nordic states will have about 250 modern combat aircraft to provide deterrence and defense in the Arctic. Many of the Russian bases in the North are located close to the Finnish and Norwegian borders, and the Russian supply lines to these bases run close to the Finnish-Russian border.

The Nordic countries have established a goal for 2025, which includes a commitment to cooperate closely in peace, crisis and conflict. With Finland now a NATO member and Sweden's membership pending, this could be a self-fulfilling prophecy. It



remains to be decided how the Nordic cooperation will be formulated after all the states are members, but there is a will to establish even closer cooperation. It is already clear there will be a joint-exercise cycle and that allied support and reinforcement planning will be closely coordinated. The Nordic states also will facilitate total defense planning. NATO has an integrated air defense, so this will affect surveillance, command and control, and air operations in the High North.

The five Nordic countries will continue to consult closely on all aspects of military security. It will be important to create continuous allied cooperation across the Arctic from the Nordic countries to include Alaska, Faroe Islands, Greenland, Iceland and Northern Canada. This requires that the Nordic countries establish a new mechanism for military cooperation with Canada, the United States and other allies who operate in the northern waters. ■



FINLAND AND THE ARCTIC

NATO MEMBERSHIP IS A STEP TOWARD NORDIC SECURITY

JANNE KUUSELA/FINLAND DEFENSE POLICY DIRECTOR

The bids of Finland and Sweden to join NATO have brought the security of the Baltic Sea region into public awareness. However, Russia's war against Ukraine also has changed the dynamics in the Arctic.

Arctic "hard" security is a two-sided coin. One represents the region's enduring strategic importance, while the other is about the geopolitics of melting polar ice. The sides are clearly connected, but they have evolved on slightly different tracks. Russia, with its vital security and economic interests in the Arctic, embodies both sides.

Despite rising tensions in Europe, there has not been an increase in military confrontation in the Arctic. However, because it is a dynamic security environment, an Arctic spillover cannot be ruled out. For Russia, the strategic importance of its Northern Fleet, Arctic sea lanes and natural resources have not diminished.

The Nordic countries have been unwavering in holding the Arctic as strategically important. In November 2022, Finland, Norway and Sweden agreed to further enhance operations planning in the High North against the background of eventual Finnish and Swedish accession to NATO. Finland officially joined NATO on April 4, 2023; Sweden's membership has yet to be ratified. The Nordic countries are preparing a



Finland's defense system relies on general conscription and well-trained reserves. FINNISH DEFENSE FORCES

new vision for defense cooperation. The geopolitical realities differ: Denmark's focus is on Greenland, while Norway and Iceland have vast Arctic sea areas to look after. Finland and Sweden are not littoral Arctic states, but both cover large land territories in the region. These perspectives are complementary and improve Nordic ability to act together to strengthen security in the Euro-Atlantic area.

Joining NATO is a historic shift in Finnish and Swedish security and defense policy. However, adding

NATO and its member nations must take the Arctic into account in collective operational requirements, defense planning and capability development, as well as in command and control.



Finnish Soldiers patrol Northern Finland. Arctic security permeates the country's defense and foreign policies.

FINNISH DEFENSE FORCES

The Finnish Navy is designed for operating in the Baltic Sea region, where navigating through the long winter requires robust ice-breaking capability.

FINNISH DEFENSE FORCES





Finland and eventually, fellow Arctic nation Sweden, also will change NATO. To ensure the security of the Baltic Sea, the alliance must be prepared to defend the northern areas. This will require a renewed focus on land and air domains, as well as a new level of Arctic defense expertise. The Nordic countries stand ready to deliver. Together, they operate a fleet of 200 modern fighter jets, which train and exercise on a regular basis across their national borders in the Arctic skies. The Finnish, Norwegian and Swedish land forces also have stepped up their joint activities.

NATO membership has not been Finland's only response to the changing security environment. We have continued to invest heavily in our defense and have significantly increased exercises with our closest partners — also in the northern parts of Finland. The United States and other key partners were unwavering in their support of Finland's NATO application, which is highly appreciated by the Finnish people.

More than anywhere else in the world, climate change continues to be an existential threat for the sensitive Arctic ecosystem. And what happens in the Arctic has consequences for the rest of the world as melting Arctic ice accelerates climate change on a global scale. As Finnish President Sauli Niinistö has often said: "If we lose the Arctic, we lose the globe."

For several years, many saw melting Arctic ice primarily as a lucrative economic opportunity.

An F-18 takes off at the Lapland's Air Command on the Arctic Circle. The Finnish Air Force has relied on F-18s for almost three decades. They are now being replaced by a fleet of F-35s. FINNISH DEFENSE FORCES

Consequently, the main security concern has been potential friction caused by geopolitical competition rather than climate change. However, it seems now that the perceived new business opportunities in the Arctic were somewhat overestimated.

Russia still seems to consider climate change primarily as an opportunity. However, its dependence on Western technologies and investments continues to limit economic ambitions in the High North, especially after further sanctions have been placed on Moscow after its war against Ukraine. There has been much speculation on potential Russian-Chinese cooperation in the Arctic. There is no question: Russia's increasing weakness is likely to open up possibilities for the People's Republic of China, whose Arctic know-how is still limited.

NATO and its member nations must take the Arctic into account in collective operational requirements, defense planning and capability development, as well as in command and control. Further discussion on Arctic security and defense policy is needed both within NATO and in other relevant forums. Like-minded Arctic countries should lead this endeavor. ■



THE JOINT EXPEDITIONARY FRAMEWORK DETECTING ADVERSARIES

UNITED KINGDOM MINISTRY OF DEFENCE

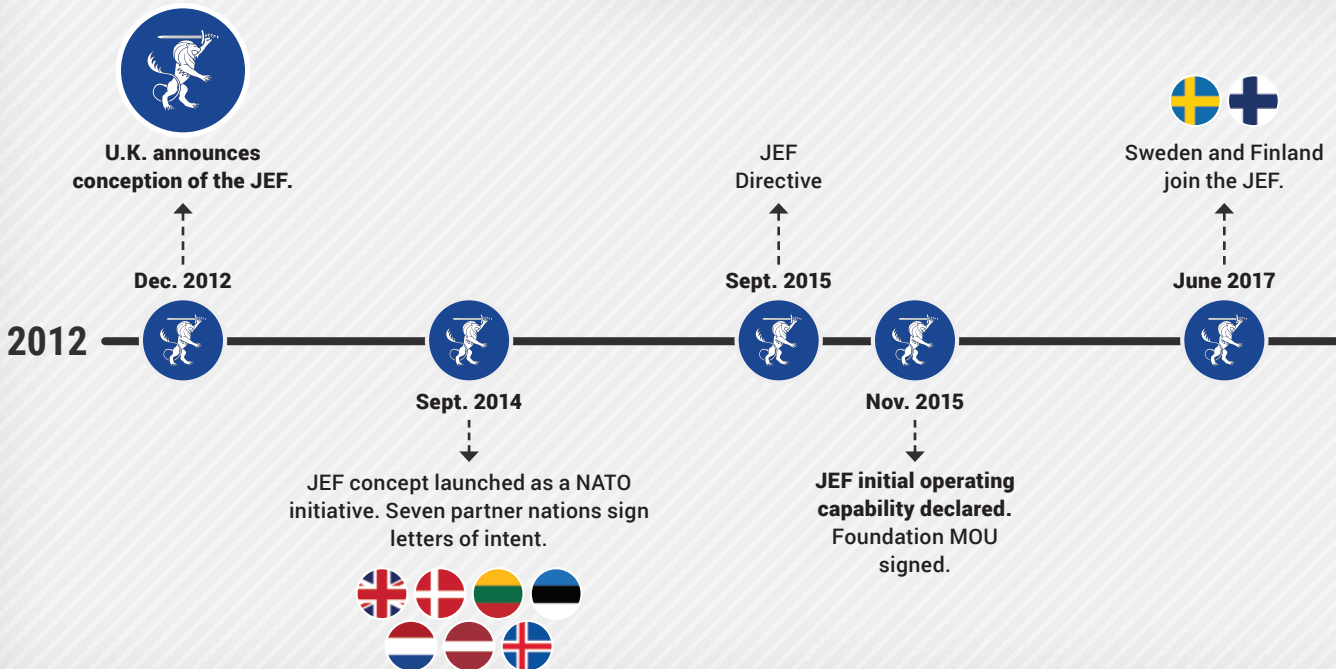
In search of established, proven practices for integrated deterrence, this article highlights the role of the Joint Expeditionary Force (JEF). This powerful military framework focuses on the High North, North Atlantic and Baltic Sea regions, and has several characteristics making it an effective option to senior decision-makers and a key element in participant nation defense.

In June 2022, U.K. Chief of Defence Staff Adm. Sir Tony Radakin described the JEF as a reflection of how the U.K. and like-minded participant nations with shared operational experience and interests had pooled their high-readiness forces for global contingencies. He emphasized it was designed so political decision-makers could respond quickly to crises in core areas of interest but that it was not a standing force. He underlined particularly the JEF's utility, which stems from its agility, responsiveness and coherence of narrative; the geographic focus areas of the organization also enabling it to utilize participant nation expertise, and the three defined operating models providing clear direction for force development.

The JEF is a coalition of like-minded nations (Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, the Netherlands, Norway, Sweden and the U.K. as the framework nation) comprising high-readiness forces configured to respond rapidly to crises in the North Atlantic, High North, Baltic Sea region or potentially farther afield. It can integrate into larger international operations, such as those led by NATO or the United Nations and can conduct full-spectrum operations. It enhances the deterrence messaging of NATO and provides agile, credible, capable forces in support of participant nation interests.

The U.K. has several options for JEF Command and Control (C2) under a Permanent Joint Headquarters Group. However, the Standing Joint Force Headquarters Group (SJFHQ) is the U.K.-nominated permanent JEF operational HQ. It is joint, international and interagency by design.

JOINT EXPEDITIONARY FORCE TIMELINE



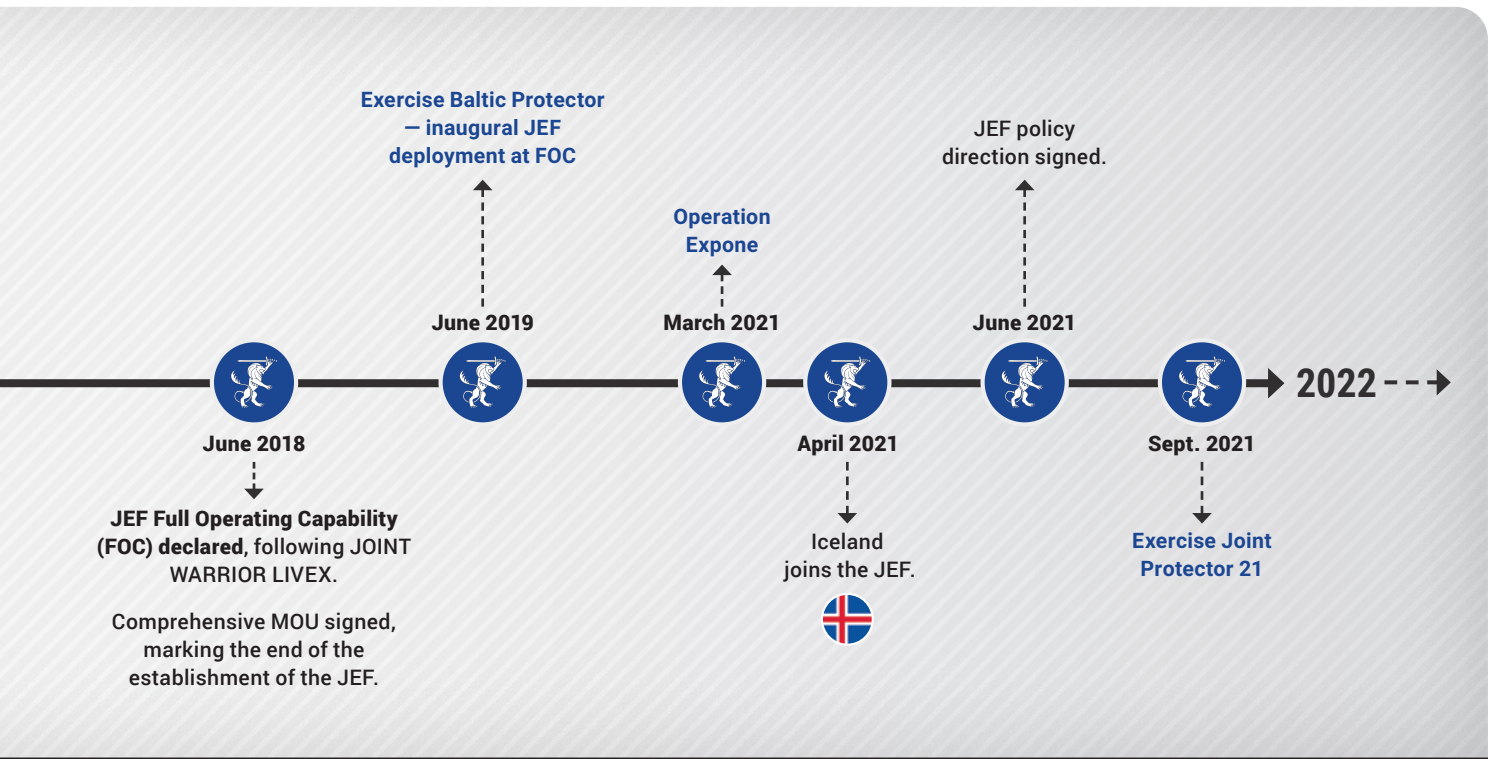
At full operating capability since 2018, JEF interoperability continued to mature through an advanced force-development agenda and regular training events. Such activity maximizes participant nation exercise programs and bespoke JEF activity.

The U.K., as the framework nation, nominates the operational headquarters and commander for an operation. Participant nations may choose to opt in to an activity or operation, assigning elements as necessary. Importantly, they are not allocating forces to the U.K., but to a specific task. National contingents remain under full national command. Participant nations delegate appropriate C2 to the operational commander, and national strategic direction to participant nation forces is delivered through senior national representatives. Participant nations have embedded staff in SJFHQ, and JEF deployments will be joint across the services and environments, combined with participant nations and integrated across government departments.

There are three JEF operating models. They provide clarity in determining the role of the JEF and also steer force development: deterrence, crisis management and defensive action. Each is nonlinear in nature, so the JEF could theoretically participate across each area concurrently. The operating model construct is driven by the narrative that the JEF integrates activity to unify effects. Operations and exercises should no longer be seen as singular events, but rather are treated as a series of programmed activities that build the JEF narrative



In June 2022, U.K. Chief of Defence Staff Adm. Sir Tony Radakin described the JEF as a reflection of how the U.K. and like-minded participant nations with shared operational experience and interests had pooled their high-readiness forces for global contingencies. He emphasized it was designed so political decision-makers could respond quickly to crises in core areas of interest but that it was not a standing force.





An Estonian anti-tank section commander participates in a NATO exercise. The United Kingdom and Estonia are members of the Joint Expeditionary Force along with Denmark, Finland, Iceland, Latvia, Lithuania, the Netherlands, Norway and Sweden.



U.K. Royal Marines and Royal Netherlands Marines participate in exercise Baltic Protector in 2019.

UNITED KINGDOM MINISTRY OF DEFENCE

HIGHLIGHTS OF RECENT JEF ACTIVITY INCLUDE:

1. Exercise Baltic Protector 2019, the first JEF maritime deployment in the Baltic Sea region, involved 3,000 military personnel and 17 vessels from nine nations.
2. Exercise Joint Protector 2021, a command-post exercise in Sweden testing response in a subthreshold context. This was followed by Joint Protector 2022 in Denmark, which explored the JEF operating from crisis into conflict.
3. Increased participant nation JEF activity in March 2022 across the three core regions in response to the invasion of Ukraine, and the Finnish and potential Swedish accession to NATO.
4. JEF defence ministers met four times in 2022 against

the backdrop of the Ukraine crisis, then to explore how they could support and mitigate the threats posed by the Russian invasion. They reaffirmed JEF proactivity, shared purpose and values.

5. The political personality evolved in 2022 with the JEF leaders meeting three times in London and Latvia, where they were joined by Ukrainian President Volodymyr Zelenskyy remotely. The leaders affirmed support to Ukraine and commitment to work in complementarity to NATO and the European Union.

In sum, the JEF provides a flexible, integrated joint force responding quickly, anytime, and in any environment. For the future, the U.K. sees the JEF as a catalyst for integrating military capabilities more effectively with other levers of government as the U.K. evolves its whole-of-government approach. ▣



UNITED FRONT

**Allies need
concerted
messaging
in era of strategic
competition**

DR. P. WHITNEY LACKENBAUER AND DR. ADAM LAJEUNESSE

Since Russia's unprovoked February 2022 invasion of Ukraine, the world has witnessed the further spillover of international tensions into circumpolar affairs. Maintaining peace and stability in the Arctic, within a world of heightened uncertainty, has forced NATO partners to reevaluate threats, strategic responsibilities and opportunities for deeper collaboration as Arctic allies.

In August 2022, after touring the Canadian Arctic, NATO Secretary General Jens Stoltenberg published an article in the Canadian newspaper *The Globe and Mail* pointing to the myriad new threats facing the region. While the Arctic has traditionally been an area of low tensions, Stoltenberg wrote, a rapidly warming climate and rising global competition have created a new dynamic whereby authoritarian regimes "are stepping up their activities and interest." Both Russia and the People's Republic of China (PRC) are now more present and, in the case of Russia, "clearly willing to use military intimidation or aggression to achieve their aims."

Threats that may pass through the Arctic include cruise missiles, hypersonic glide vehicles, ballistic missiles, bombers and submarines.

These are generally geared toward combat and deterrence, and thus best considered on a global scale rather than the regional security one. Still, they have an Arctic nexus for North Americans because both Canada and the United States have Arctic capabilities vital to detecting and defeating these global threats. These threats are best seen as "through" threats: part of comprehensive deterrence that is integrated across domains as well as theaters of competition and potential conflict. Meeting these threats means integrating all instruments of national power, including across allies and partners.

Discussions about NATO's role in the region typically link the Arctic to the maritime approaches of allied territory in the North Atlantic, global trade and supply chains, sea lines of communication, transatlantic reinforcement, and reaffirming that NATO Article 5 applies. All of this is appropriate, even though it may play into Russian threat narratives about alleged NATO aggression (and clearly more so in the Baltic than

Members of 1st Battalion, The Royal Canadian Regiment, receive a briefing while conducting Arctic field training in Crystal City, north of Resolute Bay, in Nunavut, Canada.

Threats that may pass through the Arctic include cruise missiles, hypersonic glide vehicles, ballistic missiles, bombers and submarines.



JEROME J.X. LESSARD/CANADIAN ARMED FORCES

in Baffin Bay). As the Arctic becomes a more explicit NATO priority, however, the alliance must also adopt more precise messaging that distinguishes military threats that may pass through regions of the Arctic from those risks or threats that may arise from Arctic disputes. In short, we need more nuance in our messaging about the Arctic — something that requires a sophisticated level of situational awareness, with the Arctic states best placed to retain primacy of decision-making over Arctic security and defense matters, even within a NATO context.

Gen. Glen D. VanHerk, commander of the North American Aerospace Defense Command and U.S. Northern Command, emphasizes that “our competitors’ actions are global. We must create global plans that have regional components” and strategies “that integrate homeland defense and strategic deterrence into every aspect of our defense.” The Arctic fits this logic because it is a strategic region best situated in a global context. Accordingly, the fundamental pillars of a layered, all-domain North American defense ecosystem apply to Arctic defense and security more generally and suggest natural alignments in national priorities across like-minded Arctic states that can be synchronized to strategic effect as allies.

Most Arctic states assess a relatively low risk of armed conflict in the Arctic compared with other regions, with forms of interstate competition already occurring below the threshold of armed conflict. This is not surprising, given that such aggression would escalate into a general war that Russia could not hope to win. As such, Moscow has resorted to hybrid warfare, cyberattacks, cyber espionage and disinformation campaigns. These tactics are now central pillars of Russian and Chinese approaches to strategic competition and warfare. Russia’s Arctic strategy is unlikely to be an invasion of a NATO Arctic ally. Rather, it will likely seek to exploit divisions among and within our Arctic states through concerted information campaigns designed to polarize populations and widen existing fault lines with intent to destabilize our democratic societies.

These messaging campaigns also seek to legitimize Russia’s position as the major Arctic power and frame its Arctic military investments as defensive in nature, naturally in opposition to potential NATO aggression. We also see Russia weaponizing its energy and food exports as tools of geopolitical coercion, while at the same time insisting that it will turn to “non-Arctic states” (particularly the PRC) to forge ahead with its regional development plans.

For its part, the PRC, the aspiring self-proclaimed “polar great power,” has targeted scientific, shipping and economic sectors in the Arctic. Like-minded Arctic states are increasingly aware of the risks associated with a Chinese presence, with some having taken steps to block Chinese investment on national security grounds. Yet, risks remain as the PRC normalizes its footprints in the region and strengthens its economic partnership with Russia in the North.

While the threat of a conventional military attack in the Arctic remains low, the spillover of international dynamics into the region is already visible. This heightens the importance of meetings between Arctic allies, such as the Arctic Security Forces Roundtable (ASFR) in Alaska in May 2022 and of the Arctic Chiefs of Heads of Defence (ACHOD) in Newfoundland in August 2022. Operationalizing this collaboration as like-minded Arctic states is vital to showing the world that NATO is working together from the same playbook. It also signals that the alliance is ready to deter — and defeat — any potential adversaries.

In a changing world, deliberate strategic messaging is more important than ever. While European and North American countries often communicate with Russia differently, it is imperative that allies carefully calibrate messaging to ensure that we are projecting unity, strength and confidence with clarity, precision and consistency. This includes reinforcing how integrated deterrence — particularly as exercised by like-minded states in an alliance or partnership context — is a source of regional stability. By improving the sharing of information among allies and synchronizing our Arctic-related homeland defense efforts, we will be better placed to manage the regional security space in a rational, proportionate and resource-effective manner while reinforcing the principle of collective defense.

The Kremlin’s foremost goal is to fragment our alliances and our partnerships as like-minded Arctic states. We must ensure that these relationships remain strong and are continuously reinforced. This means being more active and less passive in tending to alliances. The ASFR and ACHODs meetings, as well as the NATO secretary general’s visit to the Canadian Arctic, send strong strategic messages in their own right. They also reinforce the value of structured dialogue so that we can stay on top of developments, maintain pressure and discern ways to challenge and, where necessary, confront competitors in an uncertain Arctic and increasingly complex world. ■



The northern lights, also called the aurora borealis, illuminate the sky over the snow-covered mountains of Lofoten, Norway. These dancing waves of light have mesmerized generations of stargazers. The show, while beautiful, is a violent event. Energized particles from the sun slam into the upper atmosphere at speeds of up to 72 million kilometers per hour. The Earth's magnetic field protects us from the onslaught. Norway, where this light show was captured, is a key defense partner with the United States in safeguarding the High North. ISTOCK

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