



## Royal United Services Institute of Nova Scotia Dispatches 30 December 2022

*The Royal United Services Institute of Nova Scotia provides a forum for the study, promotion and debate of defence, security and safety issues.*

*Dispatches* is a weekly collection of news of interest, including posts to social media by the Institute. Links to articles are checked at the time they are put into *Dispatches* but may be unavailable at a later date or in some countries other than Canada.

Everyone is encouraged to submit links and other content to be included in *Dispatches*. Submissions and feedback are welcome anytime. Email to [RUSINSDispatches@gmail.com](mailto:RUSINSDispatches@gmail.com). Comments to articles can be from members or non-members of RUSI(NS). Any comment in *Dispatches* is the sole opinion of the author and does not necessarily represent the views of the Royal United Services Institute of Nova Scotia, the Department of National Defence or other government department, the Canadian Armed Forces, or the Royal Canadian Mounted Police or other agency.

If you wish to receive *Dispatches* at a different address (i.e., not your work address), please inform RUSI(NS). Past editions of *Dispatches* may be requested by contacting RUSI(NS).

### *Happy Holidays*

Hope you are enjoying the season. Here's hoping for a better 2023.

We look forward to seeing you in 2023, online and later in the spring for in-person events.

*HMCS Border Cities dressed for the holidays, December 1944.*



### Events:

To list an event in *Dispatches*, email RUSI(NS) by noon Thursday. RUSI(NS) events are by invitation. If you are interested in attending and have not been invited, email [RUSINovaScotia@gmail.com](mailto:RUSINovaScotia@gmail.com). RUSI(NS) events may be cancelled at short notice. Email RUSI(NS) if there is a question of an event occurring.

**New: 9 January**, Monday - Center for Strategic and International Studies Report Launch "The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan." 2:00-3:15 pm ET. Hybrid livestream/in-person. To register: <https://www.csis.org/events/report-launch%E2%80%95first-battle-next-war-wargaming-chinese-invasion-taiwan>

**18 January**, Wednesday – RUSI(NS) Distinguished Speaker Scott Hatcher, Canadian Coast Guard, speaking on “Canadian Coast Guard Autonomous Systems and Intelligence, Surveillance and Reconnaissance Program.” 1300-1500 Atlantic. Via Zoom. To register, email [RUSINovaScotia@gmail.com](mailto:RUSINovaScotia@gmail.com) - indicate whether you are RUSI(NS) or, if not, of what department/agency, unit, association or company you are a member. Below, advance reading from Scott Hatcher:

A more up-to-date article than in last week's *Dispatches*, discussing sea trials of the platform: Kongsberg Geospatial and Canadian Coast Guard wrap up sea trials of VTOL UA

<https://www.navaltoday.com/2022/01/28/kongsberg-geospatial-and-canadian-coast-guard-wrap-up-sea-trials-of-vtol-uas/>

Canadian Coast Guard Conducts Offshore Sea Trials of VTOL UAS with Shield AI and Kongsberg Geospatial - UASweekly.com

<https://uasweekly.com/2022/02/03/canadian-coast-guard-conducts-offshore-sea-trials-of-vtol-uas-with-shield-ai-and-kongsberg-geospatial/>

A news item from sea trials in 2016 off Newfoundland:

Schiebel's CAMCOPTER® S-100 successfully demonstrates its capability during Canadian Icebreaking Operations

<https://www.defenseforces.com/2016/04/19/schiebels-camcopter-s-100-successfully-demonstrates-its-capability-during-canadian-icebreaking-operations/>

And some footage from the CCG Environmental Response team contributed to CTV Vancouver's coverage of the Bligh Island wreck cleanup last year. This response is mentioned in the presentation and it was a great example of RPAS use in an operational context within the CCG:

Drone video of the Bligh Island oil spill

<https://ottawa.ctvnews.ca/video?clipId=2101625>

**20 January**, Friday - Royal Alberta United Services Institute Lunch & Learn "Canada's Naval Reserve: Past, Present, and Future." 1200 MT. Via Zoom (in addition to live). To register:

<https://us02web.zoom.us/meeting/register/tZUocOqpqz4tHt3qKTnDOFkLW8UDra0gxU8W>

**Save the date: 15 February**, Wednesday - RUSI(NS) Distinguished Speaker Brigadier-General G Michael Adamson, Command 3 Canadian Space Division, speaking about the division. 1300-1500. Via Zoom. More to follow;

Advance reading:

The Growing Complexity of Space: Implications for Security and Stability

[https://lop.parl.ca/sites/PublicWebsite/default/en\\_CA/ResearchPublications/202210E](https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/202210E)

**New: 21 February**, Tuesday - Georgetown University Wargaming Society presentation "The Politics of Play: Wargaming with the US Military." Noon-1400 EST. Online. To register:

<https://www.eventbrite.com/e/the-politics-of-play-wargaming-with-the-us-military-tickets-415461174557>

**New: 23 January**, Friday - Royal Alberta United Services Institute Lunch & Learn with Cmdre Pat Montgomery "Canada's Naval Reserve - Past, Present and Future." 1130-1330. Live and via Zoom. To register: <https://www.rausi.ca/info-events/lunch-and-learn/562-canada-a-naval-reserve-past-present-and-future>

**New: 7 March**, Tuesday - Georgetown University Wargaming Society presentation "Malign: Gaming Influence in the Information Age." 1800-200 EST. Online. To register:

<https://www.eventbrite.com/e/malign-gaming-influence-in-the-information-age-tickets-484966807777>

### **Publications:**

Publications without links are available on request to [RUSINovaScotia@gmail.com](mailto:RUSINovaScotia@gmail.com).

RUSI(NS) Comments "Royal Canadian Navy Public Affairs Engagement Opportunities ...for Ships" by Steffan Watkins, 26 October 2022, [https://rusi-ns.ca/pa\\_engagement/](https://rusi-ns.ca/pa_engagement/)

Canadian Marine Industries and Shipbuilding Association *On Watch*, 21 December 2022  
<https://www.cmisa.ca/cpages/on-watch-current>

**New:** Edmonton United Services Institute President's *Enews*, January 2023

Military Institute of Windsor *Communiqué*, Volume XLI, Number 1, January 2023

Naval Association of Canada recording "From the Quarterdeck: the current state of the Navy" by VAdm Topshee, Commander Royal Canadian Navy, 5 December 2022  
<https://youtu.be/IWUBjaA2Cyk>

Royal Alberta United Services Institute *Dispatches*, December 2022  
<https://www.rausi.ca/component/acym/archive/175-rausi-december-2022-dispatches>

Royal Canadian Naval Association Admiral Hose Branch *Scuttlebutt*, December 2022

Royal Canadian Navy *Your Navy Today* - Volume 5 Issue 7  
<https://www.canada.ca/en/navy/corporate/navy-news/your-navy-today/volume-5-issue-7.html>

Royal United Services Institute of Vancouver Island *Newsletter*, Volume 54, 4th Quarter 2022.

**New:** Royal United Services Institute of Victoria (Australia) *Defence Update*, Volume 16, Issue 2, 26 December 2022

Royal United Services Institute of Victoria (Australia) *Quarterly Newsletter*, Volume 21, Issue 4, December 2022

St. Francis Xavier University Mulroney Institute of Government *Canadian Naval Review* Volume 18, Number 2 (2022)

United Services Institute of Nanaimo and North Island *Newsletter*, Vol 30, No 12, December 2022.


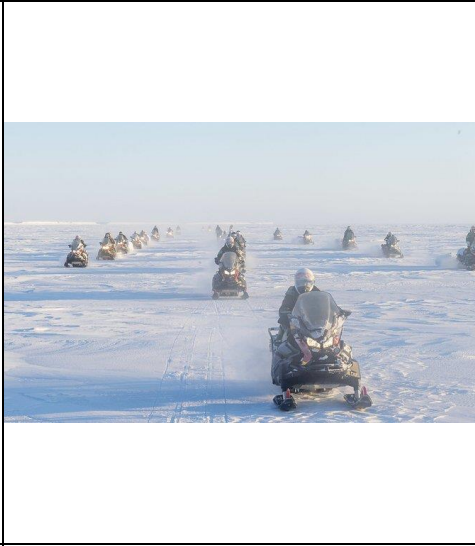


Veterans Affairs Canada *Salute!* December 2022  
<https://www.veterans.gc.ca/eng/about-vac/news-media/salute/2022-12>




**Tweeted by @RUSI\_NS:**

RUSI(NS) tweets may also be viewed by clicking on the Twitter icon at <https://RUSI-NS.ca>. To have something tweeted or retweeted, email [RUSINovaScotia@gmail.com](mailto:RUSINovaScotia@gmail.com).

National Defence @NationalDefence 22 Dec tweeted: Canada government organization  
Today, we awarded two contracts to support the CH-149 Cormorant fleet in search and rescue operations. These will increase our fleet size from 13 to 16 aircraft and provide enhanced simulation training to RCAF pilots.  
<https://canada.ca/en/department-national-defence/news/2022/12/minister-anand-announces-cormorant-mid-life-upgrade-and-simulator-solution-contracts-award-to-ensure-continued-search-and-rescue-capabilities.html>



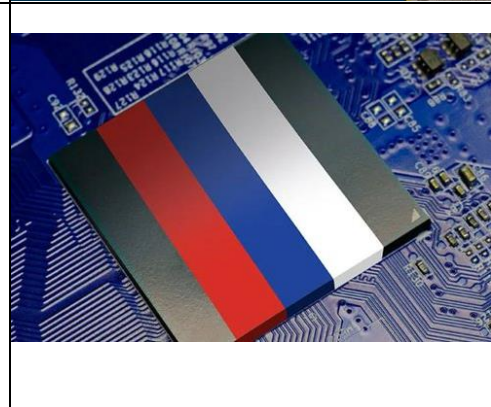
<p>RUSI(NS) retweeted: "Minister Anand announces Cormorant Mid-Life Upgrade and Simulator Solution Contracts Award to ensure continued Search and Rescue capabilities"  <a href="https://www.canada.ca/en/department-national-defence/news/2022/12/minister-anand-announces-cormorant-mid-life-upgrade-and-simulator-solution-contracts-award-to-ensure-continued-search-and-rescue-capabilities.html">https://www.canada.ca/en/department-national-defence/news/2022/12/minister-anand-announces-cormorant-mid-life-upgrade-and-simulator-solution-contracts-award-to-ensure-continued-search-and-rescue-capabilities.html</a>  "The CH-149 Cormorant: The Royal Canadian Air Force's Search and Rescue Helicopter"  <a href="https://www.canada.ca/en/department-national-defence/news/2022/12/the-ch-149-cormorant-the-royal-canadian-air-forces-search-and-rescue-helicopter.html">https://www.canada.ca/en/department-national-defence/news/2022/12/the-ch-149-cormorant-the-royal-canadian-air-forces-search-and-rescue-helicopter.html</a></p>	
<p>DRDC-RDDC @DRDC_RDDC 23 Dec tweeted: DRDC's Centre for Operational Research and Analysis (CORA) worked with the @CanadianArmy to evaluate potential climate change adaptation strategies, including in the Arctic. Read more: <a href="https://canada.ca/en/department-national-defence/campaigns/defence-research-through-the-decades/arctic-science-month.html#toc3">https://canada.ca/en/department-national-defence/campaigns/defence-research-through-the-decades/arctic-science-month.html#toc3</a> #ArcticScience #DefenceScience  RUSI(NS) retweeted: December is Arctic Science Month  <a href="https://www.canada.ca/en/department-national-defence/campaigns/defence-research-through-the-decades/arctic-science-month.html#toc3">https://www.canada.ca/en/department-national-defence/campaigns/defence-research-through-the-decades/arctic-science-month.html#toc3</a> Stories of @NationalDefence Defence Research and Development Canada 🇨🇦 @DRDC_RDDC scientists &amp; researchers working in support of @CanadianForces operational capabilities in #Arctic</p>	
<p>Transport Canada @Transport_gc Dec 22 tweeted: Guess the riddle: What has a red nose, flies really fast, and fulfills an important mission in our skies? Hint: it's not Rudolph the Reindeer, nor is it his brother Dasher. It's the Dash 8 aircraft, which takes off from the #NASPCrew hangar! ✈️  RUSI(NS) retweeted: RUSI(NS) Presentation "Surveillance of Sea Surface Activities in Atlantic Canada" <a href="https://rusi-ns.ca/national_aerial_surveillance_program/">https://rusi-ns.ca/national_aerial_surveillance_program/</a> @Transport_gc National Aerial Surveillance Program #NASP has several distinctively (&amp; seasonally) coloured aircraft. Don't mistake for sleighs!</p>	
<p>DRDC-RDDC @DRDC_RDDC 19 Dec tweeted: The Canadian Arctic Shipping Risk Assessment System (CASRAS) is used to improve route planning and make travel safer in the Arctic. DRDC collaborated on this project with @NRC_CNRC, @CoastGuardCAN, @Transport_gc and industry partners.  RUSI(NS) retweeted: Developing infrastructure including transportation/communications routes is good way to ensure CAN 🇨🇦 sovereignty &amp; defence/security/safety in #Arctic/North. Needs to be integrated local peoples/</p>	

<p>government (military, other) /industry effort. CAN Arctic strategy?</p>	
<p>International Naval &amp; Maritime News @NavalNews 26 Dec tweeted: Every Ship a Warship - The Security Role of China's Maritime Sector and its Consequences for Europe  <a href="https://jonathanholslag.be/wp-content/uploads/2022/09/Every-Ship-A-Warship-final.pdf">https://jonathanholslag.be/wp-content/uploads/2022/09/Every-Ship-A-Warship-final.pdf</a>  RUSI(NS) retweeted: Considering how integrated Chinese navy, government marine fleets, civil fleets &amp; shore holdings (incl abroad) are, CAN 🇨🇦 &amp; allies need study, plan, game &amp; exercise against them in 'whole-of' effort by navies, government departments &amp; civil sector</p>	
<p>Wavell Room - British Military Thinking @wavellroom 26 dec tweeted: "The larger fortunes of naval warfare in the Indo-Pacific may very well be decided not by large capital fleet units or advanced, long-ranged weaponry across vast expanses of ocean, but by the..."  <a href="https://wavellroom.com/2022/11/21/mine-warfare-in-asia-pacific-naval-theatre-a-clear-and-present-danger/">https://wavellroom.com/2022/11/21/mine-warfare-in-asia-pacific-naval-theatre-a-clear-and-present-danger/</a>  (Mine Warfare in Asia-Pacific Naval Theatre: A Clear and Present Danger)  RUSI(NS) retweeted: Threat of naval mines is global&amp;significant, not just during conflict. Might @RoyalCanNavy Kingston-class mine countermeasures vessels, previously deployed to Europe&amp;Africa, also deploy to Indo-Pacific to operate with allies in deterrence/response activities? Logistics challenge</p>	
<p>RUSI @RUSI_org 27 Dec tweeted: A RUSI investigation from @OSIA_RUSI and RUSI Military Sciences in partnership with @Reuters, reveals Russia's dependence on western components for the operation of critical weapons systems used in its invasion of Ukraine. Read the full report below!  (Silicon Lifeline: Western Electronics at the Heart of Russia's War Machine)  <a href="https://rusi.org/explore-our-research/publications/special-resources/silicon-lifeline-western-electronics-heart-russias-war-machine">https://rusi.org/explore-our-research/publications/special-resources/silicon-lifeline-western-electronics-heart-russias-war-machine</a>  RUSI(NS) retweeted: Analyses of systems supply chains by economic 'warriors' can be as useful in identifying opportunities to pressure adversaries (&amp; identify weaknesses in own economy) as analyses by information operators of links &amp; nodes. Plan, game, exercise economic activities as part of defence</p>	

Border Services ATL @CanBorderATL 13 Dec tweeted and RUSI(NS) retweeted: The #CBSA works to detect and seize harmful drugs from across the Atlantic region. Some seizures this year included 31 kg of opium and 1.5 tons of cocaine. Read more about how we are #ProtectingCanadians: <https://www.canada.ca/en/border-services-agency/news/2022/12/cbsa-atlantic-region--operational-and-enforcement-highlights-from-2022.html> #YearInReview



RUSI @RUSI\_org Aug 19 tweeted: RUSI's Silicon Lifeline investigation highlights the challenges of industry outreach and building private-public partnerships to ensure export controls bite. Read the latest #RUSICommentary from @dbsalisbury. Link here: <https://rusi.org/explore-our-research/publications/commentary/can-private-sector-help-cut-russias-silicon-lifeline>  
Daniel Salisbury @dbsalisbury 19 Aug and RUSI(NS) retweeted: Wrote a short commentary piece about Russia's illicit procurement and the war in Ukraine - How can the private sector help to shut down Putin's war machine? My first piece for @RUSI\_org. @KCL\_CSSS



**Posted on Facebook Royal United Services Institute of Nova Scotia:**

RUSI(NS) postings may also be viewed by clicking on the Facebook icon at <https://RUSI-NS.ca>. To have something posted or commented, email RUSI(NS) by noon Thursday.

**Analysis: Canada's price tag for F-35 jets raising questions**

<https://ottawacitizen.com/news/national/defence-watch/analysis-canadas-price-tag-for-f-35-jets-raising-questions>



\$7B looks like a lot for seven aircraft until you consider the funds also cover "...spare parts, some weapons and various startup costs associated with the new aircraft, such as the construction of new hangars."

A query to the Department of National Defence about how the \$7B broke out, that is, how much was for aircraft and how much was for spare parts, etc., elicited a response from Public Services and Procurement Canada: "As outlined in Canada's Defence Policy 'Strong, Secure, Engaged', Canada will be acquiring 88 advanced fighter aircraft. We look forward to providing an update on this important project shortly."

The public reporting and discussion about trying to make sense of the cost breakdown increases: Canada To Pay A Whopping \$450 Million Per F-35 Stealth Fighter When Actual Cost Of US Aircraft Is Less Than 100M?

<https://eurasianimes.com/canada-to-pay-a-whopping-450-million-per-f-35-stealth-fighter-when-actual-cost-of-us-aircraft-is-less-than-100m/>

## Belgium's New MCM Mothership Breaks Cover

<https://www.navalnews.com/naval-news/2022/12/belgiums-new-mcm-mothership-breaks-cover/>

"The hull of the first mine countermeasure (MCM) mothership for the Belgian Navy, 'Oostende' (M940), is now fully assembled..."



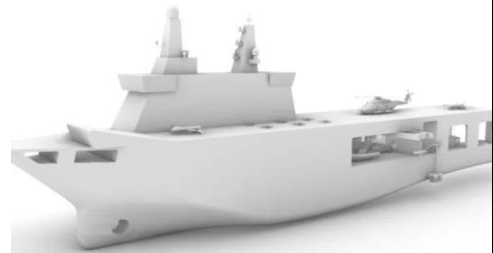
Yes, 'mothership' is but a colloquial and media term (though 'mother' is an official codeword, too, used in boarding operations and the like) but use should not be too casual in these days of reflecting on customary/institutional language. Maybe something like 'drone carrier' or 'drone control ship.' Might naval staffs be considering something descriptive for NATO's APP-20 Standard Ship Designator System?

*Added as comment:*

## Portuguese Navy Unveils New Drone Mothership Project

<https://www.navalnews.com/naval-news/2022/06/portuguese-navy-unveils-new-drone-mothership-project/>

"The Portuguese Navy (Marinha Portuguesa) unveiled details on a new drone mothership project dubbed 'plataforma naval multifuncional' (multifunctional naval platform)."



Some drone carriers actually look like carriers. ("Multifunctional naval platform" is not much descriptive...)

*Added as comment:*

## China's Drone Carrier Mothership Looks To Be In Service

<https://www.thedrive.com/the-war-zone/chinas-drone-carrier-mothership-looks-to-be-in-service>

"China's People's Liberation Army Navy, or PLAN, appears to have put an unusual catamaran drone mini-carrier into service as part of an experimental naval training force."

Maybe here 'mother' is only being used in the header (often headline editors are different people than content editors). Anyways, the Chinese vessel looks like something you'd expect for a drone carrier.



## Navy Issues RFP for Leasing of One Vessel for Deep Submergence Rescue Vessel Mothership and Submarine Support Ship

<https://www.indiandefensenews.in/2022/12/navy-issues-rfp-for-leasing-of-one.html>

"MoD, intends to lease one vessel for Deep Submergence Rescue Vessel (DSRV) Mother-Ship (MOSHIP) and submarine support ship..."

Okay, 'MOSHIP' may be taking this all too far...



### Canadian Military Tests DroneShield in Counter Drone Exercises

<https://dronelife.com/2022/12/22/canadian-military-tests-dronesield-in-counter-drone-exercises/>

"DroneShield has announced its successful completion of the Counter Uncrewed Aerial Systems Sandbox 2022 exercise in Alberta, Canada. The exercise was led by the Canadian Joint Operations Command (CJOC), in coordination with the Canadian Army, Royal Canadian Navy (RCN), Royal Canadian Air Force (RCAF), and Canadian Special Operations Forces Command (CANSOFCOM)."



A lesson from the ongoing Russia-Ukraine War, if not from before, that counter uncrewed aerial systems (CUAS) measures and equipment needs great and rapid development, testing and fielding. Drones of all sorts, air, surface, subsurface and ground, are routine now to operations.

### Airlift versus Sealift

J.J. @kadonkey 23 Dec 22 tweeted  
<https://twitter.com/kadonkey/status/1606481996472909824>  
: Max Payload C-17 170,900 lbs, M1A2 Abrams weighs 145,000 lbs +\-



This is part of the challenge for countries like Canada, getting forces overseas to where they are needed. And later, replenishing ammunition, fuel and other material needed to keep those forces going. Strategic airlift is great for moving people and high-value, low-volume, low-weight items. But when it comes to mass and volume, it's sealift. Which is why Canada needs assured access to ships, logistics arrangements to include them into military supply chains, and a strong navy to protect them.

### Rescue at Sea and Asylum on Humanitarian Vessels

<https://www.ejiltalk.org/rescue-at-sea-and-asylum-on-humanitarian-vessels/>

Some good reading here for naval operators and legal staff.

The doctrine of extra-territorial or diplomatic asylum ("Question of Diplomatic Asylum"

[https://www.unhcr.org/protection/historical/3ae68bf10/question-diplomatic-asylum-report-secretary-general.html#\\_ftn1](https://www.unhcr.org/protection/historical/3ae68bf10/question-diplomatic-asylum-report-secretary-general.html#_ftn1)

- interesting reading with respect to warships) "...has been also applied to warships that, under international law of the sea, enjoy complete inviolability (Art. 32 UNCLOS [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)).



UNCLOS Article 32 - Immunities of warships and other government ships operated for non-commercial purposes

"With such exceptions as are contained in subsection A and in articles 30 and 31, nothing in this Convention affects the immunities of warships and other government ships operated for non-commercial purposes."



Interesting, "other government ships operated for non-commercial purposes." Does this apply to Motor Vessel ASTERIX, leased by the Royal Canadian Navy as a replenishment oiler?

Recall RUSI(NS) Paper: "Warships: Sovereign Immunity versus Sovereign Territory"  
<https://rusi-ns.ca/warships-sovereign-immunity-versus-sovereign-territory/>

### Could Maritime Protector RPAS operate from Royal Navy aircraft carriers?

<https://www.navylookout.com/could-maritime-protector-rpas-operate-from-royal-navy-aircraft-carriers/>



"In May 2022 General Atomics announced they are developing a Short-Takeoff and Landing (STOL) option for their MQ-9B Remotely Piloted Aircraft System (RPAS)."

Operating Royal Canadian Air Force RPAS, yet to be acquired, from allied aircraft carriers is probably not a requirement being considered by Canadian project staff, but the idea is intriguing. On the other hand, might the STOL option be useful for operations from austere airfields.

See RUSI(NS) presentation "Uncrewed Aerial Vehicles – Canadian and US Programs" (<https://rusi-ns.ca/rpas/>).

### Ship Types

The Indians are planning to build 13,000 ton destroyers with 144 vertical launch tubes

([https://twitter.com/indopac\\_info/status/1606608139289518085](https://twitter.com/indopac_info/status/1606608139289518085)) and the Japanese to build 20,000 ton destroyers with 64 tubes ("Japanese MoD Releases Further Details about Its



Future BMD Destroyers" <https://www.navalnews.com/naval-news/2022/12/japanese-mod-releases-further-details-of-asev-bmd-destroyers/>). Destroyers have certainly grown in size since they originated as torpedo boat destroyers and displaced a few hundred tons. Of course, what distinguishes destroyers as such is their role of defending high value units such as battleships and aircraft carriers against, at first, surface and later air and submarine threats. Modern destroyers, no matter their size, still much have that distinction as compared to frigates, corvettes and other escorts with less demanding roles (e.g., civil ship convoy). There are other and at times not evident differences such as magazine size ('magazine depth,' amount of munitions/missiles carried), growth potential and sea-keeping.

When the type designation of the Canadian Surface Combatant project ships is announced, no matter whether the type is frigate or destroyer or other, focus should be on how Canada intends to operate the ships and how suited they are for that, and not their size.

### Chaos is a Ladder: Opportunity in the High North

<https://cdrsalamander.substack.com/p/chaos-is-a-ladder-opportunity-in>

The author calls for greater NATO engagement in the Arctic and High North to counter Russian buildup there. Canada is there, has been there (okay, could have been more there) and



looks to increase its presence, particularly in its waters. The Canadian position as guardian of the NATO north west flank needs more public understanding and general appreciation by other states and militaries. A Canadian Arctic strategy addressing defence, security and safety; infrastructure development and activities, could go a long way to helping.

- - -

*The article was linked to:*

Forgotten Waters - Minding the GIUK Gap

<https://www.cnas.org/publications/reports/forgotten-waters>

### **Initiating a new national support approach – mobilising national logistics in the support of military operations**

<https://logisticsinwar.com/2022/11/29/initiating-a-new-national-support-approach-mobilising-national-logistics-in-the-support-of-military-operations/>

"...creat(ing) the conditions by which that nation can respond to its own crises or changes in the strategic environment...is a whole-of-Government activity, an approach which includes industry partners and alliance partner involvement, as part of a holistic national security endeavour to confirm the strategic logistics basis upon which it will draw the strength to protect <insert your nation's name here> national interests."



A worthy read and points worth considering as Canada looks to publish a Defence Policy Update soon.

### **Other Sources:**

#### **#Arctic**

Russia Entering Ukraine Opens the Door for China in the Arctic

<https://www.usni.org/magazines/proceedings/2022/december/russia-entering-ukraine-opens-door-china-arctic>

#### **#strategy**

Fear, Honor, and Interest in the Arctic: The Case for Realism and Transactional Balancing

<https://mwi.usma.edu/fear-honor-and-interest-in-the-arctic-the-case-for-realism-and-transactional-balancing/>

Canada extends continental shelf claim, increasing overlaps with Russia in Arctic

<https://thebarentsobserver.com/en/arctic/2022/12/canada-extends-continental-shelf-claim-increasing-overlaps-russia-arctic>

#### **#China**

Report to Congress on The People's Liberation Army

<https://news.usni.org/2022/12/22/report-to-congress-on-the-peoples-liberation-army>

#### **#defence policy**

Canada's Defence Policy Statements: Change and Continuity

<https://hillnotes.ca/2022/09/22/canadas-defence-policy-statements-change-and-continuity/>

## **#defence procurement**

The U.S. Needs More Military Arms Makers, Says Pentagon No. 2

<https://www.defenseone.com/business/2022/02/us-needs-more-military-arms-makers-says-pentagon-no-2/362041/>

15 Feb 22. *This was prophetic.*

*Canada needs munitions security.*

## **#drones**

Airfield Design for Large Unmanned Aircraft Systems—A Guide

<https://nap.nationalacademies.org/catalog/26839/airfield-design-for-large-unmanned-aircraft-systems-a-guide>

*Whether this report is applicable to Canada and the RCAF as it procures RPAS is unknown, but is included for its possibilities.*

High-tech high seas: how drone boats are changing the way navies do their work

<https://www.cbc.ca/news/canada/nova-scotia/drone-boats-navy-usvs-research-automation-nato-1.6661191>

*A general summary.*

## **#Indo-Pacific**

Taiwan: Invasion is not likely, but deterrence remains vital

<https://www.geostrategy.org.uk/research/taiwan-invasion-is-not-likely-but-deterrence-remains-vital/>

## **#economic warfare**

Combating Chinese Dual-Use Infrastructure: Bringing In the Private Sector

<https://www.csis.org/analysis/combating-chinese-dual-use-infrastructure-bringing-private-sector>

## **#reading**

A Short Course in the Sino-American War

<https://www.breakingbeijing.com/p/a-short-course-in-the-sino-american>

Lots of good suggestions.

## **#wargaming**

How Would a Chinese Invasion of Taiwan Play Out?

<https://foreignpolicy.com/2022/12/23/taiwan-invasion-china-us-military-war-game/>

## **#information operations**

Mirror, Mirror on the Wall, Who Is The Worst Of Them All?

<https://euvsdisinfo.eu/mirror-mirror-on-the-wall-who-is-the-worst-of-them-all/>

Kremlin ABC: Adapt Focus. Blame Others. Cancel Events.

<https://euvsdisinfo.eu/kremlin-abc-adapt-focus-blame-others-cancel-events/>

## **#intelligence**

The Growing Importance of Open-Source Intelligence to National Security

<https://hillnotes.ca/2022/02/17/the-growing-importance-of-open-source-intelligence-to-national-security/>

## **#ISR #intelligence, surveillance and reconnaissance #Arctic #NATO**

Northern Europe, the Arctic and the Baltic: The ISR Gap

<https://www.iiss.org/blogs/research-paper/2022/12/northern-europe-the-arctic-and-the-baltic-the-isr-gap>

## **#NATO**

Don't Let Russia Dominate the Strategic Concept

<https://warontherocks.com/2022/06/dont-let-russia-dominate-the-strategic-concept/>

## **#naval warfare #drones**

Responding to Drone Swarms at Sea

<https://www.usni.org/magazines/proceedings/2022/december/responding-drone-swarms-sea>

## **#planning**

Lethality and Staff Work: How Improving Organizational Workflow Makes Army Units More Combat-Effective

<https://mwi.usma.edu/lethality-staffwork-organizational-workflow-army-units-combat-effective/>

## **#reading**

Suggested Holiday Reading List: Twenty online Articles and eBooks on Canadian Military Intelligence History

<https://www.cmia-acrm.ca/page/select-holiday-reading-list-of-twenty-books-on-canadian-military-intelligence-history>

## **#Russia-Ukraine War**

Know the Battlespace to Own the Battlespace: Lessons From Ukraine

<https://www.usni.org/magazines/proceedings/2022/december/know-battlespace-own-battlespace-lessons-ukraine>

The Battle for Bakhmut – Wagner Trench Warfare Tactics

<https://wavellroom.com/2022/12/15/the-battle-for-bakhmut/>

5 of Russia's Biggest Blunders in Putin's War on Ukraine

<https://www.businessinsider.com/biggest-russian-blunders-during-putin-war-against-ukraine-2022-12>

How the Battle for the Donbas Shaped Ukraine's Success

<https://www.fpri.org/article/2022/12/how-the-battle-for-the-donbas-shaped-ukraines-success/>

*"Ammunition availability might be the single most important factor that determines the course of the war in 2023..."*

Ukraine Situation Report: Strategic City Of Melitopol Could Be Kyiv's Next Target

<https://www.thedrive.com/the-war-zone/ukraine-situation-report-strategic-city-of-melitopol-could-be-kyivs-next-target>

Ukraine Needs Better Defense Against Russian Drone, Cruise Missile Attacks

<https://news.usni.org/2022/12/21/ukraine-needs-better-defense-against-russian-drone-cruise-missile-attacks>

Putin's Pit Bull Is Making a Power Play

<https://foreignpolicy.com/2022/12/21/prigozhin-putin-russia-war-ukraine-kadyrov-gerasimov-military/>

The Russia-Ukraine war and its ramifications for Russia

<https://www.brookings.edu/articles/the-russia-ukraine-war-and-its-ramifications-for-russia/>

*Part of series "The Talbott Papers on Implications of Russia's Invasion of Ukraine"*

<https://www.brookings.edu/series/the-talbott-papers-on-implications-of-russias-invasion-of-ukraine/>

Analyses of Ukrainian drone attack on Russian Engle air base

<https://threadreaderapp.com/thread/1607537186328686593.html>

*And some comments on air fleet balancing.*

Russia-Ukraine War Settles into Predictable Alternating Phases, But Russia's Losing Remains Constant

<https://realcontextnews.com/russia-ukraine-war-settles-into-predictable-alternating-phases-but-russias-losing-remains-constant/>

*Somewhat a self-congratulatory opinion piece but worth reading.*

Ukraine Situation Report: Kyiv Struggling To Keep Captured Weapons In The Fight

<https://www.thedrive.com/the-war-zone/ukraine-situation-report-kyiv-struggling-to-keep-captured-weapons-in-the-fight>

'We Fight With Our Brains. They Fight With Numbers': Ukrainian Paratroopers On The Battle For The Donbas City of Kreminna

<https://www.rferl.org/a/ukraine-kreminna-battle-recapture-russia-supply-lines/32197165.html>

Links to R&D Seminar "Lessons Identified from the War in Ukraine" 6th – 8th December 2022

<http://www.dupuyinstitute.org/blog/2022/12/16/links-to-rd-seminar-lessons-identified-from-the-war-in-ukraine-6th-8th-december-2022/>

A Russian winter offensive - Part 1

<https://thelookoutn.substack.com/p/a-russian-winter-offensive-part-1>

A Russian winter offensive - Part 2

<https://thelookoutn.substack.com/p/a-russian-winter-offensive-part-2>

### **#armour**

Russian Tanks: A New T-72B3M variant?

<https://wavellroom.com/2022/12/23/new-russian-tanks-variant/>

### **#drones**

Russia's novel use of Iranian drones in Ukraine serves as classroom for Western militaries

<https://www.stripes.com/theaters/europe/2022-10-07/drones-ukraine-russia-iran-7606441.html>

### **#intelligence**

Open Secrets: Ukraine and the Next Intelligence Revolution

<https://www.foreignaffairs.com/world/open-secrets-ukraine-intelligence-revolution-amy-zegart>

### **#logistics**

Russia Struggles to Maintain Munition Stocks (Part One)

<https://jamestown.org/program/russia-struggles-to-maintain-munition-stocks-part-one/>

Russia Struggles to Maintain Munition Stocks (Part Two)

<https://jamestown.org/program/russia-struggles-to-maintain-munition-stocks-part-two/>

*"Shell hunger." And critical logistical difficulties continue with railways moving munitions forward. Logistics rule!*

**#wargaming**

My wargame says Ukraine is going to win as the Russian army collapses

<http://wargamingco.blogspot.com/2022/11/my-wargame-says-ukraine-is-going-to-win.html>

**#veterans**

Veterans Affairs Canada releases 2022-2025 Accessibility Action Plan

<https://www.canada.ca/en/veterans-affairs-canada/news/2022/12/veterans-affairs-canada-releases-2022-2025-accessibility-action-plan.html>

**#weapons**

New Hypersonic Weapons: Same but Different

<https://ras-nsa.ca/new-hypersonic-weapons/>

**Other:**

**CDS/CAF CWO Year-End Message to the Canadian Armed Forces**

<https://www.canada.ca/en/departement-national-defence/maple-leaf/defence/2022/12/cds-cafcwo-year-end-message-to-caf.html>



The holiday season is upon us, and we hope it brings time for you to relax and recharge in the company of family and friends, after what has been yet another extraordinarily busy year.

We also hope you'll take the opportunity to reflect on the year gone by, and all that we have accomplished together. We are so proud of all that you have done in this regard.

The year 2022 saw our sailors, soldiers, aviators, and operators continue to perform at remarkably high tempo.

Even as Canadians began to learn to live with COVID-19, a new challenge to global stability and security arose in Europe, with Russia's unprovoked and illegal invasion of Ukraine. Once again, we were called upon to stand strong and united with our allies, friends, and partners in the cause of freedom, and against the spread of authoritarianism and tyranny.

We continued to work closely to support the Armed Forces of Ukraine, strengthening their ability to defend their homes and families against Russian aggression. Their successes, as a direct result from the training you provided, have been inspiring.

At the same time, we worked in concert with our NATO Allies to deter further instability in Central and Eastern Europe, through leading a multinational enhanced Forward Presence battle group in Latvia; air

support in support of operations throughout Europe, Africa, and the Middle east out of Air Task Force Prestwick; and securing NATO airspace and Baltic and North Atlantic waters through Operation REASSURANCE.

We have also increased our presence in the waters off Asia, working with our allies and partners to promote stability and security in the Indo-Pacific Region.

And wherever we have gone, everyone we have met has praised the quality, dedication, and complete professionalism of the people who wear our uniform.

When we defend the rules-based international order, we defend the peace and prosperity that Canada has enjoyed for so long. This work may take you far from home, but you can be sure: Wherever in the world you are deployed, you are defending Canada and Canadians – our interests, our values, and our way of life.

Meanwhile, here at home, thousands of you remain at an elevated state of readiness should the need for further deployments arise, and our domestic tempo has remained equally demanding.

We have continued to train and drill and assist in search-and-rescue operations – and this fall, when Hurricane Fiona battered the East Coast, our members were there alongside our domestic partners, providing vital services to Canadians in their time of need.

This is the high-profile work – the work Canadians see in the news. But many of you have also been doing outstanding work this year behind the scenes to make our Armed Forces stronger, more adaptable, and more prepared to meet the challenges we face. From critical logistics support and sustainment, to cyber defence, to ensuring our Defence Team and Canadians are informed, your achievements have not gone unnoticed.

Like our Armed Forces in general, many of the trades within the CAF are understaffed – from signal operators and information systems technicians to weapons engineering technicians and maritime systems engineering officers to our medical trades, to name just a few. And the people working in those trades are making a heroic effort to keep up with the demands we put on them. They deserve our thanks.

We'd also like to mention here everyone involved in our modernization efforts. No matter how busy we are with current operations and initiatives, we can never stop preparing for the future, because it's not going to wait for us.

This high tempo has not slowed the work of addressing our critical internal challenges. Indeed, the increased need for a strong, nimble, and resilient Canadian Armed Forces has underlined why this work is so vitally important. Internally, this year we issued our Reconstitution Directive, under which we are placing a sharp new focus on recruiting new members and retaining existing members by improving the quality of their service experience as they carry out their work.

Everything we do, from now on, must be seen through the lens of Reconstitution, and every decision we make must consider the question: How does this help or hinder us in achieving these goals? This has always been a priority, but we are redoubling our efforts, tackling it in earnest. Because for us it is an existential concern.

As is the work of evolving our institutional culture. Canada is a remarkably diverse nation, and we need to draw on all that diversity if we are to become the Armed Forces that Canada and Canadians need – a military where every individual can see themselves in uniform, applying their unique skills and perspectives to the service of our country.

In 2022, we took real and tangible steps toward realizing this goal, ranging from delivering on our new military ethos, *Trusted to Serve*, to the initial implementation of the [Arbour Report](#), to many other

initiatives from [Chief Professional Conduct and Culture](#), Commands, and your units at the grassroots level.

We continue to work across government on a Post Living Differential (PLD) replacement, and the creation of a new benefit, tentatively called the CAF Housing Differential. This would assist in bridging the gap for those struggling to afford basic housing in locations where the cost of housing is higher so that what they spend on housing is within the Canadian average for their before-tax income. Negotiations are also ongoing for an Economic Increase (AKA pay raise).

Finally, we are pleased to inform you that as of January 1, 2023, recruits going through the training system who are living in single quarters and on ration strength, will no longer be charged for rations and quarters until such time as they complete their occupation/trade training (DP1).

We will look back on 2022 as a historic year for other reasons as well.

We expanded our presence in recently emerged domains by standing up [3 Canadian Space Division](#).

We celebrated the 75<sup>th</sup> anniversary of the Canadian Rangers, whose role is becoming ever-more essential as our changing Arctic becomes the focus of greater interest and, potentially, competition.

And we mourned the passing of Her Majesty The Queen, who had been the Canadian Armed Forces' Commander-in-Chief for longer than most of us have been alive.

Through it all, the people we love have been a source of constant strength and support, and we thank every military family for your own service and sacrifice. Without you, those of us in uniform would not be able to do what our country asks of us. And when duty calls, knowing your love awaits us at home is what gets us through.

It is wonderful that the crews of HMCS Vancouver and HMCS Winnipeg, and the personnel of ATF Romania, have returned to Canada safely in time for the holidays. But we must also recognize that there are still some members on deployments far from home. To them we say: You may be spending the holidays on the front lines of freedom, but you are also in our hearts.

To every member of the Canadian Armed Forces: It has been an honour and a privilege to spend another year serving alongside you. We wish you all peaceful, safe, and restful holidays.

Whatever joys the New Year brings we will celebrate.

And whatever challenges arise, we will meet — as always — together.

General Wayne Eyre  
Chief of the Defence Staff

CPO1 Gilles Grégoire  
CAF Chief Warrant Officer

**The complicated truth about the famous 'Christmas Truce' of World War I**

<https://taskandpurpose.com/history/christmas-truce-world-war-1-history/>

This event was featured in the 23 December 2022 Dispatches. Concurrently, there were a number of articles detailing what really happened.





## INTELLIGENCE UPDATE

- On 21 December, President Putin was presented with plans to expand the Russian military by around 30% to 1.5 million personnel. It isn't clear when this level would be achieved.
- Russian Defence Minister Sergei Shigou explained that the expansion would involve at least two brigades in north-western Russia growing to divisional strength. He cited the supposed threat from Finland and Sweden's accession to NATO.
- This constitutes one of the first insights into how Russia aspires to adapt its forces to the long-term strategic challenges resulting from its invasion of Ukraine. It remains unclear how Russia will find the recruits to complete such an expansion at a time when its forces are under unprecedented pressure in Ukraine.

## INTELLIGENCE UPDATE

- Russia has augmented its force in Ukraine with tens of thousands of reservists since October. Despite the easing of its immediate personnel shortages, a shortage of munitions highly likely remains the key limiting factor on Russian offensive operations.
- Russia has likely limited its long-range missile strikes against Ukrainian infrastructure to around once a week due to the limited availability of cruise missiles. Similarly, Russia is unlikely to have increased its stockpile of artillery munitions enough to enable large-scale offensive operations.
- A vulnerability of Russia's current operational design is that even just sustaining defensive operations along its lengthy front line requires a significant daily expenditure of shells and rockets.

## INTELLIGENCE UPDATE

- Russian forces have largely focused on constructing defensive positions along many sections of the front line in Ukraine since October. This includes laying additional fields of anti-tank and anti-personnel mines, almost certainly going beyond Russian doctrinal guidelines.
- Minefields only present an effective obstacle for trained troops if covered by observation and fire. A major challenge for the Russian forces will likely be a shortage of surveillance assets and trained personnel to effectively monitor large areas of the new minefields.

## INTELLIGENCE UPDATE

- Over the last 48 hours, fighting has remained focused around the Bakhmut sector of Donetsk Oblast, and near Svatove in Luhansk. Russia continues to initiate frequent small-scale assaults in these areas, although little territory has changed hands.
- To the north, elements of Russia's 1st Guards Tank Army were probably amongst the Russian forces recently deployed to Belarus. This formation was likely conducting training before its deployment and is unlikely to have the support units needed to make it combat-ready.

## INTELLIGENCE UPDATE

- In recent days, Russia has likely reinforced the Kremina sector of its frontline in Luhansk Oblast, as it comes under continued pressure from Ukrainian operations.
- Kremina has been relatively vulnerable since Ukrainian forces advanced through the town of Lyman, to the west, in October.
- Russia has constructed extensive new defences in the area and will likely prioritise holding the line here. The area is logistically important for Russia's Donbas front and it is also a significant town in Luhansk Oblast. The Kremlin claims that the 'liberation' of this area is a core justification for the war.

## INTELLIGENCE UPDATE

- In the early hours of 26 December 2022, Russia's Engels Air Base was attacked for the second time in three weeks. Russian media reported that uncrewed aerial vehicles (UAVs) were responsible for the strike on the facility, one of the main operating bases of Russia's strategic bomber fleet.
- Russia has long given a very high priority to maintaining advanced ground based air defences, but it is increasingly clear that it is struggling to counter air threats deep inside Russia.
- One challenge for Russia is probably the exceptional demand on its fleet of modern, medium-range air defence systems, such as SA-22 Pantsir, which would typically be expected to take a major role in countering UAVs. As well as providing point defence for strategic sites such as Engels, these systems are currently required in large number to protect field headquarters near the front line in Ukraine.