

Royal United Services Institute of Nova Scotia Dispatches 15 November 2024

Remembrance Day 2024

Some fifteen members of RUSI(NS) turned out at our 'home', Royal Artillery Park, to parade with 1st (Halifax-Dartmouth) Field Artillery Regiment and cadets on a traditional Halifax Remembrance Day, very cold and wet.

Our Vice-President, Major John McLearn, Canadian Army (retired), accompanied by member Petty Officer First Class Bobby Corbin, Royal Canadian Navy (retired), laid a wreath on behalf of RUSI(NS).



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 periodic 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 <u>RUSINSDispatches@gmail.com</u>. Comments to articles can be from members or nonmembers 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).

Editor's Notes: Please note that the next issue will be 29 November.

RUSI(NS) Postal Address

Please note that the correct mailing address for RUSI(NS) is:

Royal United Services Institute of Nova Scotia c/o BOR CFB Halifax PO Box 99000, Station Forces Halifax, NS, B3K 5X5

Some mail has been in danger of delay or loss because of being incorrectly addressed (e.g., to RA Park Officers' Mess.)

Quick links:

Events Publications @RUSI_NS on X Royal United Services Institute of Nova Scotia on Facebook Other Sources Odds and sods SAC Notes

Dispatches

Publication of *Dispatches* may be irregular and less frequent pending a stable of editors.

Your Dispatches needs your contributions!

You are encouraged to assist the volunteer editor by emailing articles and other contributions to <u>rusinsdispatches@gmail.com</u>. Articles with a Canadian nexus, explicit or implicit (i.e., Canada is not mentioned in a cyber ops article but it is an area to which we should be paying attention) are good, articles with your value-added comments (why we should read the article and think about it) are better. It would be particularly helpful if you could volunteer to contribute in your areas of interest and experience. We need a team of contributors to ensure a balance in our production.

Contributions to RUSI(NS) social media

You are also encouraged to send material to be posted to the RUSI(NS) X and Facebook accounts to <u>rusinsdispatches@gmail.com</u>. Preferably, send the material ready to post. We are still looking for a volunteer(s) to be editor(s) for these accounts in order to keep them active.

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 <u>RUSINovaScotia@gmail.com</u>. RUSI(NS) events may be cancelled at short notice. Email RUSI(NS) if there is a question of an event occurring.

RUSI (NS) Events:

18 November 2024, tentatively CAF Ombudsman, details TBC.

21 November 2024, CIC/NATO Assn of Canada/RUSI NS Collaboration, VIP Guest TBC.

22-24 November 2024, Halifax International Security Conference.

27 November 2024, LCol Lessvesque, Army PA, in-person discussion group.

5 December 2024, Christmas Meet and Greet, RA Park.

27 January 2025, Robert Taylor, Bardex, Ship building and Dockyard Infrastructure.

Other Events:

New 21 November, Thursday – Naval Association of Canada November Speaker's evening presentation "A NAC Townhall with CRCN." 20-2130hrs AST. Online. To register: <u>https://nac-o.wildapricot.org/event-5933812/Registration</u>

New 26 November, Tuesday – MacDonald-Laurier Institute presentation "Confronting censorship and defending free speech in professional associations and beyond." 15-1600 hrs AST. Online. To register: <u>https://www.eventbrite.ca/e/confronting-censorship-defending-free-speech-tickets-</u> 1080644830779?aff=oddtdtcreator

New 27 November, Wednesday – Rocky Mountain Conference on Security and Defence presentation by BGen (ret'd) Cox "The intelligence disconnect: Rethinking Canada's security strategy." 2200hrs AST. Online. To register: <u>https://us02web.zoom.us/meeting/register/tZcud-</u> yrpzIiHtd3Flpxw5OM5Ak2CKSSu0Sg#/registration

New 11 December, Wednesday – Rand's Policy Lab presentation "AI and the Future of Work." 13-1400hrs AST. Online. To register: <u>https://www.rand.org/events/2024/12/ai-and-the-future-of-work/register.html</u>

Wargaming Events:

Georgetown University Wargaming Society long-range schedule: <u>https://www.guwargaming.org/guwsevents</u>

17 December, Tuesday - Georgetown University Wargaming Society presentation "Understanding Educational Wargaming in the Military Sector." 7-8:30pm AST. Online. To register: <u>https://www.eventbrite.com/e/understanding-educational-</u> wargaming-in-the-military-sector-tickets-1054234095559

4 March, Tuesday - Georgetown University Wargaming Society presentation "Professional Wargaming in France." 1-2:30 pm AST. Online. To register: <u>https://www.eventbrite.com/e/professional-wargaming-in-france-tickets-1060419526349</u>

18 March, Tuesday - Georgetown University Wargaming Society presentation "Tactical Wargame Design." 7-8:30 pm ADT. Online. To register: <u>https://www.eventbrite.com/e/tactical-wargame-design-tickets-</u> <u>1052472612917</u>

8 April, Tuesday - Georgetown University Wargaming Society presentation "Spyships, Satellites, and SAMs" 7-8:30pm ADT. Online. "A summary of 3 games run in Canada in 2024" by RUSI(NS) member Dave Redpath. To register: <u>https://www.eventbrite.com/e/spyships-satellites-and-sams-tickets-1060415745039</u>

16 September 2025, Tuesday - Georgetown University Wargaming Society presentation "Naval Wargaming and Quantitative History." 1-2:30 pm ADT. Online. To register: <u>https://www.eventbrite.com/e/naval-wargaming-and-quantitative-history-tickets-1052463264957</u>

Publications

New RUSI(NS) Presentation "How 'drones' are changing 21st Century warfare, aviation, and society" by Dr Ian MacVicar, 18 September 2024, <u>https://rusi-ns.ca/drones_changing_warfare/</u>

RUSI(NS) Comments "Geopolitics and Police Intelligence: The Case Study of Disinformation" by Nathan Romas and Jay Heisler, 28 October 2024, <u>https://rusins.ca/geopolitics-and-police-intelligence-the-case-study-of-disinformation/</u>

RUSI(NS) Comments "Arctic Seabed Warfare Against Data Cables" by Cate Belbin, 25 September 2024, <u>https://rusi-ns.ca/arctic_seabed_warfare/</u>

RUSI(NS) Comments "Veteran Charities Operate in Lebanon Evacuation" by Jay Heisler, 24 August 2024, <u>https://rusi-ns.ca/lebanon-evacuation/</u> RUSI(NS) Information Note "Warship Orthography", 17 July 2024, <u>https://rusi-ns.ca/warship-orthography/</u>

RUSI(NS) Comments "Anti-Human Trafficking" by Jay Heisler, 19 July 2024, <u>https://rusi-ns.ca/anti-human-trafficking/</u>

Two articles from RUSI(NS) member John Boileau in the Legion Magazine: The Greatest Landing https://legionmagazine.com/the-greatest-landing/ Security system https://legionmagazine.com/security-system/

The following publications are received by RUSI(S) from other associations. The latest edition, where not otherwise indicated, may be requested by emailing RUSI(NS). To readers of Dispatches from other associations, sharing of your publications is appreciated.

weekly: Naval Association of Canada Royal United Services Institute of Victoria (Australia) Defence Update Vancouver Artillery Association and Royal United Services Institute Vancouver Members News

bi-weekly: Canadian Marine Industries and Shipbuilding Association On Watch

monthly:

Canadian Gunner News Edmonton United Services Institute President's Enews Military Institute of Windsor Communiqué Naval Reserve Association of Canada Mess Deck ConneXions Royal Alberta United Services Institute Dispatches Royal Canadian Logistics Service The Logistician Royal Canadian Naval Association Admiral Hose Branch Scuttlebutt Royal United Services Institute of Vancouver Island Newsletter Veterans Affairs Canada Salute!

quarterly: Royal United Services Institute of Victoria (Australia) Quarterly Newsletter

@RUSI_NS on X

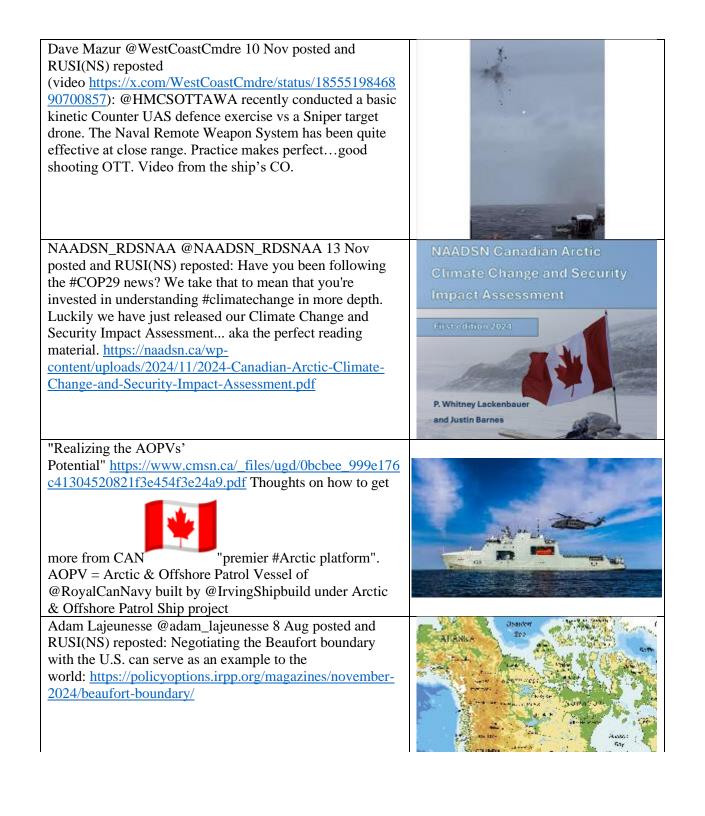
@RUSI_NS posts may be viewed by clicking on the icon at https://RUSI-NS.ca. To have something posted or reposted, email RUSI(NS).

Jonathan Fowler @ArchInAcadie Nov 12 posted and RUSI(NS) reposted: Mapping Halifax Heritage: 87% of Buildings Standing in 1878 Have Been Lost. Our team has just published the results of a comprehensive built heritage inventory of peninsular Halifax, Nova Scotia. We invite you to check out our interactive

maps: https://mapsofmemory.com

CAN^[+]announces contracts for 85 heavy recovery vehicles as part of Enhanced Recovery Capability project to support @CanadianForces <u>https://canada.ca/en/public-services-</u> procurement/news/2024/11/government-of-canadaannounces-contracts-for-recovery-vehicles-to-support-thecanadian-armed-forces.html Rheinmetall HX 8×8 trucks equipped with heavy towing & recovery module <u>https://www.joint-forces.com/defence-equipment-</u> news/77452-canada-awards-rheinmetall-erc-order





RUSI(NS) members marked #RemembranceDay 2024 at ceremony at our 'home' Royal Artillery Park, @CanadianForces Base #Halifax @CFB_BFCHalifax. #WeRememberThem



Bill Blair @BillBlair 9 Nov posted

(https://x.com/BillBlair/status/1855280069742092781): As Minister of National Defence, let me be unequivocally clear: the directive that the Chaplain General independently developed and published in October 2023 does not, and never did ban prayer. Please see my statement below. RUSI(NS) quoted: "Finding our Religion: The (Canadian) Chaplaincy

Validation" <u>https://theforge.defence.gov.au/article/finding-our-religion-canadian-chaplaincy-validation</u>

Veterans Affairs CA @VeteransENG_CA 7 Nov posted: Have you heard of No. 2 Construction Battalion? It was the largest Black military unit in Canadian history. Today, Minister Petitpas Taylor announced a new call for applications for organizations working to commemorate its legacy. \mathscr{O} : <u>https://www.veterans.gc.ca/en/remembrance/com</u> <u>memorative-events/commemorative-</u>

partnership #CanadaRemembers

(Commemorative Partnership Program) RUSI(NS) presentation "No. 2 Construction Battalion: A Short History & an Apology" <u>https://rusi-ns.ca/no-2-construction-battalion/</u>

Canadian Army @CanadianArmy 8 Nov posted: On this National Indigenous Veterans Day, we honour First Nations, Inuit and Métis people in Canada who have bravely served and continue to serve Canada. Today, at the National Aboriginal Veterans Monument in Ottawa, we stood in remembrance for these courageous men and women.

RUSI(NS) quoted: RUSI(NS) presentation "'Growing Together' – The Cultural Contribution of Indigenous People in the Canadian Military Since the First World War" <u>https://rusi-ns.ca/indigenous-in-the-canadian-military/</u>







At Remembrance Dinner 6 Nov 24, RUSI(NS) President VAdm Miller @RoyalCanNavy (ret'd) presented Honorary Life Memberships to our departing patron, His Honour Arthur Leblanc, Lieutenant Governor Nova Scotia @LtGovNS, & Her Honour Mrs Leblanc, in thanks for their support & service Conference of Defence Associations Institute CONFERENCE OF REFERENCE ASSOCIATIONS INSTETUTE @CDAInstitutereport "Force Development - The Future of FORCE Land Warfare and the Canadian Army" October 2024: DEVELOPMENT summary of future of land warfare, lessons from Russia-Ukraine War, situates capabilities of @CanadianArmt in context of future conflicts Canada at NATO @CanadaNATO posted: #DYK The Canada-led NATO Multinational Brigade in Latvia @NATOMNBLatvia is holding its first major field exercise as a full brigade. Exercise RESOLUTE WARRIOR 2024 #ExREWA demonstrates concrete commitment to defend & deter on @NATO's eastern flank. RUSI(NS) quoted: RUSI(NS) Information note "Brigade and Brigade Group" https://rusins.ca/brigade brigade group/ National Post @nationalpost 5 Nov posted and RUSI(NS) reposted: Canada's spy service tracked the flow of its intelligence reports across government and studied how other agencies handled them: memo (CSIS tracked intelligence flow across government in foreign interference leak probe https://nationalpost.com/news/canada/csis-trackedintelligence-foreign-interference-leak)

John Ivison @IvisonJ 4 Nov posted and RUSI(NS) NATO reposted: The Defence Department has - accidentally or on purpose - inflated Canada's defence spending as a share of its economy. That is bad news, whoever wins the US election. (The Defence Department just gave Trump a bigger stick to whack us with https://nationalpost.com/opinion/ivison-canada-defencespending-nato) David Pugliese @davidpugliese 4 Dec posted and RUSI(NS) reposted: New \$6-billion Arctic radar will track incoming missiles, says Canadian military -The Polar-Overthe-Horizon Radar will be "optimized to detect missiles," but will also track additional aerospace and maritime objects https://ottawacitizen.com/news/national/defencewatch/new-6-billion-arctic-radar-will-track-incomingmissiles-says-canadian-military via @ottawacitizen CDN Defence Academy/L'Académie cdn de la défense @CDACanadaACD 18 Sep posted: ¹It's #WargameWednesday and recently the CDA team put their skills to the test with @SebastianBae's Littoral Commander. #DYK that wargaming is used across the CAF (and NATO!) to innovate, validate concepts and analyze decisions? Experiential learning for the win! RUSI(NS) quoted: That's @CanadianForces gamers there gaming an Indo-Pacific scenario (there is also Baltic scenario appropriate to CAN^[] presence in Latvia). Wargames don't provide solutions but do generate questions & make you think. Looking forward to Littoral Commander with CAN units gCaptain @gCaptain 1 Nov posted: Arctic Alliance: U.S. Raises Alarms as Russia and China Flex Military Muscle Along NATO's 'Western Flank' (https://gcaptain.com/arctic-alliance-u-s-raises-alarms-asrussia-and-china-flex-military-muscle-along-natos-westernflank/) RUSI(NS) quoted: Really, #Arctic is #NATO's 'Northern

Front', where CAN^[] faces RUS^[]&, increasingly, CHN ^[]. Our contribution to alliance may best be by focusing @CanadianForces on North. Logistics easier (debatable) than deploying to Europe

"Royal United Services Institute of Nova Scotia" on Facebook:

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

Industry responds to new Henderson precinct https://www.australiandefence.com.au/news/news/industryresponds-to-new-henderson-precinct

"Birdon and Civmec have welcomed the announcement that Defence will build a new precinct at the Henderson Shipyard in-and-around the Common User Facility (CUF)."

Interesting article, despite the unusual reference to "precinct", not a Canadian use. The article underscores the importance

and cost of marine infrastructure in support of ship projects. This has been and will continue to be an important factor of the Canadian National Shipbuilding Strategy. Given our demands in ship repair of large ships over the next decades, we too could use such a facility.

Should Donald Trump Risk the U.S. Navy in a War Against China?

https://nationalinterest.org/feature/should-donald-trump-riskus-navy-war-against-china-213614 (The headline is clickbait.)

Article from James Holmes, J. C. Wylie Chair of Maritime Strategy at the Naval War College, advocating a (RADM Wylie USN) 'sequential strategy' of sea denial followed by sea control.

"Naval commanders have an unenviable lot in the Pacific. They have to prevail with the force they have against a more numerous antagonist that's able to rebound after taking heavy blows. But if they harness the assets at their command cleverly, they might yet face down or defeat aggression."

Will the River-class destroyers be the RCN's 'lumpy capital' and to what extent might they be hazarded (might Canadian strategies hazard them) in a major conflict, Pacific or otherwise?

French, UK naval chiefs urge dramatic changes in warship design https://www.defensenews.com/global/europe/2024/11/05/fren ch-uk-naval-chiefs-urge-dramatic-changes-in-warshipdesign/

Thoughts for Canada.

"Navies can no longer count on ships staying relevant over their 40-year lifespan..." Forty years seems long; hulls and marines systems can wear out before then. If a ship's fit changes out several times over that forty years, might it not be better to build for and operate them for a shorter time, meanwhile keeping industry building ships (see 'ships as trucks')?

"Weapon systems may need to be adapted as frequently as every year, requiring ship architecture that allows for systems to be plugged in and changed when needed..." 'Ships as trucks.' More attention to containerization, plug-and-play and other technologies that facilitate change out of a ship's capabilities.

"...one lesson from the Red Sea was that facing a constant threat is "really hard" on crews, and the navy probably needs more people on board..."







Re-visit crew design with the idea of 'surging' crew size and composition depending on the missions/situation. People are a (main?) part of a ship's capabilities (e.g., boardings, humanitarian activities).

"Speeding up innovation will require closer cooperation with industry..." Bring industry more into naval training, exercising, deployments, etc. (Easier to embark industry reps with ships designed to accommodate more people?)

Comment: Under plug-and-play concept, one can have standard hull and power pack (faster construction, better parts supply) and plug in mission specific packages. Long range versus short range, air versus surface/subsurface, humanitarian versus troop transport.

Shipyards now building military/government ships are toooo small. McNabs Island, Levis and Esquimalt have ideal geography for mega shipyards for both military and commercial work. Have geography including the human element.

However logical we may see it we must remember there is no logic in defence procurement.

Comment: Insightful commentary from France's Navy chief that must be carefully addressed to get maximum benefit from warship design. I have always felt that the separation of platform from combat systems development needs to be carefully done to avoid degraded signatures and survivability. Secondly, the often used modular approach and fitted-for-but-not-with systems never seem to be fully employed.

More generally I have posed the question whether the anti-air warfare and anti-ship missile defence capabilities have really kept pace with the evolving threat from cruise missiles up to hypersonics, ballistic missiles with terminal homing, and multiple drone swarm attacks, but have yet to hear any convincing answer. And that is without even mentioning anti-submarine warfare, electronic warfare and information warfare.

US Navy awards contract for torpedo-sized mine-laying underwater drones https://interestingengineering.com/military/general-

https://interestingengineering.com/military/generaldynamics-to-make-compact-mining-system



"...the system will have a diameter of 21 inches (53 cm)..." "...the UUV will be launched using an impulse method from

the torpedo tubes of the Navy's submarines."

Capabilities like this would allow the Royal Canadian Navy, or at least its submarines, to get back into mine laying. Mine laying could be greatly useful in barring chokepoints like in the Arctic from transgression from adversary submarines and ships. Even just public knowledge that Canada has the capability could deter adversaries.

Likely the capability could be containerized to be embarked in the Canadian Multi-mission Corvette Project ships (see https://shdefence.com/the-cube/).

The RFA: The civilian support fleet without which the Royal Navy would be sunk <u>https://www.forcesnews.com/opinion/rfa-civilian-support-</u>fleet-without-which-royal-navy-would-be-sunk

Putting aside the author's use of 'tanker' when the naval term is 'oiler', this is a good description of the importance of a navy having a capable service support fleet.



Canada is not included in the article's list of 'blue water navies' (able to support extended operations in the high seas). But then, Canada currently has one replenishment oiler (leased, at that) and is building towards having two, insufficient even for a navy of only two task groups considering Canada is a three-ocean country and needs service support to deploy elsewhere in the world in furtherance of government objectives.

The picture is of ASTERIX, Canada's leased oiler, replenishing foreign ships in a 2018 exercise.

Comment: An excellent article that well explains the need for such ships and a capable and supportive Merchant Marine capacity. Interesting that the RFA is UK's largest employer of Merchant Mariners. A great article overall analyzing the UK's naval needs!

SECNAV Announces Service Life Extensions for 12 Destroyers to "Keep More Ready Players on the Field" <u>https://www.navy.mil/Press-Office/Press-Releases/display-</u> pressreleases/Article/3952231/secnav-announces-service-lifeextensions-for-12-destroyers-to-keep-more-ready-p/



This says something about increasing recognition (at least, in the US) that numbers count, especially considering the current world geo-political situation.

Secretary of the Navy Carlos Del Toro @SECNAV Oct 31 posted: Today, I announced that the Department of the Navy plans to operate 12 Arleigh Burke class (DDG 51) Flight I Destroyers beyond their 35-year expected service life.

"...beyond their 35-year expected service life."

It is understood Canadian ships are designed for 30 years service life. Often they are kept longer, though that is not necessarily a good thing as they suffer equipment casualties more, maintenance is more frequent, spares are harder to obtain, training has to be retained for old equipment, and sailors' morale suffers for working in ships older than they are.

Also:

U.S. Navy Plans to Extend Service of its Oldest Destroyers Into the 2030s <u>https://maritime-executive.com/article/u-s-navy-plans-to-extend-service-of-its-oldest-destroyers-into-</u>2030s

Other Sources

#AI

Turkey's strategic balancing efforts amid the US-China AI confrontation. <u>https://www.rusi.org/explore-our-research/publications/commentary/turkeys-strategic-balancing-efforts-amid-us-china-ai-confrontation</u>

#Arctic

Ottawa to reinstate Arctic ambassador as it faces challenges from US, Russia, and China in region.

https://www.cbc.ca/news/politics/federal-ministers-inuit-leaders-arctic-foreign-policy-1.7378054

European North: NATO's new northern flank.

https://macdonaldlaurier.ca/european-north-natos-new-northern-flank/

"The European Arctic is now one of the likeliest places for a Russia-NATO land conflict to occur."

#artillery

How the US Army is rethinking howitzers <u>https://dsm.forecastinternational.com/2024/09/10/the-search-for-range-how-the-u-s-army-is-rethinking-howitzers/</u>

"The future is not bright for towed artillery." "Future systems must be mobile to reposition quickly on the battlefield and away from potential enemy fire. (U.S. Army Futures Command head General) Rainey also expressed interest in capabilities like an autonomous robotic cannon. The statements paint a bleak future for towed artillery, but opens the door to potential procurement of new self-propelled howitzers."

#Asia

Pakistan strengthens Azerbaijan's military muscle.

https://jamestown.org/program/pakistan-strengthens-azerbaijans-military-muscle/ The South Caucasus Azerbaijan-Armenia dispute becoming an extension of the Pakistan-India rivalry, the increasing significance of the Black Sea energy transit corridor, and Türklye materializing as key regional player, which threatens Iran, all heighten security concerns in the area.

#Canadian Armed Forces

Fixing recruitment and retention in the CAF: Leadership and risk tolerance. (~26min podcast)

https://cdainstitute.ca/fixing-recruitment-and-retention-in-the-caf-leadership-risk-tolerance/

Canadian Armed Forces to benefit from a new and improved electronic health record system

https://www.canada.ca/en/department-national-defence/mapleleaf/defence/2024/10/caf-to-benefit.html

#China

China's chip chokepoints.

https://www.defenseone.com/ideas/2024/10/chinas-chip-chokepoints/400593/

Comments: The key takeaway for this reader is that in the US, "Export controls have only been partly updated since the Cold War and rely on a network of nations and companies. **The United States needs a new multilateral export regime powered by consensus among <u>key partners</u> (for example Japan, the Netherlands, and South Korea) that make semiconductor manufacturing tools [and] prefer to continue selling to China...for the one certainty about the future of the economy and warfare is that they will be powered by semiconductors."**

The article written prior to the US election. If we thought multilateralism was out of favour before...

Defeating the CCP: A running start. (a report)

https://cesionline.org/wp-content/uploads/2024/11/Defeating-the-CCP_A-Running-Start.pdf

Taiwan: Resistance is not futile. https://www.taipeitimes.com/News/editorials/archives/2024/11/11/2003826694 #China #maritime security CMSI Studies in China Maritime Development https://digital-commons.usnwc.edu/cmsi-studies/

#defence procurement #innovation #NATO How NATO wants to shape the future of war https://www.politico.com/newsletters/digital-future-daily/2024/10/31/tk-daniella-top-00186582

#drones

Vinnytsia inventors have developed a new type of FPV drone, the Flamingo VB140 wing-interceptor. Here's how it can protect the skies from Orlan (need to translate) <u>https://dev.ua/news/flamingo-vb140</u> Unmanned interceptors!

Military Drones Industry Research, Opportunities and Strategies to 2033: Focus on Enhanced Border Surveillance, Introduction of Advanced Hexacopter Drones for Enhanced Combat Operations

https://www.globenewswire.com/news-

release/2024/11/07/2976797/28124/en/Military-Drones-Industry-Research-Opportunities-and-Strategies-to-2033-Focus-on-Enhanced-Border-Surveillance-Introduction-of-Advanced-Hexacopter-Drones-for-Enhanced-Combat-Operatio.html Just a summary, the report is way too expensive.

#drones #armour

Drones Have Not Yet Killed Armored Warfare <u>https://nationalinterest.org/feature/drones-have-not-yet-killed-armored-warfare-</u> 213395

#energy security

Canada and the Three Seas Initiative – Energy security through nuclear cooperation. https://macdonaldlaurier.ca/canada-and-the-three-seas-initiative-energy-securitythrough-nuclear-co-operation-george-christidis-and-heather-exner-pirot-in-the-globeand-mail/

Sweden scraps plans for 13 offshore windfarms over Russia security fears. <u>https://www.theguardian.com/world/2024/nov/04/sweden-scraps-plans-for-13-offshore-windfarms-over-russia-security-fears</u>

#Indo-Pacific

Invasion Plans: Operation Causeway and Taiwan's Defense in World War II https://www.andrewerickson.com/2024/10/china-maritime-report-42-invasion-plansoperation-causeway-taiwans-defense-in-world-war-ii/

This provides a historical context for challenges now faced by China in invading Taiwan - check Parts 5 and 6.

Chinese Amphibious Warfare: Prospects for a Cross-Strait <u>https://digital-commons.usnwc.edu/cmsi-studies/8/</u>

Joint Sword-2024B: Quarantining Key Ports and Seizing Comprehensive Superiority

https://jamestown.org/program/joint-sword-2024b-quarantining-key-ports-and-seizing-comprehensive-superiority/

Is the West prepared to respond to the Chinese positioning themselves (à la the game Go) rather than an outright attack?

#industry #NATO NATO and Its Defense Industrial Base

https://www.rand.org/pubs/commentary/2024/10/nato-and-its-defense-industrialbase.html

#maritime security

CIA Has Secret "Nonviolent" Way To Disable Large Ships: Report

https://www.twz.com/news-features/cia-has-secret-nonviolent-way-to-disable-largeships-report

If suddenly you have a splitting headache and you realize your ship is 'not under command'...

#NORAD #Arctic #Indo-Pacific

The 242nd Meeting of the Permanent Joint Board on Defense <u>https://www.canada.ca/en/department-national-defence/news/2024/11/the-242nd-meeting-of-the-permanent-joint-board-on-defense.html</u>

"The Canadian and U.S. delegations discussed NORAD modernization implementation; Arctic security; climate change; defense cooperation in the Indo-Pacific; Latin America and the Caribbean; and critical minerals."

#planning

Global Catastrophic Risk Assessment

https://www.rand.org/pubs/research_reports/RRA2981-1.html

"This report summarizes what is known about the risks associated with six threats and hazards: artificial intelligence; asteroid and comet impacts; sudden and severe changes to Earth's climate; nuclear war; severe pandemics, whether resulting from naturally occurring events or from synthetic biology; and supervolcanoes."

A Vocabulary of Escalation - A Primer on the Escalation Literature for Military Planners

https://www.rand.org/pubs/research_reports/RRA1933-1.html

#professional military education

The Multi-Domain Operations (MDO) approach to intermediate PME. https://warroom.armywarcollege.edu/articles/competencies-6/

Comments: The authors do an excellent job of distilling down why multi-domain operations is NOT just joint by another name and why PME in this area is so important. "...operating in multiple domains and us[ing] other services' additive capabilities [doesn't mean] they are conducting MDO. MDO provides an overarching maneuver strategy intended to create converging effects across five domains [and] has an enormous impact on the planning and execution competencies taught by PME institutions." They state that the reductionism approach to ambiguity and complexity that surrounds today's planning fails to address the interconnectedness of the system. "PME students need a...MDO educational framework that prepares them to plan and operate in an environment that will eclipse traditional maneuver

constructs...[including] understanding maneuver as a holistic system; using design to distill vision from complexity; and harnessing data to drive decision making in compressed planning, decision, and execution cycles."

OPP is still recognized as a critical tool for MDO, but in conjunction with design to "...generate the vision required to distill clarity from complexity for decisive action."

#reading
Should You Study the Korean War?
https://tacticalnotebook.substack.com/p/should-you-study-the-korean-war

#reading (and research!)
Small Unit Case Studies
https://tacticalnotebook.substack.com/p/small-unit-case-studies-encore

#reading #warfare
The Canon [Encore]
<u>https://tacticalnotebook.substack.com/p/the-canon-encore</u>
with: A Canon for the Officer Corps
<u>https://www.theamericanconservative.com/a-canon-for-the-officer-corps/</u>

#risk management
Global catastrophic risk assessment.
https://www.rand.org/pubs/research_reports/RRA2981-1.html

#Royal Canadian Air Force

SkyAlyne purchases 19 Airbus H135s to train Canadian helicopter pilots <u>https://www.janes.com/osint-insights/defence-news/industry/skyalyne-purchases-19-airbus-h135s-to-train-canadian-helicopter-pilots</u>

#Royal Canadian Navy

Why was Sea Ceptor dumped from Canadian Surface Combatant? https://defenceobserver.ca/2024/11/why-was-sea-ceptor-dumped-from-canadiansurface-combatant/

#Russia-Ukraine War

What does North Korea gain by sending troops to support Russia's invasion of Ukraine?

https://www.forcesnews.com/russia/what-north-korea-gaining-sending-thousands-troops-russias-invasion-ukraine

Russian forces rely on armored vehicles from storage, but they won't last long <u>https://newsukraine.rbc.ua/news/russian-forces-rely-on-armored-vehicles-from-1731551416.html</u>

"...if Russia continues to withdraw tanks and armored vehicles from storage at the current rate, its stockpiles could be exhausted by autumn 2025."

#Russia-Ukraine War #drones

Sea Drones Helping Ukraine Win the Battle of the Black Sea

https://www.geopoliticalmonitor.com/sea-drones-helping-ukraine-win-the-battle-of-the-black-sea/

#Russia-Ukraine War #logistics

Ukraine's Railway Wars: How to Sabotage Russian Military Logistics <u>https://irregularwarfare.org/articles/ukraines-railway-wars-how-to-sabotage-russian-military-logistics/</u>

#Russia-Ukraine War #North Korea

North Korea joins Russia's war against Ukraine: Operational and strategic implications in Ukraine and Northeast Asia.

https://www.understandingwar.org/backgrounder/north-korea-joins-russias-waragainst-ukraine-operational-and-strategic-implications

Comments: This reader took notice of two key takeaways. First, that "the war in Ukraine will change the character of all future wars…" and North Korea's military has not conducted large-scale conventional combat since 1953. Their involvement in Ukraine indicates that they see the war as a learning opportunity; its doctrine is not up to speed for a modern war, "…especially against a sophisticated adversary." Are western states taking enough (the right) lessons? Or will this war have the same fate as the US Civil War, where the empires didn't take enough notice and had to learn the hard way during the Great War? Second, that North Korea's ability to "…absorb, disseminate, and institutionalize lessons learned…" depends entirely on how Russia uses the North Korean forces. An interesting space to watch with potential for farreaching impacts.

#space

Better space: Consolidating the UK National Space Enterprise <u>https://www.geostrategy.org.uk/research/better-space-consolidating-the-uk-national-space-enterprise/</u>

#strategy #reading

The Theoretical Edge: Why Junior Officers Should Study Military Classics https://cimsec.org/the-theoretical-edge-why-junior-officers-should-study-military-classics/

Comment: Strategy should be introduced early to junior officers. Yes, that is much a challenge as they are busy trying to learn the basics of their occupations. But the tactics they are mastering make better sense in the context of operations, and operations in the context of strategy. So, how to do it? The classics can be overwhelming. Maybe there needs to be Cole's Notes to guide them as to what to read/study while they progress through their careers.

#submarines #Australia

Just one Australian submarine is fully operational as aging fleet undergoes urgent maintenance

https://www.abc.net.au/news/2024-11-01/one-australian-submarine-is-fullyoperational-aging-fleet/104551528

Canada is not the only country with issues with SSK. Can't let a capability get old without resulting limits on employability.

#veterans

Veterans may be paying too much for long-term care, analysis shows. https://www.cbc.ca/player/play/video/9.6549934 #war

War = Problem Solving https://democura.substack.com/p/war-problem-solving

My Military Philosophy, 2024 https://militaryphilosopher.substack.com/p/my-military-philosophy-2024

#warfare

Obstructive Warfare: Applications and Risks for AI in Future Military Operations <u>https://www.cigionline.org/publications/obstructive-warfare-applications-and-risks-for-ai-in-future-military-operations/</u>

"Wargames and tabletop exercises might suggest that stand-off warfare and "attacks from above" are the solutions to the challenges of future warfare, but they are actually causing more problems than they are solving."

The Art of War: PRC Weaponizes Culture to Galvanize the People https://jamestown.org/program/the-art-of-war-prc-weaponizes-culture-to-galvanizethe-people/

Add culture warfare to the list of other types of warfare (economic, cyber, etc.).

#wargaming

Kriegspiel on the Eve of War

https://tacticalnotebook.substack.com/p/kriegspiel-on-the-eve-of-war

200 years of Kriegsspiel history - lessons to be learned? https://www.linkedin.com/pulse/200-years-kriegsspiel-history-lessons-learned-joritwintjes-v2iaf

A French View of Kriegspiel (I)

https://tacticalnotebook.substack.com/p/a-french-view-of-kriegspiel-i A French View of Kriegspiel (II) https://tacticalnotebook.substack.com/p/a-french-view-of-kriegspiel-ii A French View of Kriegspiel (III) https://tacticalnotebook.substack.com/p/a-french-view-of-kriegspiel-iii A French View of Kriegspiel (IV) https://tacticalnotebook.substack.com/p/a-french-view-of-kriegspiel-iv

Games for Information Warfare Training

https://www.cna.org/our-media/indepth/2024/10/meet-the-innovator-nolan-noble-ontraining-games

#wargaming #climate change

Wargaming Climate Change: Who Plays for the Red Team? https://warontherocks.com/2022/11/wargaming-climate-change-who-plays-for-thered-team/

Wargaming the Future of Climate Change <u>https://www.rand.org/pubs/articles/2024/wargaming-the-future-of-climate-change.html</u>

Odds and sods...

Important Notice: Disability Pensions for Veterans awarded between 2003 and 2023 https://veteranspensionsettlement.kpmg.ca/

Royal Canadian Navy Our Navy Today Volume 7 Issue 8

https://www.canada.ca/en/navy/corporate/navy-news/our-navy-today/volume-7-issue-8.html

Decoys

Next-Generation Decoys for the Marine Corps <u>https://warontherocks.com/2024/11/next-generation-decoys-for-the-marine-corps/</u>

Look closely, that's a rubber tank...



Chaplain General Direction on Chaplain's Spiritual Reflection in Public Settings

There've recently been posts by the Opposition and MND on the subject. See:

Bill Blair @BillBlair 8 Nov (thread:

<u>https://x.com/BillBlair/status/1854983294791585908</u>): This is complete nonsense. Any suggestion that our Chaplain General banned prayer is disrespectful to the excellent work that our chaplains do in tending to the spiritual wellbeing of all members of the Canadian Armed Forces.

and

Bill Blair @BillBlair 9 Nov (<u>https://x.com/BillBlair/status/1855280069742092781</u>): As Minister of National Defence, let me be unequivocally clear: the directive that the Chaplain General independently developed and published in October 2023 does not, and never did ban prayer. Please see my statement below.

The Chaplain General Direction (2023) is at: <u>https://www.canada.ca/en/department-national-defence/services/benefits-military/health-support/chaplain/chaplain-general-direction-on-chaplain-spiritual-reflection-in-public-settings.html</u>



CDS/DM message on the second directive for CAF reconstitution

October 31, 2024

Team,

Today, we issued the <u>second Defence-wide directive</u> on Canadian Armed Forces (CAF) reconstitution. Our primary goal remains to strengthen military readiness to support the CAF's ability to deliver strategic effects directed by the Government of Canada now and into the future. This goal is reinforced in Canada's defence policy update – <u>Our North, Strong and Free</u>.

We've made progress to modernize the recruitment process since the initial directive was released in fall 2022 due to your ongoing efforts, such as:

- Launching trials to speed up the application process and improve onboarding;
- Introducing new measures to shorten the time it takes to do necessary medical and security screenings; and
- Enhanced advertising and attractions activities, including increased face-toface and targeted recruiting.

This directive refines and prioritizes the most critical recruitment and retention initiatives to recover personnel strength and rebuild the CAF. It builds upon the foundation established by the first directive, and by applying lessons learned in the first 18 months, the second directive aims to effectively balance priorities and adapt to the evolving environment.

Some of the new reconstitution initiatives going forward include:

- Working to create a probationary period to more quickly enroll applicants;
- Investing in more quality-of-life supports for military families including affordable childcare, rehabilitating existing housing, and building new housing; and
- Accelerating the development of an electronic health record platform to support the mental and physical well-being of our people.

We encourage all Defence Team members to read the directive. Leaders at all levels need to continue to engage regularly with their teams about reconstitution, why it matters, and how their work contributes directly or indirectly to making us a stronger, more effective organization. We'll continue to review, refine, and adjust our reconstitution approach. We'll keep pressing forward with a sense of urgency until we reach our target strength of 71,500 Regular Force and 30,000 Primary Reserve members, and lay the foundation for future growth.

General Jennie Carignan Chief of the Defence Staff Stefanie Beck Deputy Minister

SAC Notes

O Canada

It was announced this week that Canada will have a new Arctic Policy and has pushed for an indigenous forum to help define this issue. Once again Canada's action when confronted by its lack of effective action in the North is to "bafflegab" ineffectively to indicate our sovereignty over large patches of the North. Our claims in the North are not universally supported. This includes the United States which appears to have elected a government that will not give Canada a "free pass." China and Russia fully intend to exploit the Arctic as they see fit. Canada has no friends on this issue. We haven't even completed a single base in the region. It is expected that Canada will be facing an increasingly complex situation in the Arctic and it isn't prepared to deal with the results.

This problem leads to the role of the Canadian Armed Forces (CAF). In past SAC Notes, the need of the CAF is to provide deterrence and an effective lethal response if deterrence fails. Canada has also failed on this issue as well as the CAF has gotten used to taking a year or more to prepare forces for a deployment. This is not reasonable for an emergency. Ready forces must be available 24 hrs a day/365 days per year and be capable of deploying within 24 to 72 hrs examples of this thinking were found in the Special Service Force where one found an airborne and an air portable battle group. These units trained every day for their mission and practiced their role for either the Arctic or Northern Europe and there was no theatre mission specific training lasting a year. This was not ideal either, but it is certainly much more realistic than the current situation in dealing with the Arctic. Some reconstitutions of these types of units should be considered for the task to the North whether in Canada or Northern Europe.

In relation to so many of the promises by the current government, most have no money attached to make them an actual programme whether new aircraft, new ships and submarines, new air defence systems and new vehicle types are all needed but most supporting efforts to make this occur are bogged down in bureaucracy. Canada should consider reconstituting Canadian Arsenals Limited as one stop shopping for all military procurement. The current system simply is not effective in providing equipment or resources in a timely fashion. One stop shopping with oversight by the Auditor General might alleviate some of the glacial pace that procurement takes.

Canada is acquiring a reputation for allowing terrorist groups to operate freely inside our country. The Air India disaster was perpetrated by the Khalistani separatist movements in the early days. India apparently asked Canada to act, however, this was not followed up. The lack of success in the prosecution of the alleged bombers also seemed to take the thought of any action against the Khalistani movement away. We now have various supposedly pro-Palestinian movement organized by elements now considered to be terror organizations. Some known members continue to be free despite being declared as criminal organizations. Canada seems to be guilty of supporting known terror groups.

The last point for this week although there are many more points from a Canadian perspective is the foreign interference inquiry and the announcements of the identity of five politicians identified by independent MP Kevin Vuong as being wittingly or unwittingly been associated with the Chinese communist Party's (CCP) United Front or propaganda arm of the CCP. This news conference can be found on You Tube at link: https://www.youtube.com/watch?v=G8pX5kttgdc

The main contributor to this information was freelance reporter Sam Cooper who was also a key participant in the news conference. He is the author of "Willful Blindness" which covers aspects of the Chinese inference in Canadian politics. The general point is that China, not India is the primary concern in dealing with interference in Canadian politics. The persons named as being wittingly or unwittingly involved are:

Senator Yuen Pau Woo Trudeau appointee - willful agent of the CCP;

Senator Victor Oh Conservative Senator – willful agent of the CCP;

Ding Guo reporter, - an alleged United Front operative;

Minister Mary Ng, Liberal Party- unwitting participant in United Front activities; and

Minister Parm Baines – a willing participant in CCP United Front activities.

The US election is over, yet there are comparisons to our own political landscape. One must wonder about what is taught in schools about our own system of government that anyone can even remotely compare the two systems. Despite the rhetoric, the Conservative Party is to the left of the US Democratic Party just for a start. There is no real argument about abortion in Canada and a woman's right to choose. Nor is there any argument about the provision of medical services to Canadians no matter what party. We cannot equate US issues with our own, we have our own issues that are ours and will be dealt with by Canadian citizens who are taxpayers. No party has a monopoly on good ideas and no party is exempt from creating bad policy. Most politicians are there for the right reasons, and many get disillusioned by dogmatically following Party lines all the time again no matter what party. The bottom line is that Canada has a very different system, and it generally works for us. The US has their own system that they use and like, but it is very different.

Australia

Some interesting articles by our Australian correspondent. Australia is developing new strategies and therefore development of infrastructure to support these concepts and programs. Canada could learn many lessons from their efforts.

https://psnews.com.au/momentous-deal-sealed-between-wa-and-federal-governmentsover-defence-precinct-at-henderson/147029/

Attached is a story in today's press about the new naval precinct for the greater Perth region.

https://www.usni.org/magazines/proceedings/2023/december/you-cant-win-withoutmore-submarines

The referenced article is a cause for concern.

https://www.abc.net.au/news/2024-11-01/one-australian-submarine-is-fullyoperational-aging-

fleet/104551528?utm_source=abc_news_app&utm_medium=content_shared&utm_ca mpaign=abc_news_app&utm_content=other

There is little good news from the RAN on the state of their subs.

https://www.abc.net.au/news/2024-11-04/australian-military-satellite-program-facesthe-

<u>axe/104557112?utm_source=abc_news_app&utm_medium=content_shared&utm_ca_mpaign=abc_news_app&utm_content=other</u>

Money for defence seems to be in short supply.

https://www.abc.net.au/news/2024-11-04/what-the-us-election-might-mean-foraustralia/104554684?utm_source=abc_news_app&utm_medium=content_shared&ut m_campaign=abc_news_app&utm_content=other Australian nervousness about the US election.

https://www.abc.net.au/news/2024-11-05/indonesia-military-exercises-russiaaustralia/104561198?utm_source=abc_news_app&utm_medium=content_shared&ut m_campaign=abc_news_app&utm_content=other

Indonesia is really pushing its luck with this decision to conduct military exercises with Russia and Australia. I realize neutrality is a balancing act, but common sense seems lacking in Jakarta.

https://www.internationalaffairs.org.au/australianoutlook/climate-change-a-growingthreat-to-australias-national-security/

This is an interesting article. I don't see it as an imminent threat, but it is not a far distant threat. The coastal areas and southern areas of the land mass are probably better off. The interior and north bear greater risk in the short and long terms.

https://www.aspistrategist.org.au/northern-deterrence-demands-full-use-of-civilianinfrastructure/

Attached is an interesting short article about useful military facilities in North Australia. It has some similarities to northern Canada.

https://www.abc.net.au/news/2024-11-08/japan-and-germany-shortlisted-foraustralia-warship-

program/104575738?utm_source=abc_news_app&utm_medium=content_shared&ut m_campaign=abc_news_app&utm_content=other Japan or Germany will supply the next frigates to the RAN.

https://www.australiandefence.com.au/news/news/sea-3000-reportedly-down-togermany-and-japan?utm_medium=email&utm_campaign=ADM+Today+-+11+November+2024&utm_content=ADM+Today+-

+11+November+2024+CID_16a4e7ce05264b8270a067a8894bda8f&utm_source=Em ail+marketing+software&utm_term=HMAS

11 new frigates for the RAN planned.

https://www.australiandefence.com.au/news/news/industry-responds-to-new-henderson-precinct

Morr details on the Henderson, WA shipbuilding precinct.

https://www.australiandefence.com.au/news/news/industry-critical-for-aukussubmarine-delivery

More info on the Australian submarine plan.

https://breakingdefense.com/2024/11/alarming-but-not-surprising-australiareportedly-left-with-1-operational-sub-amid-repairs-upgrades/ Old subs are failing down under.

https://news.usni.org/2024/09/02/royal-australian-navy-hiring-maintenance-workersahead-of-more-u-s-submarine-visits

The attached updates the start of work on USN sub repairs here.

https://www.aspistrategist.org.au/seven-things-for-britains-aukus-review-to-fix/ Aukus needs some changes to be effective.

United States

Donald J. Trump was elected as President of the United States by the electoral college and by popular vote. It was the decision of the American electorate as it should be, no matter what we think. It was and is their decision and the rest of the world will have to live with it and the potential fallout.

Enough said about the US this week.

Israel-Iranian War

I served nearly two years in the Middle east. I have very strong opinions formed by my observations and witnessing certain activities which preclude me being totally unbiased. One side has genocidal goals, and it is written in their equivalent of their founding documents. Hint it is not Israel. Iran has created many proxies including Hezbollah, Hamas, the Houthis, various other smaller factions found in Syria, and Iraq. Iran has called for the eradication of Israel or rather as they call it, the Zionist entity. The shout "from the river to the sea" has actual genocide in mind. I cannot be complacent about people who suggest this type of action. Israel is not committing genocide, but Hezbollah and Hamas both use civilians as human shields.

The UN has proven itself useless and unable to perform its most basic duty. In both Gaza and Southern Lebanon, civilian houses and places normally protected by the

Geneva Conventions have been violated. One wonders if the UN can be recovered?

According to the Economist, Israel's strikes on Iran were more effective than previously thought including the destruction of most of Iran's most effective air defence system, the Russian built S 300. All four batteries were destroyed or badly damaged. Iran does have locally produced air defence systems called "Talesh" however they were ineffective against Israeli attacks. More importantly, Israel also struck production of missile fuel which will prevent Iran from easily replacing the more than 300 ballistic missiles used in its two attacks and the missile and rocket losses in Lebanon. Iran is hurt but it is not stopping its rhetoric, they have pledged a counterattack. Iran is likely to take time to view its options. Its proxies are badly hit and the loss of material and trained manpower will have an impact in the near term.

Iranian calls for all Muslims to attack the Zionist entity seem to have fallen on deaf ears so far. In the longer term they will rebuild but this could take several years. Keep in mind the regime is only supported by 8% of the population with an aging and very ill leader and factions waiting for an opportunity to take over. It is not a recipe for future success.

Moldova

Pro-Western Moldovan President Maia Sandu was reelected on 3 November 2024 beating her pro-Russian candidate by slightly more than 10%. The referendum on joining the EU also passed but by the narrowest of margins as well despite a massive effort by the Putin Regime.

Moldova summoned the Russian Ambassador on 12 November 2024, to protest Russia's interference in Moldovan affairs during the election implicating Ilan Shor and the Russian Government in specific actions such as the attempt to buy 300 k votes. Just a reminder, the bribe averaged \$84.USD per vote before the agents were arrested. Second, Russian Government accusations about the conduct of the election saying it was unfair and illegal. Russia does not view Sandu as the legitimate President. Lastly to protest the violation of Moldovan air space by Russian drones this weekend according to Reuters. As expected, Russia denied everything; what a surprise!

Moldova has new agreements with both France and Romania to assist in security matters and to assist the development of the Moldovan armed forces. Russia may find Moldova an increasingly difficult target as relations with other European powers continue to develop.

Belarus

Belarus has now been selected as a BRICS partner. This is considered by the Regime as a major diplomatic achievement. Belarus has been going virtually everywhere to develop relations with any country that is willing to have some form of connection whether possible or not. Lukashenko himself said he would like to reconnect with Europe but has had no takers. Lithuania has increased trade with the orphan country.

Up to ten drones passed through Belarus airspace this last weekend on the evening of

9/10 November 2024 during Russia and Ukraine's massive attacks on each other's infrastructure. Russia attacked general infrastructure Ukraine attacked specific targets.

Belarus is participating in COP 29 in Azerbaijan this week. Their comments cover three areas of their concern: first the change in climate has forced various industries to adapt, such as agriculture. Belarus has been able to develop some corrective actions and is happy to help other nations. Second, political tensions should not be a barrier to access to modern, safe green technologies and third, concern over some new developments that are as harmful or more harmful to the environment. There needs to be better testing and focus to prevent unsafe products entering the market, especially ones touted as green.

As one looks at Belarus actions one can see a pattern of trying to develop new relationships outside of the Russian sphere. It is deliberate and ongoing. It seems to be a major policy to avoid the war yet at the same time find an alternative to Russia's disastrous war effort. Lukashenko seems well aware that Russia's economy is near collapse; he needs an alternative that allows him to retain power. Can he do it? Yes, in the near term, no, in the longer term. If Russia's economy implodes, he wants options.

The Russia Ukraine War

An increasing number of analysts are now claiming the Russian economy is finally starting to collapse. It had been held up by extensive reserves of cash and careful actions by the Governor of the Russian Federation Central Bank, Elvira Nabiullina. Russia has transformed the economy to a war economy. It includes high levels of employment, inflation, high interest rates, skill shortages, and increasing scarcity coupled with plunging quality of consumer goods. The economy produces very little that creates wealth. The interest rate is already well beyond the capacity of businesses to borrow money yet still make a profit; thus, even large well-funded companies are seeing the potential for bankruptcy. Interest rates are supposed to climb as high as 24% possibly as early as the end of the year.

The magazine Force Index in a May 2024 article specifies that Russia is on track to build up to 20 SU 35s and up to 14 SU 57. Both are complex aircraft requiring access to Western technology. In late summer of 2024, there were rumours that SU 57 production would be halted in favour of older but well-tried models such as the SU 30 variants, SU 34 bombers, and SU 35 variants. Although some would be used by the Russian Federation some would be sold or even bartered for access to weapons such as drone technology from Iran. The question is how many of these aircraft produced will be used by the Russian Federation? In the past, tranches of only two aircraft, each of SU 34 and SU 35 were produced early this year and delivered over a three-month period. It would seem to indicate thus giving a total production of around 12 to 14 max at that rate of each type. A later article specifies a "fleet" of SU 35 and SU 57 aircraft were delivered without giving specific numbers. According to Defence News, they were only able to produce ten in 2022 and eleven in 2023. The current contract sees the production of a total of 76 aircraft to be formed into three squadrons. Sanctions were affecting avionics and engine production.

The real issue is whether Russia can continue its losses whether it be tanks, ships or aircraft coupled with the increased losses in trained crews. The answer is probably no.

Russia is at a turning point; will its economy sustain the effort much longer? The economy is deteriorating almost daily, and the population will feel it. Will they continue to support a war that seems increasingly to be unwinnable, and will Russia overcome its pariah status?

Ukraine continues to fight well, imposing massive personnel and equipment casualties. More importantly, new equipment is arriving. The EU has produced or acquired nearly all the ammunition it promised. The number of F 16s delivered will be between 16 and 20 total with 69 more to come. Two new corvettes are undergoing workup training in Turkish waters. New long-range missiles are arriving from the French. Ukrainian domestic production is increasing especially in drones but also in artillery pieces, armoured vehicles ammunition and according to president Zelenskiy, more than 100 new ballistic missiles have been produced. Despite Trump's election it is increasingly clear that most European countries know that a ceasefire with the current lines in place is a recipe for an even greater conflict. Still Ukraine is losing terrain that will be costly to lose.

Ukraine is badly hurt. Its power generation infrastructure is badly damaged and although it has EU and other foreign help, it will not be sufficient to deal with this winter at present. Ukraine has developed the long range means to hit Russian targets up to 1800 kms away. Late last week two Russian patrol ships were damaged by Ukrainian drones in the Caspian Sea as one example. Other targets included oil facilities including storage and refining and ammunition production sites. Although, the Russians denied the attacks local Russian citizens filmed and uploaded the video. It is hard to lie and deception plans have to be more elaborate. Social media tells all admittedly in half-truths, disinformation, rumours as well as good information. Info reliability becomes an essential element.

The ground war seems to be static with no side achieving major gains. Russian casualties have been high and one estimate places Russian personnel losses over 40 k just for October and November appears to be very much the same. North Korean troops have arrived in the Kursk oblast and have suffered significant losses in their first operations.

China

China's economy continues to decline in real terms. Most of the major parts are undergoing difficult times and are not being aided by an effective government, China continues to use exports, and over production capacity to grow the economy. Most economists now suggest that China needs a major restructure that creates conditions for a consumer driven economy. This is a concern to the CCP as it also means that they will be unable to control all aspects. Xi's regime has taken care to bring the economy back into the control of the CCP and central planning. Consumers would now be a "wild card."

In the past two years, private property development firms have generally failed partly because the model they used was more in line with a "Ponzi Scheme" rather than sound economics. It also gave rise to a hidden financial system that was essentially uncontrolled with one firm lending to another. It was a "shell game" of "where is the actual money?"

Over building and over production have created other issues such as too many houses, too much infrastructure and limited ability to maintain this increasing supply of unnecessary, unproductive sites including huge airports, fast rail to nowhere, a large military with a lot of equipment, huge fleets without the ability to maintain them and the list goes on; it is unsustainable and in the longer term will cause further instability within the economy. China's 94 k dams are wearing out and some have collapsed with dire results. The Three Gorges dam was apparently badly built and is showing signs of possible collapse and that is a relatively new dam. Most dams were built in the 1950s and 60s and are now requiring replacement or controlled demolition. Just this one area is cause for major concerns. Infrastructure requires maintenance and resources to fund improvements and modernization. China does not seem to have thought of this issue.

The CCP also cracked down on private successful entrepreneurs who created wealth. Most new jobs were created by private enterprises and non-state-owned enterprises. Again, the CCP saw this a threat especially after several criticized key regulatory but CCP bodies. It led to the arrest and incarceration of successful entrepreneurs. Many were forced to either give money to the CCP as 'fines'' or to sign over large portions of their companies.

The CCP also attacked whole sectors such as the private education sector and most recently, even the "Mom and Pop" delivery organizations which made small amounts individually but large amounts as a group. The internet was filled with images of police seizing scooters and bikes from small-time entrepreneurs; it did not go over well with the public. Again, these small businesses would lead to a level of independence. Provincial leaders used security forces to seize scooters and bikes used for this type of employment.

Last week, the hidden debt was estimated to be around 60 T Yuan on top of provincial, autonomous cities and national government debt already estimated to be 300+% of GDP. Now the CCP also has to face a new Trump administration that is likely to impose more putative tariffs of 60% on all Chinese goods. The question is whether China has any way to cushion the potential blow on top of its badly damaged economy? The Economist staff suggests it does. More local sources say the bank is empty except for printing more money. It is not a recipe for success.

China continues to be aggressive against most of its neighbours especially Bhutan and in the South China Sea. Xi must be looking at the future, does he act aggressively now before a Trump administration takes over? Trump has suggested that he will not enter a war while in power, this being said, Trump is also known to be unpredictable particularly if someone makes him look bad.

China also has a rogue North Korea to contend with at present one that is actively supporting Russia's war in Ukraine. This is out of China's control, something that is a potential source of instability. Would North Korea take a more aggressive action to unify the Korean peninsula especially as the rhetoric and actions seem to indicate a more aggressive stance. South Korea has also taken a more aggressive stance firing ballistic missiles in tests recently. It is a problem for a country that likes control and stability.

The bottom line is that China is facing the unknown. The CCP's ability to control the situation is less and its internal popularity continues to deteriorate although it would be impossible for any opposition to succeed at present, but an internal faction is a different story. There seem to be very few bright lights for the current regime.