



Royal United Services Institute of Nova Scotia Dispatches

20 July 2018

Dispatches is a weekly collection of links and news of current interest, included those tweeted and posted by the Institute on social media. Everyone is encouraged to submit links and other content to the Institute's Chief Information Officer (CIO) at RUSINovaScotia@gmail.com to be included in *Dispatches*. Comments can be from members or non-members of RUSI(NS). If you do not want to receive *Dispatches*, or wish to receive it at some different frequency, please inform the CIO. Feedback is welcome anytime.

RUSI(NS) also publishes a weekly Defence & Security Newsletter, aimed at opinion leaders and industry. If you are interested in receiving the newsletter, email admin@duncom.ca.

Events: (To list an event into *Dispatches*, email the CIO by noon Thursday.)

28 July, Saturday – Naval Museum of Halifax Garden Party. Noon to 2 pm, Naval Museum of Halifax, Stadacona, CFB Halifax.

1 to 3 August, Wednesday-Friday – Shearwater 100th Anniversary, celebrating Shearwater as birthplace of maritime aviation in Canada and the introduction of a century of service by all those who served there. Event details and registration at: <http://www.shearwater100.com/>

29 August, Wednesday – RUSI(NS) Distinguished Speaker Robert Brooks, Canadian Coast Guard Safe Shipping & Economic Intelligence, speaking on "Arctic Priorities: Opportunities For The Canadian And Global Arctic." 1130 hours. Royal Artillery Park Officers' Mess

Tweeted by @RUSI_NS: Original article title in parentheses. [RUSI(NS) tweets may be viewed by clicking on the Twitter icon at <https://RUSI-NS.ca>. To have something tweeted or retweeted, email the CIO by noon Thursday.]

"Maritime presence: Canadian naval operations in European waters" <https://ml-fd.caf-fac.ca/en/2018/06/14441> #RCNavy has no concerns in meeting commitments in Europe, not a force generation challenge because it's such a high priority #NATO @RCN_MRC @CFOperations



“Canada And NATO: An Alliance Forged In Strength And Reliability” Report of the Standing Committee on National Defence

<http://www.ourcommons.ca/Content/Committee/421/NDDN/Reports/RP9972815/nddnrp10/nddnrp10-e.pdf>



CANADA AND NATO: AN ALLIANCE FORGED IN STRENGTH AND RELIABILITY

Report of the Standing Committee on National Defence
Stephen Fuhr, Chair



JUNE 2018
42nd PARLIAMENT, 1st SESSION

Canadian Global Affairs Institute @CAGlobalAffairs 15 Jul tweeted and RUSI(NS) retweeted: What are #China's ambitions in the North American #Arctic? Our @lindsaylrodman lays it all out in her newest commentary:

<http://diplomatonline.com/mag/2018/07/chinas-ambitions-in-the-north-american-arctic-by-lindsay-l-rodman/>

(China’s ambitions in the North American Arctic)



CAF Operations @CFOperations Jul 14 tweeted: Medical personnel play a crucial role on operations. Personnel deployed on #OpPRESENCE – Mali show off the medical branch flag at the new Role 1 facility in Gao, Mali.

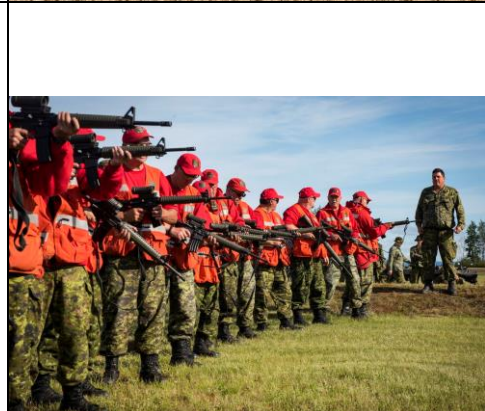
RUSI(NS) retweeted: Role 1 medical support = integral/allocated to small unit. Provides 1st aid, immediate lifesaving measures&triage. Health&well-being thru guidance in prevention of disease, non-battle injuries&op stress. Routine sick call, management of minor sick&injured pers for return to duty



CAF Operations @CFOperations 16 Jul tweeted: #OpNANOOK 2018 starts today along the #NorthwestPassage. An @RCAF_ARC CC-138 Twin Otter aircraft and ~50 Canadian Rangers of the @CanadianArmy are deploying to work with governmental partners <https://bit.ly/2KtFiZA> This is how we’re strong, secure and engaged in Canada’s north pic.twitter.com/JgjSf0d0Ra

(Operation NANOOK: Towards a new North <https://ml-fd.caf-fac.ca/en/2018/07/152490>)

RUSI(NS) retweeted: Operation NANOOK #OpNANOOK <http://www.forces.gc.ca/en/operations-canada-north-america-recurring/op-nanook.page> @CanadianForces guards CAN🇨🇦 sovereignty; improves operating in #Arctic; improves coord w Indigenous, fed & territorial gov'ts & northern partners; works w partners to respond better to safety & security issues in North



Steve Daly @SteveDaly 15 Jun 26 replying to @RUSI_NS: I read somewhere that the cost of on ISI shutdown is approximately \$350M. If we subtract that lost money from the cost of a 6th AOPS it becomes cheap to buy that vessel. We should also be looking at a sister for Asterix and a dedicated HADR vessel.

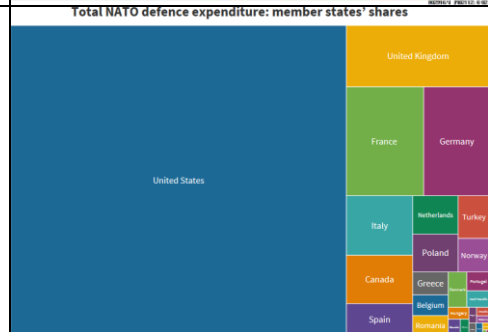
RUSI(NS) retweeted: "Why Canada Needs a Humanitarian Assistance and Disaster Relief Ship" www.navalreview.ca/wp-content/uploads/public/vol13num1/vol13num1art1.pdf by @IrvingShipbuild President. Increasingly HADR ships are vessels of #defenceDiplomacy



CDA Institute @CDAInstitute 16 Jul tweeted and RUSI(NS) retweeted: Canada's Shifting Strategic Circumstances | David M. Law (<https://cdainstitute.ca/law-canadas-shifting-strategic-circumstances/>)



"Total NATO defence expenditure: member states' shares" <https://www.iiss.org/blogs/military-balance/2018/07/us-and-nato-allies-costs-and-value> Another way to measure contributions than 2% GDP. Canada 2.157% "...the argument over burden sharing is not as clear-cut..." Apples & oranges



Capability like Containerized Ice Making System would be good (dare I write cool?) to have as part of humanitarian assistance/disaster response pack-up kits https://www.army.mil/article/208532/army_researchers_advance_ice_making_system Also to embark in #HADR ships. Does @CanadianForces have? #logistics



(Army researchers advance ice making system)

.@CAGlobalAffairs "The Context of Canadian Defence Policy"
https://www.cgai.ca/the_context_of_canadian_defence_policy
"gov't must choose between retaining self-imposed neutrality adopted decades ago & creating an armed state that will stand up for itself & its allies in this era of growing great power competition"



Posted on Facebook Royal United Services Institute NS with comments:

The launch this weekend past in the UK of RRS SIR DAVID ATTENBOROUGH allows some reflection on foreign ship naming practices in the context of naming of Canadian ships in recent years (and hopefully of 15 Canadian Surface Combatants in the not-too-distant future). Certainly the launch and the naming furor that preceded it led to a large number of news stories in the UK (see <http://www.newsnow.co.uk/h/Entertainment+&+Arts/TV/TV+Celebs/Sir+David+Attenborough>).



First, a couple years ago, an example article about the misstep when the UK government opened naming the ship to public voting: "Boaty McBoatface rejected as name of polar research vessel in favour of Sir David Attenborough" (<https://nationalpost.com/news/boaty-mcboatface-rejected-as-name-of-polar-research-vessel-in-favour-of-sir-david-attenborough>).



Then, some articles about the launch:

David Attenborough launches Boaty McBoatface into the Mersey
<https://metro.co.uk/2018/07/14/david-attenborough-launches-boaty-mcboatface-mersey-7716809/>

Watch the ship people voted Boaty McBoatface launched by Sir David Attenborough
<http://home.bt.com/news/science-news/watch-the-ship-people-voted-boaty-mcboatface-launched-by-sir-david-attenborough-11364283778157>

RRS Sir David Attenborough Launched (this article is sedate/professional compared to many other articles.)
<https://maritime-executive.com/article/rrs-sir-david-attenborough-launched#gs.Cc9woP0>

Comments:

1. The public poll soliciting a name for the ship resulted in "Boaty McBoatface" (apparently a reference to a British TV character?) being voted the most popular. Propriety must be ensured in government ship namings, they are after all representations of the state, else the 'humour of the crowd' may prevail. The Halifax Regional Municipality appreciated the possibility with its ferry namings and allowed voting only on a slate of names municipal staff had selected in advance. The flip side to facing a humorous name is a name with inappropriate but at-the-time-of-naming unknown historical links.

2. Once a misstep is made in a naming, the media will not forget it and will not allow it to be forgotten. Government communications staff will have to grin and bear it. Best to avoid it all in the beginning.




3. The ship name prefix RRS is used in many articles but not explained. Not something readily known by those who are not British (and maybe many of them). Royal Research Ship. Canada has a more limited selection of ships prefixes, e.g., HMCS, CCGS (Her Majesty's Canadian Ship, Canadian Coast Guard Ship), but at least they are probably more widely known.

4. There were valiant effort by UK officials (a good Canadian-ish move, viz the 2010 Winter Olympics) to try to turn the misstep into something positive by naming an onboard drone Boaty McBoatface. Back to point 2 though - the media won't let the matter by.

The Royal Canadian Navy and Canadian government has a naming process that works, even if at times it results in politicized names. Naming of the Canadian Surface Combatants (CSC) should receive careful attention. Nothing wrong with public participation as long as the seriousness of the action is appreciated. It would be nice if the CSC names were announced early in the shipbuilding process, as the Australians recently did with their Hunter-class frigates, but it is more likely the name announcements will be used in Canadian government messaging somewhat later.

A proposal: name the CSC after Canadian indigenous peoples. There are many famous indigenous names already in Canadian naval history.

Posted on Facebook Royal United Services Institute NS: [RUSI(NS) postings may be viewed by clicking on the Facebook icon at <https://RUSI-NS.ca>. To have something posted or commented, email the CIO by noon Thursday.]

<p>Russia admits defeat on its 'stealth' F-35 killer by canceling mass production of the Su-57 fighter jet</p> <p>http://www.businessinsider.com/russia-admits-defeat-su-57-not-going-into-mass-production-2018-7</p>	
<p>See Israel hit Syrian posts, drone that breached its airspace</p> <p>https://www.defensenews.com/global/mideast-africa/2018/07/12/see-israel-hit-syrian-posts-drone-that-breached-its-airspace/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2013..07.18&utm_term=Editorial%20-%20Early%20Bird%20Brief</p>	
<p>The Coming Split in NATO</p> <p>https://www.defenseone.com/ideas/2018/07/coming-split-nato/149666/?oref=defenseone_today_nl</p>	

U.S. Envoy to NATO: A Washington Insider Caught Between Trump and a Hard Place

<https://foreignpolicy.com/2018/07/11/u-s-envoy-to-nato-a-washington-insider-caught-between-trump-and-a-hard-place-kay-bailey-hutchison-ambassador-to-alliance-transatlantic-defense-spending/>



Canada to provide up to 25 personnel for NATO AWACS program

<https://ottawacitizen.com/news/national/defence-watch/canada-to-provide-up-to-25-personnel-for-nato-awacs-program>



Second group of RCAF helicopters in Iraq to operate from Taji Military Complex

<https://ottawacitizen.com/news/national/defence-watch/second-group-of-rcaf-helicopters-in-iraq-to-operate-from-taji-military-complex>



NATO emerges battered, bruised but still alive after tense summit

<http://www.meadowlakenow.com/article/609439/nato-emerges-battered-bruised-still-alive-after-tense-summit>



Donald Trump showdown at the NATO summit, a journalist's perspective.



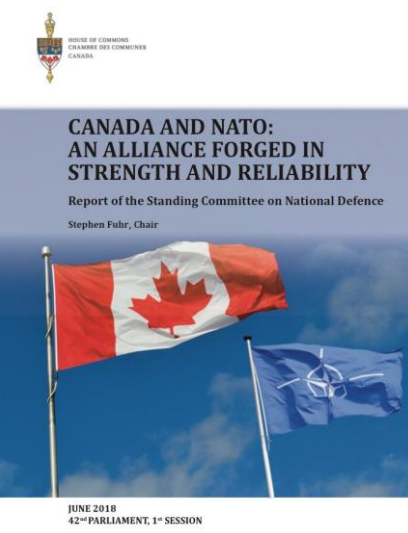


<http://www.meadowlakenow.com/article/609451/donald-trump-showdown-nato-summit-journalists-perspective>



SkyGuardian UAV embarks on milestone transatlantic flight

<https://newatlas.com/skyguardian-embarks-transatlantic-flight/55398/>



<p>Canada confirms spy planes acquisition plan</p> <p>https://defence-blog.com/aviation/canada-confirms-spy-planes-acquisition-plan.html</p>	
<p>PHOTOS: New Cyclone showcased in Halifax ahead of deployment</p> <p>http://thechronicleherald.ca/novascotia/1583888-photos-new-cyclone-showcased-in-halifax-ahead-of-deployment</p>	
<p>CANADA AND NATO: AN ALLIANCE FORGED IN STRENGTH AND RELIABILITY</p> <p>http://www.ourcommons.ca/Content/Committee/421/NDDN/Reports/RP9972815/nddnrp10/nddnrp10-e.pdf</p>	 <p>HOUSE OF COMMONS CHAMBRE DES COMMUNES CANADA</p> <p>CANADA AND NATO: AN ALLIANCE FORGED IN STRENGTH AND RELIABILITY</p> <p>Report of the Standing Committee on National Defence Stephen Fuhr, Chair</p> <p>JUNE 2018 42nd PARLIAMENT, 1st SESSION</p>
<p>New Cyclone helicopter takes to the skies before first international deployment</p> <p>https://www.cbc.ca/news/canada/nova-scotia/new-cyclone-helicopter-flies-before-first-international-deployment-1.4746053</p>	
<p>Farnborough Airshow: Brexit and bulging order books dominate</p> <p>https://www.bbc.com/news/business-44824336</p>	

New Canadian Forces radar worth more than \$200 million can't be linked in with NATO networks

<https://nationalpost.com/news/canada/new-canadian-forces-radar-worth-more-than-200-million-cant-be-linked-in-with-nato-networks>



Is the US NATO's piggy bank? Here's what America gives and takes

"Trump seems to be doing everything Putin wants him to do and why he is doing that is still a mystery to many people, including many people in Trump's own government," von Hippel said.
[CNN](#)

<https://rusi.org/in-the-news/us-natos-piggy-bank-heres-what-america-gives-and-takes>



Chinese spy ship eyes RIMPAC

http://www.staradvertiser.com/2018/07/12/breaking-news/china-sends-spy-ship-to-rimpac/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2016.07.18&utm_term=Editorial%20-%20Early%20Bird%20Brief



Israel again fires Patriot missile at drone from Syria

https://www.defensenews.com/global/mideast-africa/2018/07/13/israel-again-fires-patriot-missile-at-drone-from-syria/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2016.07.18&utm_term=Editorial%20-%20Early%20Bird%20Brief



Jim Mattis' 'dynamic force employment' concept just got real for the US Navy

https://www.defensenews.com/naval/2018/07/16/jim-mattis-dynamic-force-employment-just-got-real-for-the-us-navy/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2017/17/18&utm_term=Editorial%20-%20Early%20Bird%20Brief



Macron signs French military budget into law. Here's what the armed forces are getting.

https://www.defensenews.com/global/europe/2018/07/16/macron-signs-french-military-budget-into-law-heres-what-the-armed-forces-are-getting/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%207/17/18&utm_term=Editorial%20-%20Early%20Bird%20Brief



Japan to provide peacekeeper training for ASEAN nations in bid to counter China's growing presence

https://www.japantimes.co.jp/news/2018/07/16/national/japan-provide-peacekeeper-training-asean-nations/?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%207/17/18&utm_term=Editorial%20-%20Early%20Bird%20Brief#.W04Q4LgnaHs



TAPVs for Canada's new Iraq mission?

<https://ottawacitizen.com/news/national/defence-watch/tapvs-for-canadas-new-iraq-mission>



'Chronic' but solvable: Why is the majority of French military helos 'immobilized'?

https://www.defensenews.com/global/europe/2018/07/17/chronic-but-solvable-why-is-the-majority-of-french-military-helos-immobilized/?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB-7-18&utm_term=Editorial%20-%20Early%20Bird%20Brief



Iran files suit in international court against U.S. over sanctions







https://www.reuters.com/article/us-iran-nuclear-usa-sanctions/iran-files-world-court-suit-against-u-s-over-new-sanctions-idUSKBN1K71WU?utm_source=Sailthru&utm_medium=email&utm_campaign=EBB-7-18&utm_term=Editorial%20-%20Early%20Bird%20Brief









NATO Already Vastly Outspends Russia. Its Problems Are Not About Money.

https://www.defenseone.com/ideas/2018/07/nato-already-vastly-outspends-russia-problem-not-money/149801/?oref=defenseone_today_nl



<p>Trump trashes allies, then wants them to buy U.S.-built defence equipment</p> <p>https://ottawacitizen.com/news/national/defence-watch/trump-trashes-allies-then-wants-them-to-buy-u-s-built-defence-equipment</p>	
<p>RAF Centenary Flypast Buckingham Palace 10 July 2018 BBC Coverage</p> <p>https://www.youtube.com/watch?v=xnSVVcgntyc</p>	
<p>Joint Strike Missile</p> <p>https://www.raytheon.com/capabilities/products/jsm</p>	
<p>Slovakia selects F-16 over Gripen for new fighter</p> <p>https://www.defensenews.com/digital-show-dailies/riat/2018/07/11/slovakia-selects-f-16-over-gripen-for-new-fighter/</p>	
<p>Exclusive - Lockheed F-35 jet price falls 6 percent to below \$90 million: sources</p> <p>https://uk.reuters.com/article/uk-britain-airshow-f35-exclusive/exclusive-lockheed-f-35-jet-price-falls-6-percent-to-below-90-million-sources-idUKKBN1K50DD</p>	
<p>Why an unmanned fighter fleet isn't yet viable, in the words of Britain's Air Force chief</p> <p>https://www.defensenews.com/digital-show-dailies/farnborough/2018/07/11/why-an-unmanned-fighter-fleet-isnt-yet-viable-in-the-words-of-britains-air-force-chief/</p>	

<p>'Gamechanger' aerial drone arrives in UK after mammoth 24-hour transatlantic flight</p> <p>https://www.defensenews.com/digital-show-dailies/riat/2018/07/13/gamechangaerial-drone-arrives-in-uk-after-mammoth-24-hour-transatlantic-flight/</p>	
<p>With Trump as commander-in-chief, Canada's dithering on procurement becomes intolerable</p> <p>http://www.cbc.ca/news/opinion/SOMNIA-1.4720330</p>	
<p>Mali 'far messier' than other peacekeeping missions, says Canada's defence chief</p> <p>https://www.cbc.ca/news/world/canada-mali-peacekeeping-mission-general-jonathan-vance-1.4720215</p>	
<p>Italy says won't buy more F-35 fighter jets, may cut existing order</p> <p>https://www.reuters.com/article/us-italy-defence-f35/italy-says-wont-buy-more-f-35-fighter-jets-may-cut-existing-order-idUSKBN1JW28M</p>	
<p>Israel hosted UAE military delegation to review F-35s, sources say</p> <p>https://www.i24news.tv/en/news/israel/178686-180704-sources-tell-i24news-israel-hosted-uae-military-delegation-to-review-f-35s</p>	
<p>Airbus and Saab consider challenge to Boeing Wedgetail for UK</p> <p>https://www.defensenews.com/global/europe/2018/07/06/airbus-and-saab-consider-challenge-to-boeing-wedgetail-for-uk/</p>	

Hamis leaders opt for gradual cease-fire

https://www.al-monitor.com/pulse/originals/2018/07/israel-palestinians-egypt-hamas-idf-ceasefire-gaza-strip.html?utm_source=Sailthru&utm_medium=email&utm_campaign=ebb%2019.07.18&utm_term=Editorial%20-%20Early%20Bird%20Brief



Boeing Is Pitching the US a New F-15, Using Its Super Hornet Game Plan

https://www.defenseone.com/business/2018/07/boeing-pitching-new-f-15-using-its-super-hornet-game-plan/149839/?oref=defenseone_today_nl



The Russian "Firehose of Falsehood" Propaganda Model

https://www.rand.org/pubs/perspectives/PE198.html?utm_source=WhatCountsEmail&utm_medium=RAND%20Policy%20Currents+AEM:%20%20Email%20Address%20NOT%20LIKE%20DOTMIL&utm_campaign=AEM:631600804



Russian Nuclear Forces and Prospects for Arms Control

https://www.rand.org/pubs/testimonies/CT495.html?utm_source=WhatCountsEmail&utm_medium=RAND%20Policy%20Currents+AEM:%20%20Email%20Address%20NOT%20LIKE%20DOTMIL&utm_campaign=AEM:631600804



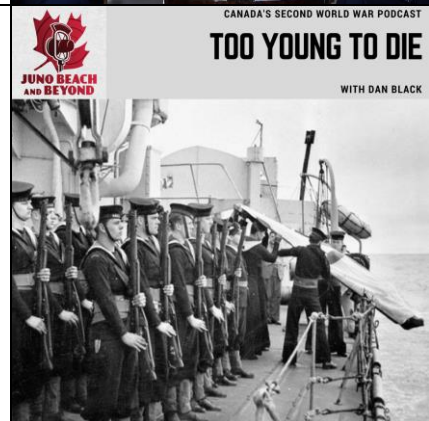
Trump Is Coming Off as Putin's Poodle, But That Actually Undermines Russia's Main Goal

https://foreignpolicy.com/2018/07/19/the-manchurian-idiot-helsinki-putin-trump/?utm_source=PostUp&utm_medium=email&utm_campaign=Editors%20Picks%20%207/19/18%20-%20Yale&utm_keyword=Editor's%20Picks%20OC



Too Young to Die

<https://www.junobeach.org/podcast/too-young-to-die-with-dan-black/>



Other Sources:

#airpower

UK introduces new Combat Air Strategy at Farnborough Air Show 2018

<http://www.airrecognition.com/index.php/archive-world-worldwide-news-air-force-aviation-aerospace-air-military-defence-industry/global-defense-security-news/global-news-2018/july/4403-uk-introduces-new-combat-air-strategy-at-farnborough-air-show-2018.html>

Combat air strategy

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725600/CombatAirStrategy_Lowres.pdf

#artificial intelligence

Three Ways AI Helps Prepare for Future Attacks

<https://www.domesticpreparedness.com/preparedness/three-ways-ai-helps-prepare-for-future-attacks/>

#child soldiers

Children at War: Foreign Child Recruits of the Islamic State

<https://ctc.usma.edu/children-war-foreign-child-recruits-islamic-state/>

#China

Xi Jinping heads to Africa to clinch China's hold over the continent

<https://www.cnn.com/2018/07/18/asia/xi-jinping-africa-visit-intl/index.html>

#cyber war

Cyber War – And Nobody Will Come?

<https://isnblog.ethz.ch/cyber/cyber-war-and-nobody-will-come>

8 top cyber attack maps and how to use them

<https://www.csoonline.com/article/3217944/security/8-top-cyber-attack-maps-and-how-to-use-them.html>

OPSEC for Journalists Covering Trump and Putin

<https://safeandsavvy.f-secure.com/2018/07/12/essential-opsec-for-journalists-covering-trump-and-putin/>
a.k.a. How To Operate And Communicate Securely In A Possibly Hostile Environment

#defence spending

Global Military Spending Remains High at \$1.7 Trillion

<https://isnblog.ethz.ch/defense/global-military-spending-remains-high-at-1-7-trillion>

#drones

The Islamic State and Drones: Supply, Scale, and Future Threats

<https://ctc.usma.edu/app/uploads/2018/07/Islamic-State-and-Drones-Release-Version.pdf>

From: Combating Terrorism Center at West Point. Their journal *CTC Sentinel* is interesting.

Who Will Police Police Drones?

<https://gizmodo.com/who-will-police-police-drones-1826891119>

#information operations

Stop Editorializing with Photographs

<https://www.nationalreview.com/2018/06/media-dishonesty-editorializing-with-photos/>

"For both producers and consumers, news photographs today often function more as editorial illustration than factual documentation."

Imagefare - keep an eye on that buzz term.

#joint doctrine

The Problem with Joint Doctrine

<https://mwi.usma.edu/problem-joint-doctrine/>

#legal

Threading the Needle: Structural Reform & Canada's Intelligence-to-Evidence Dilemma

<http://craigforcese.squarespace.com/national-security-law-blog/2018/7/16/threading-the-needle-structural-reform-canadas-intelligence.html>

#logistics

What we need to be. Building the Defence logistician

<https://logisticsinwar.com/2018/06/22/what-we-need-to-be-building-the-defence-logistician-part-two/>

A 'Logistics in War' primer: Logistics and the art of command

<https://logisticsinwar.com/2018/07/14/a-logistics-in-war-primer-logistics-and-the-art-of-command-2/>

#NATO

NATO's Framework Nations Concept

<http://www.css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/CSSAnalyse218-EN.pdf>

After the bombast, NATO's still here

<https://www.aspistrategist.org.au/after-the-bombast-natos-still-here/>

#operations

Exercise TRADEWINDS 2018

Excellent photo-essay: <https://www.facebook.com/notes/caf-operations/exercise-tradewinds-2018/2142095672484403/>

#public affairs

How Canada's military shapes media coverage of deployments

<http://rabble.ca/blogs/bloggers/yves-englers-blog/2018/07/how-canadas-military-shapes-media-coverage-deployments>

The author is well known for his animus toward the establishment and the CAF PA machinery in respect of which he has written often. He is notorious for his hyperbolic illogical conclusions that play fast and loose with the facts. He is right in alluding to the power of the CAF PA machinery. However, he fails to account for the autonomy and independence of the Canadian media (and the fact that the media operate in global context subject to global information flows), which make it impossible to achieve the media control that he attributes to the CAF.

#submarines

Infographics #36: The Americas submarines in 2018

<https://www.navalanalyses.com/2018/07/infographics-36-americas-submarines.html>

Other:

Canadian Military Journal Vol. 18, No. 3 (Summer 2018)

<http://www.journal.forces.gc.ca/index-eng.asp>

contents:

‘Wolves of the Russian Spring’: An Examination of the Night Wolves as a Proxy for the Russian Government

Missed Steps on a Road Well-Travelled: Strong, Secure, Engaged and Deterrence

Left Out of Battle: Professional Discourse in the Canadian Armed Forces

In Defence of Victory: A Reply to Brigadier-General Carignan’s “Victory as a Strategic Objective”

The Implications of Additive Manufacturing on Canadian Armed Forces Operational Functions

Prepare for the Flood before the Rain: The Rise and Implications of Lethal Autonomous Weapon Systems (LAWS)

Historical Insights to Strategic Challenges

Child Soldiers

The Fighter Replacement Conundrum


F-35 LIGHTNING II PROGRAM STATUS AND FAST FACTS

PROGRAM STATUS


305+
AIRCRAFT DELIVERED

FLIGHT HOURS
145,004


15
BASES WORLDWIDE


650+ PILOTS
5,800+ MAINTAINERS

RECENT MILESTONES

- Luke Air Force Base Flies 20,000th F-35 Sortie. [\(June 27\)](#)
- Three More Israeli F-35s Arrive at Nevatim Air Base, Israel. [\(June 25\)](#)
- Turkey's first F-35 Rolls Out at Lockheed Martin in Fort Worth. [\(June 21\)](#)
- Lockheed Martin Selects Raytheon To Deliver Next Generation F-35 Sensor System. [\(June 13\)](#)
- Pentagon and Lockheed Martin Deliver 300th F-35 Aircraft. [\(June 11\)](#)
- F-35Bs Arrive Home to the United Kingdom at RAF Marham. [\(June 6\)](#)
- Royal Australian Air Force Team F-35 Team Flies Their 1,000th Sortie. [\(June 4\)](#)
- Three New F-35 Aircraft Arrive at Ørland Air Base in Norway. [\(May 22\)](#)
- Israeli Air Force Announces F-35 Combat Debut. [\(May 22\)](#)
- Five Japanese F-35As Arrive Home to Misawa Air Base, Japan. (May 28)
- First Two Republic of Korea Aircraft Arrive at Luke Air Force Base, Arizona. (May 24)
- UK Announces First UK F-35Bs Will Arrive at RAF Marham in Early June. [\(May 16\)](#)
- F-35A Training Equipment Delivered to RAAF Base Williamtown. [\(May 2\)](#)
- Pentagon And Lockheed Martin Finalize 2018 F-35 Sustainment Contract To Enhance Readiness And Reduce Cost. [\(April 30\)](#)

PROGRAM COST

LRIP 10 Cost

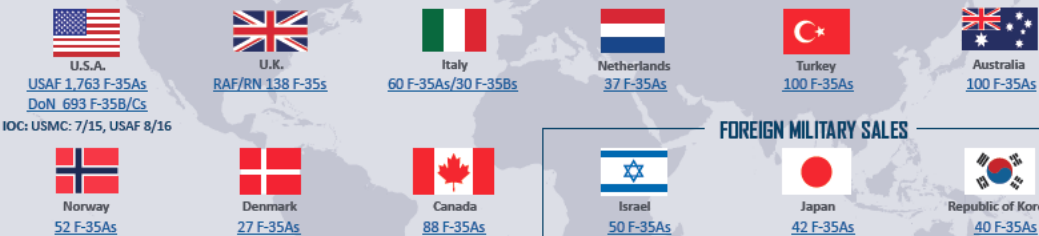
F-35A  F-35B  F-35C 
\$94.3 M \$122.4 M \$121.2 M




Total Aircraft Quantities LRIP 1-10: 358

Cost Reduction Statistics

- More than 60% reduction in Unit Recurring Flyway cost since Lot 1
- 8% reduction in Unit Recurring Flyway since previous contract
- Blueprint for Affordability is delivering projected savings of more than \$4 billion over the life of the program
- Second phase of the Blueprint for Affordability is projected to save an additional \$2 billion over the life of the program
- As production ramps and additional improvements are implemented, Lockheed Martin's goal is to reduce the cost of an F-35A to \$80 million by 2020.

PROGRAM OF RECORD



F-35 LIGHTNING II SPECS	F-35A 	F-35B 	F-35C 
Length	51.4 ft / 15.7 m	51.2 ft / 15.6 m	51.5 ft / 15.7 m
Height	14.4 ft / 4.38 m	14.3 ft / 4.36 m	14.7 ft / 4.48 m
Wingspan	35 ft / 10.7 m	35 ft / 10.7 m	43 ft / 13.1 m
Wing area	460 ft ² / 42.7 m ²	460 ft ² / 42.7 m ²	668 ft ² / 62.1 m ²
Horizontal tail span	22.5 ft / 6.86 m	21.8 ft / 6.65 m	26.3 ft / 8.02 m
Weight empty	29,300 lb	32,300 lb	34,800 lb
Internal fuel capacity	18,250 lb / 8,278 kg	13,500 lb / 6,125 kg	19,750 lb / 8,960kg
Weapons payload	18,000 lb / 8,160 kg	15,000 lb / 6,800kg	18,000 lb / 8,160 kg
Standard internal weapons load	<ul style="list-style-type: none"> • 25 mm GAU-22/A cannon • Two AIM-120C/D air-to-air missiles • Two 2,000-pound GBU-31 JDAM guided bombs 	<ul style="list-style-type: none"> • Two AIM-120C/D air-to-air missiles • Two 1,000-pound GBU-32 JDAM guided bombs 	<ul style="list-style-type: none"> • Two AIM-120C/D air-to-air missiles • Two 2,000-pound GBU-31 JDAM guided bombs
Maximum weight	70,000 lb class	60,000 lb class	70,000 lb class
Propulsion* (uninstalled thrust ratings)	F135-PW-100 40,000 lb Max. 25,000 lb Mil. Vertical N/A	F135-PW-600 40,000 lb Max. 25,000 lb Mil. 40,500 lb Vertical	F135-PW-100 40,000 lb Max. 25,000 lb Mil. Vertical N/A
Speed (full internal weapons load)	Mach 1.6 (~1,200 mph)	Mach 1.6 (~1,200 mph)	Mach 1.6 (~1,200 mph)
Combat radius (internal fuel)	>590 nm / 1,093 km (USAF profile)	>450 nm / 833 km (USMC profile)	>600 nm / 1,100 km (USN profile)
Range (internal fuel)	>1,200 nm / 2,200 km (USAF profile)	>900 nm / 1,667 km (USMC profile)	>1,200 nm / 2,200 km (USN profile)
Max g-rating	9.0	7.0	7.5