



ARCTIC SECURITY BRIEFING PAPERS

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Canada, the Arctic, and the expanding world of drones

“Remotely piloted vehicles” get frequent mention in last spring’s Canadian defence policy statement. They are characterized as integral to a range of new capabilities to be acquired by the army, air force, and navy, as bringing new operational sophistication to the armed forces, as enhancing joint intelligence, surveillance, and reconnaissance capabilities in the Arctic, and as enabling precision strikes. But don’t expect to see prominent military drone operations in Canada’s high north any time soon – it’s a foreboding environment, adapting models to the north’s unique geography and climatic conditions will take time and money, the advantages are not self-evident, and, what should be top of mind, the international community has yet to agree on credible international standards for the responsible transfer and use of drones.

The terms “remotely piloted systems” and “remotely piloted aerial systems” (referred to here as drones¹) appear some 20-plus times in the 2017 defence policy statement (DPS).² In the context of the Arctic, drones are listed among a range of promised new Arctic-focused capabilities: naval vessels, space-based surveillance assets, polar satellite communications, new operational support facilities, new ground vehicles – and drones. And all are to be linked in a “system-of-systems” approach to Arctic operations (DPS, p.80).³

While drones for Arctic operations potentially include remotely operated land and sub-surface naval vehicles, the focus here is on remotely piloted aerial vehicles – including, as the defence policy statement confirms, “an armed [remotely piloted] aerial system capable of conducting surveillance and precision strikes” (DPS, p.73).

Canada and Drones So Far

Canada is certainly not new to drones – to operating or building them – and two recent essays in *Air Force Journal* (in 2015 and 2016)⁴ describe the developments.

The Canadian aircraft manufacturer Canadair, later taken over by Bombardier, developed and built both fixed and rotary wing drones. The Canadian forces never bought the fixed wing version and made limited use of the rotary wing version, which Bombardier continued to develop into the early 2000s. Canada’s early participation in the American post-9/11 attack on Afghanistan led to the acquisition of the French Sperwer drone, a truck mounted, fixed wing remotely piloted aircraft with “ISTAR” capability (intelligence, surveillance, target acquisition and reconnaissance). That sounds sophisticated, but Danny Garrett-Rempel’s *Air Force Journal* article quotes a soldier as comparing it to a “kid’s remote-controlled plane with a camcorder taped to the bottom of it,” propelled by an engine with a “distinctive lawnmower sound.” Canada went on to lease and use a more advanced but still un-armed drone technology in Afghanistan – that is, the Israeli-built Heron drone, which was used in the Kandahar province operations.

When the Afghan mission ended, Canada was left, as the Government puts it in a recent announcement linked to the possible acquisition of long range, long endurance drones, “with no persistent [drone] capability to support domestic and expeditionary taskings.”⁵ More recent deployments have included leased ScanEagle drones, Boeing-built, unarmed systems for short range and short endurance tasks, deployed on Navy frigates in the Gulf of Aden from 2012 to support tactical intelligence, surveillance and reconnaissance.⁶ The ScanEagle, its lease ending in 2015, was also used by the Army. The Canadian Forces also operated the small Israeli Elbit Systems “Skylark” and American Prioria Robotics “Maveric” drones in Afghanistan and for training in Canada. In 2013 the Canadian Forces announced the selection of the RQ-11B “Raven B” drone, built in the US by Aerovironment Inc. and supplied through MacDonald, Dettwiler and Associates Ltd. of Richmond, BC. At the time, the plan was to distribute 35 to 45 systems to artillery, armored, and infantry units for operations up to 2020 and beyond. Each Raven B system includes two drones capable of battery-powered flights of 12 hours, a hand-held ground control station and a notebook computer to receive and display video and data from the drone. The notebook computer is also said to serve as a second ground control station, enabling it to send the second drone to replace the first one at the end of its 12-hour mission, thus allowing continuous surveillance of a site.⁷

In mid-2016 the Government announced the acquisition of another tactical drone system, the RQ-21A Blackjack system with the Canadian designation of CU-172 Blackjack, comprised of five unarmed aircraft, two ground control stations, and one launch and recovery system. Also built by Boeing, each remotely piloted aircraft is said to be capable of providing surveillance coverage of over 100 km for over 12 hours, at altitudes of up to 19,500 feet.⁸ It will be based at Canadian Forces Base Gagetown⁹ and delivery is set for 2021.¹⁰ The civilian Transport Canada surveillance operation, the National Aerial Surveillance Program, has also initiated a formal process to acquire at least one drone aircraft for environmental, ice movement, and sovereignty surveillance.¹¹ It is looking for a medium-altitude, long-endurance drone able to fly between 10,000 and 30,000 feet for as long as two days straight.¹²

Military drones range from small hand-launched aircraft for battlefield roles to large aircraft capable of flying thousands of kilometers at high altitude and delivering a range of munitions.¹³ Mini or micro drones, some only a few inches long, can be used for looking over walls and around corners in urban conflict zones. Small tactical drones are hand-launched with ranges from a few kilometers to around 100, with flying times up to about 12 hours, and are used mainly for ISTAR (intelligence, surveillance, target acquisition, and reconnaissance).

Medium-sized reconnaissance drones – often referred to as MALE (medium-altitude long-endurance) drones – can fly at altitudes up to about 35,000 feet and are used for wider ISTAR coverage (examples of which are the Israeli Heron and the American Predator), and in some cases can be and are armed with air-to-ground missiles and gravity bombs. Large combat and surveillance drones – HALE (high-altitude long-endurance) – are designed to fly at 50,000 feet or higher with flight durations of 24 hours or more. Target drones range from small hand-launched aircraft to very large aircraft, the latter sometimes being conversions of piloted aircraft into remotely piloted aircraft and sometimes including sophisticated countermeasures, to serve as targets for testing and training anti-aircraft systems.

The Chief of Defence Staff, Gen. Jonathan Vance, is an enthusiast for armed drones, telling the press in March of this year: “in my view there’s little point to having a UAV that can see a danger but can’t strike it if it needs to”¹⁴ (an odd comment, since he has just ordered the Blackjack for the explicit purpose of seeing danger, and without a capacity to strike it, and there are obviously many other military assets that are similarly designed to detect danger without having the capacity to attack). The new defence policy statement confirms the commitment to armed drones: promising investment in medium altitude remotely piloted systems (DPS, p. 39), and re-stating the promise to “invest in a range of remotely piloted systems, including an armed aerial system capable of conducting surveillance and precision strikes” (DPS, p. 73).

The American think tank, New America, lists 28 countries that are in possession of armed drones and nine that have used them in combat (US, Israel, UK, Pakistan, Nigeria, Iran, Azerbaijan, Iraq, and Turkey), and lists 26 countries that are currently manufacturing armed drones. Non-state actors have long used commercially available drones for surveillance, and ISIS has established a drone unit and has loaded explosives onto civilian drones. Iran is believed to be supplying armed drones to Houthi fighters in Yemen. Hezbollah and Hamas have also had a military drone capacity for some time. At least another half dozen non-state groups have made use of commercial drones for surveillance purposes in combat zones.¹⁵ Despite Canada having in the past manufactured military drones and currently manufactures various types of civilian drones, it is not on any of these lists since it has never manufactured armed drones and, to date, has not bought any.

Canada’s interest in drones is obviously neither new nor unique.

JUSTAS and persistence

The persistence of DND’s (Department of National Defence) interest in military drones is currently embodied in the Joint Unmanned Surveillance and Target Acquisition System (JUSTAS) program that it established in 2000. It was to have selected an operational drone capability for Canada by 2009, but the current schedule calls for approval of a basic concept in 2018, a contract to be awarded around 2020, and delivery by 2025 – at a cost of \$500 million to \$1.5 billion.¹⁶ That means medium- or high-altitude, long endurance remotely piloted aircraft. The point of JUSTAS is stated simply: to “acquire an unmanned aircraft system (UAS) weapon system to support Canadian Armed Forces (CAF) domestic and international operations.” The interest in supplying field commanders with “near-real time,” operationally relevant, beyond-the-line-of-sight, and persistent intelligence, surveillance, and reconnaissance information speaks to a focus on expeditionary contexts, as does the added requirement that Canada have a drone capacity for “precision force application in support of Land and Special Operations Forces.” But the rationale for the JUSTAS program also includes enhanced maritime and Arctic domain awareness.¹⁷ There is interest in Arctic drone operations, and it doesn’t hurt to be able to invoke the romance and perceived vulnerability of the north, when making the case for drones, but the notable interest in armed drones remains linked primarily to overseas operations.

As such, Canada’s drone aspirations have been escalating. The 2015 statement of requirements included the capability “to covertly detect, identify and track targets at least as small as humans with weapons,” capable of day or night operations, “able to transit 1,000 kilometers, loiter for 12 hours without descending, and return to base,” and “capable of carrying weapons” even if surveillance is

the main role. More recent reports point to Canadian interest in variations of American medium- to high-altitude, long-endurance drones like the Predator¹⁸ and its successors, like the MQ-9B SkyGuardian, capable of carrying armaments and flying in excess of 35 hours at 210 knots at altitudes above 40,000 feet,¹⁹ or the MQ-4C Triton,²⁰ operating at higher altitudes and also capable of carrying armaments and flying more than 9,000 nautical miles and stay aloft for 30 hours.

Wherever Canadian drones will be expected to operate, it's clear they will have to be in a permissive air environment, not threatened by hostile anti-aircraft capacity.²¹ The 2017 defence policy statement sees drones as "important tools that help remove humans from dangerous situations, and permit operations in severe and inhospitable environments" (DPS, p.73). But, in fact, drones are not amenable to operating in militarily hostile air environments. Indeed, fighter aircraft with on-board pilots have been deployed into contested air space in the post-Cold War period.

The combat capabilities of drones are oriented to providing support to ground forces from secure air space. Notably, however, foreign missions currently envisioned for Canadian involvement do not focus on combat. While UN peace support operations in active combat zones create new challenges, as the defence statement pointed out, the Government emphasizes the importance of Canadian expertise and specialized capabilities for "supporting peace processes and post-conflict peacebuilding, and improving the training available to other contributing countries" (DPS, p.55). The Prime Minister's mandate letter to the Minister of National Defence in the early days of the current government made it a top priority to shift Canada's contributions to the international forces in Iraq and Syria from combat to training of local forces and humanitarian support.²²

That arguably puts the persistence in seeking the acquisition of *armed* drones out of sync with current realities and priorities – namely, with an emphasis now on North America, where there are certainly no current or foreseen military land operations for which armed drones would be at all relevant (only civilian enforcement challenges), with peacekeeping now assigned a higher priority, and with a focus on training in coalition operations. It is true that surveillance and "control of Canadian territory and approaches, particularly our Arctic regions"²³ imply enforcement capabilities, but in a security environment that is not preoccupied with military threats, those capabilities need to be oriented to assisting civilian regulatory compliance, law enforcement, and emergency response operations in which civilian agencies take the lead.

The Challenge of Drones in the Arctic

Though the pursuit of armed drones primarily has expeditionary roles in mind, the Arctic still figures prominently in the Government's public rationale for expanding its drone inventory – drones being listed among "new Arctic-focused capabilities" (DPS, p. 80) which are to be pursued for Arctic intelligence, surveillance, and reconnaissance operations (DPS, p. 15), and for "operations in severe and inhospitable environments" (a relevant point if by that is meant the physical environment, DPS, p. 73). Defence Minister Harjit Sajjan has also invoked Arctic surveillance as a focus of drone activity,²⁴ and even the smaller Blackjack drones will engage in "patrolling coastal areas and surveillance of Arctic waters."²⁵ Garrett-Rempel argues that drones would complement existing surveillance assets in tasks that are "low-intensity, time-consuming," and require "persistence" for "surveillance over the frigid expanse of Canada's sparsely populated Arctic" and for avoiding placing pilots in harm's way.²⁶ It's argued they could also support Canadian Rangers in search and rescue

operations and could be used for dropping rescue kits – which is not to say that conventionally piloted aircraft are incapable of performing such tasks. Indeed, Michael Byers, a foremost Canadian authority on Arctic security, told the defence policy consultations that Canada is currently well equipped for Arctic surveillance without drones.²⁷

There is certainly no current or foreseeable role for armed drones. As noted, without any military threat, current or anticipated, the role of the Canadian Armed Forces in the Arctic is primarily to aid civil authorities. At most there could be calls for constabulary support, but policing is not conventionally carried out by robots. Another Arctic defence expert, Prof. Adam Lajeunesse, similarly explains that even “combat aircraft [with on-board pilots] are unlikely to play a major role in Arctic security. In spite of Russia’s renewed proclivity for flying its ageing bombers outside Canada’s northern airspace, there is no realistic situation in which the RCAF will have to engage hostile aircraft in the region.” He points out that “Canada will need to maintain a small fighter force stationed in the North, ready to escort Russian planes out of its Air Defence Identification Zone,” a role “easily managed by the RCAF’s existing fleet of CF-18s operating from its four forward operating locations in the North.”²⁸

In addition to the paucity of credible arguments for drone operations in the Canadian North, there is nothing straight forward about adapting drones to Arctic flight. Any drone operations in the Arctic will have to overcome some of the key challenges in Arctic flying – including “the shortage [and cost] of readily available satellite communications links in Canada’s far north,...; severe meteorological conditions including high winds, icing conditions and low temperatures; a lack of significant ground infrastructure, such as paved runways and aircraft hangars.”²⁹

For example, drones are made possible by effective communication between the drone in its operational theatre and its remote pilots. Conventional communications satellites, the kind that transmit television signals, are in geosynchronous or stationary orbit that can reach much of the north, but not the high north of the higher polar north. So the Canadian Enhanced Satellite Communication Project is meant to remedy that. Still in its planning stages, it is a military satellite system that will provide the Canadian Forces global communications coverage for beyond-the-line-of-sight communications for operations anywhere in the world, including the Arctic. But in the latter case, communication capacity will come in two stages. The first, as part of the global system, will be effective up to the 65°N latitude, but an additional system is to be developed to cover the most northerly reaches.³⁰ The project is Canadian-led but the US, Denmark, and Norway are expected to become partners.³¹ With the aid of ground stations and portable terminals carried by Armed Forces personnel, the system, slated to become operational in the mid-2020s, would thus also be available for all northern military communications, including command and control of drones operating in the Arctic.³²

Equipping drones with de-icing capabilities is another challenge. Without that, drones are confined to fair weather operations. The American space agency NASA carries out extensive research on ice build-up under certain atmospheric conditions – and the impact on small, lighter aircraft like drones is more immediately consequential, limiting range and altitude and potentially becoming uncontrollable. Anti-icing systems used on commercial aircraft are bulky and heavy and require on-board pilots to activate them. The challenge is to develop de-icing equipment that is light and has minimal impact on drone performance.³³

Drones obviously also require launch and recovery facilities, as well as maintenance and refueling depots.³⁴ In other words, Arctic drones, though seemingly inevitable, are still a long way from becoming routinely operational.³⁵

Nevertheless, development continues. In 2014 scientists of Defence Research and Development team scientists based at CFB Suffield in Alberta went to Canadian Forces Station (CFS) in Alert, Nunavut to test air and land drones they have developed.³⁶ The US Department of Energy is in the process of developing the ArcticShark for Arctic scientific research, a reworking of the military TigerShark, to include de-icing materials.³⁷ The US Air Force's RG-4 Global Hawk lacks de-icing capability,³⁸ but a variant of the Global Hawk, the Triton, is being tested and is to include an anti-icing system.³⁹

Byers and Franks have argued that until at least 2023 existing facilities will be adequate for Arctic surveillance, but they suggest that after that "a UAV with proven Arctic capability could be pursued."⁴⁰ Conrad Orr echoes that approach: "...Canada should foster capability, operational knowledge and technical familiarity in order to stay competitive and be capable in the future; however, doing so should not radically alter the Royal Canadian Air Force's (RCAF's) force structure in the immediate future."⁴¹ And before going beyond the exploration and testing of effective physical characteristics for drones in Arctic operations, security planners would be well-advised to also develop a much clearer sense of just what are the essential tasks that should be done by drones to advance security and public safety in the Canadian Arctic.

The Need for Regulation and Restraint

Another essential dimension in deploying drones to the Arctic (and operations overseas) is the development of credible international standards for drone transfer and use. Through the defence policy statement, DND has given assurances that, "as with any technology used in operations, the Canadian Armed Forces will ensure that its use of remotely piloted systems is consistent with domestic and international law." That would seem to be a minimal requirement, and having felt the need to be explicit about its intention to operate drones according to the same "rules of engagement that govern the use of force with any other weapon" (DPS, p.73) DND is at least implicitly acknowledging that drones are not really like any other military system.

Drones warrant particular care and caution precisely because care and caution are more readily compromised when operation is by remote control. Eroded caution and diminished accountability may not be inevitable, but without conscious restraint, drones can become combat "enablers," making it easier and thus more likely to pursue combat remedies in regional disputes,⁴² and once in those combat environments, drones can tilt calculations towards accepting greater risks if pilots are not placed in harm's way. Even in reconnaissance roles, without a pilot on board, there may be greater willingness skirt and cross international boundaries.

With the Americans in particular indulging in drone attacks in contexts of contested legality – notably in assassination missions and attacks on individuals and groups outside military combat theatres – the suspicions that armed drones are not used with appropriate restraint and discretion remain strong and understandable. Canada's chief of defence staff has assured Canadians that acquiring armed drones would not mean Canada has opted for "Hollywood" style assassination

missions. “There are rules of engagement,” he says, “there is an approved target, there is the absolute commitment to avoiding any collateral damage, any harm to a civilian population. So to us, it’s just another weapon.”⁴³

And yet, not everyone is assured. A study of drone use on Yemeni populations points to their unique psychological impacts.⁴⁴ The study looked at populations in communities struck by drone-fired munitions between 2002 and 2014, leading to between 360 and 530 deaths, about 20 percent of which were civilians, including children. Surviving populations reported and displayed higher levels (“overwhelming majority”) of post-traumatic stress disorder symptoms linked to a sense of pervading danger lurking overhead. The study concluded that as drone attacks continue with apparent impunity, their use will expand in the context of “a ‘legal black hole’ in which international humanitarian law and human rights law are overlooked. That in turn points to an urgent need for the international community to clarify legal and ethical issues, ensure accountability, and pay greater attention to the psychological impacts on civilians.

Analysts also argue that the combined qualities of remoteness and continuing presence do in fact lower the threshold for the resort to force.⁴⁵ Without their own soldiers directly in battle, politicians find it easier to opt for lethal force. As Chris Cole writes, with supporting testimony from military and political leaders, “the availability of armed drones, it appears, pushes political leaders away from engaging in the often difficult and long-term work of solving the root causes of conflicts through diplomatic and political means, towards a quick, short-term ‘fix’ of ‘taking out the bad guys’.”⁴⁶

Drones may also lessen political restraints regarding violations of territorial integrity. In Britain the Prime Minister’s office has tried to make a distinction between drones engaged in intelligence gathering and drones with an attack mission. The former, it was argued, did not require direct Governmental authorization because they were about intelligence gathering, while drones on “military” or combat missions would require Parliamentary authorization.⁴⁷ Nor are drone strikes made with greater precision than usual. One US military analysis concludes that in a 12-month period from mid-2011 to mid-2012 in Afghanistan, armed drones caused considerably more civilian deaths than strikes by fighter aircraft with on-board pilots.⁴⁸

So not only do drones seem to make it easier for politicians to support the resort to force, the mistaken notion that drones are more accurate and thus produce less “collateral damage” may also increase the likelihood that military field commanders will authorize strikes in areas with significant risks of striking civilian populations.

So, it is possible that drone use tilts decision-makers towards the earlier resort to force, makes them less bothered by unauthorized crossing of (someone else’s) international boundaries, and makes them more tolerant of risking civilian casualties. The point is that any state contemplating increased reliance on drones has a responsibility to try to get a better understanding of the legal and humanitarian implications of drone use, as well as having a responsibility to be more transparent in its own operations. Anna Diakun documents the US Government’s refusal to disclose details of drone attacks, or to provide legal justification and information on who the targets were (are) and who was killed. She argues that this lack of transparency contributes to abuses. Greater transparency would reduce abuses and would facilitate accountability and democratic engagement about the legitimacy of particular military actions.⁴⁹

A Drone Control Regime?

A year ago Canada joined 52 other countries in signing on to a US-initiated “Joint Declaration for the Export and Subsequent Use of Armed or Strike-Enabled Unmanned Aerial Vehicles.”⁵⁰ The statement acknowledges that the misuse of armed or strike-enabled drones by state or non-state actors “could fuel conflict and instability, and facilitate terrorism and organized crime” and thus identifies four principles for their responsible transfer and use. The statement affirms the applicability of international law; declares that exports should meet existing arms control and disarmament norms and comply with multilateral export control and nonproliferation regimes; insists on the importance of transparency (but with the qualifier, “where appropriate”), and commits signatory states to continued discussions on drone transfers and use. These are hardly breakthrough concepts or commitments. Generalized principles don’t lend themselves to robust accountability measures, and thus the Stimson Centre’s expert on drone policies, Rachel Stohl, warns that the absence of specific guidelines in the face of ongoing questionable practices could in fact promote an “environment of impunity.” Principled guidelines, in the absence of compliance measures, are apt to undermine the whole regulatory and restraint environment. Stohl calls for accountability mechanisms that involve industry and civil society, as well as governments, and for multi-stakeholder involvement in establishing the global standards that will be effective in limiting the proliferation and irresponsible use of drones.⁵¹

There is a danger that questionable practices become more readily accepted as normal if they are unchallenged under the umbrella of the most general of principles. An analysis in Georgetown University’s *Security Studies Review* makes that very point.⁵² The American position is that drone and other attacks on al Qaeda, the Taliban, and similar forces, are an exercise of the right of self-defence, and that through Congress’s 2001 Authorization for the Use of Military Force the Pentagon has a virtually limitless mandate to pursue its “war on terror” wherever it perceives not only a current threat but a threat that it thinks could become serious in the future. It is a logic, says Jake Howry, that “justifies lethal action against any person associated with a terrorist organization on the presumption they will engage in an act of terror if they were able to do so.” It involves a radical redefinition of “‘imminence’ as understood in international law [and] arguably conflates an imminent threat with an individual’s status, something specifically prohibited under the international law of self-defense.”

While Canada may have done well to sign on to a joint international declarations of principles, it needs also to be attuned to the obvious danger that an American-led process to articulate basic principles will produce guidelines that accommodate American behavior. It is the obvious, if daunting, responsibility of joint signatories to the US-led declaration of principles to find the means to move from general principles to specific rules and regulations that are amenable to monitoring and implementation.

One arms control agreement that currently affects the international transfer of drones is the voluntary Missile Technology Control Regime (MTCR). It is voluntary inasmuch as it is not a treaty, but it is an arrangement agreed to by a group of states (currently 35) and is meant to prevent the spread of cruise and ballistic missiles capable of delivering weapons of mass destruction. Drones are not missiles, but they share characteristics with engine-powered cruise missiles, and under the MTCR there is an agreed prohibition on exports of both ballistic and air-breathing missiles, or

vehicles, that can travel more than 300 kms and carry more than 500 kgs. Many drones now fit into that category, and the MTCR as currently understood would prevent, for example, Canada from importing a medium-altitude, or high-altitude, long-endurance drone.

Quite apart from the Canadian case, critics of the MTCR inclusion of drones argue that the regime has been successful in at least restraining ballistic missile proliferation, and particularly in limiting the spread of technology for long-range ballistic missiles, but the MTCR has not fared so well against cruise missiles and seems to have little restraining impact on drone proliferation. Thus, say the critics, the failure to restrain drones threatens to undermine the MTCR as a whole and to weaken its efforts to prevent the spread ballistic missile technology, the key original objective of the MTCR.⁵³ On the other hand, the spread of armed drones is a genuine threat to international peace and security. China and Iran, in particular (the US has exported drones only to the UK), are engaged in proliferating drones to state and non-state actors, which suggests the solution is not to abandon all efforts to control exports but to search for more effective means of control.⁵⁴

As far as Canada importing drones, the US announced in 2015 that it might begin selling drones to select allies – meaning the MTCR is unlikely to prevent Canada acquiring drones capable of being armed.⁵⁵

The European Parliament has prepared a set of model criteria⁵⁶ by which all EU states are called on to control military and dual-use drone technology and equipment: according to obligations of states under the Arms Trade Treaty and a 2008 agreement on a common European position on arms transfers (2008/944/CFSP).

The Arms Trade Treaty requires states to set up export control mechanisms and prohibits arms transfer that would, among other things, violate UN arms embargoes or would be at serious risk of being used to commit “genocide, crimes against humanity, grave breaches of the Geneva Conventions of 1949, attacks directed against civilian objects or civilians protected as such, or other war crimes.” The Treaty also requires states to ensure that their exports would not undermine peace and security or be used in violation of international humanitarian or human rights law, or be used in acts of terrorism.

A broad intent of 2008/944/CFSP is “to prevent the export of military technology and equipment which might be used for internal repression or international aggression or contribute to regional instability.”⁵⁷

So the European Parliament’s model criteria for controlling drone transfers call on its member states to honor all relevant international obligations, but the most important provision could end up being the one promoting transparency related to both drone transfers and operations. It calls on states to produce “detailed statistics released at least annually on lethal force practices in both armed conflict and non-armed conflict situations, including data such as number of strikes, broken down by geographic location, weapons platforms utilised in strikes, numbers of those killed and injured by country, location, sex, age, and the identity and affiliation of any intended target,” as well as “prompt and public acknowledgement of each and every strike carried out, including a detailed assessment of the impact of each drone strike.”⁵⁸

In Canada, National Defence officials have acknowledged that "the policy and operational questions posed by the use of these systems are significant and require careful thought and discussion within Canada and internationally." There have been assurances that Canada's acquisition and use of drones would be compliant with Canada's domestic and international legal obligations and employed in a manner that is consistent with these obligations.⁵⁹ But without genuine transparency, such assurances will have little credibility. University of Ottawa Prof. Errol Mendes, an expert in international and human right law, urges the Government to "start now to develop a framework of transparency and accountability for the use of those weapons system" – establishing a chain of responsibility that stretches beyond the military to the political level.⁶⁰ A retired Colonel with the Conference of Defence Association Institute says he "hasn't seen any evidence of the policy architecture that would be needed to run a drone program."⁶¹

Multilateral discussions of measure to control the transfer and use of drones are under way, and Canada, in joining the drone club, shoulders the concomitant responsibility press for the creation of such a robust policy architecture, or regime.

Notes

¹ Also variously referred to as unmanned Aerial Systems, unmanned Aerial Vehicles, unmanned vehicle systems, etc.

² GOC, *Strong, Secure, Engaged: Canada's Defence Policy*, Department of National Defence 2017.

³ These references are part of a new articulation of a Canadian defence policy, but one that reinforces the three traditional missions that have framed Canadian Armed Forces' operations throughout the post-World War II era – namely, the defence of Canada, the defence of North America in cooperation with the US, and contributing to international peace and security through the NATO alliance, ad hoc coalitions, or UN-mandated peace support operations.

⁴ Danny Garrett-Rempel, "Will JUSTAS Prevail? Procuring a UAS Capability for Canada," *RCAF Journal*, Winter 2015, Vol. 4, Issue 1.

Conrad Edward Orr, "Can Unmanned Aircraft Systems Meet Canadian Air Power Needs?" *RCAF Journal*, Summer 2016, Vol. 5, Issue 3.

⁵ "The Canadian Government Releases Request for Information for the DND Joint Unmanned Surveillance and Target Acquisition System (JUSTAS); DND_JUSTAS RFI 2016_Letter_of_Interest, 19 January 2016. <https://unmannedsystems.ca/the-canadian-government-releases-request-for-information-for-the-dnd-joint-unmanned-surveillance-and-target-acquisition-system-justas/>

⁶ Conrad Edward Orr, "Can Unmanned Aircraft Systems Meet Canadian Air Power Needs?", is from the *RCAF Journal*, Summer 2016, Vol. 5, Issue 3, (also available on the Air Force website – <http://www.rcf-arc.forces.gc>)

⁷ "New Wings Coming to the CAF in 2014," National Defence and the Canadian Armed Forces, 20 December 2013. <http://www.forces.gc.ca>

⁸ David Pugliese, "Canadian Army to acquire new drones – system to be based out of CFB Gagetown," *Ottawa Citizen*, 26 August 2016. <http://ottawacitizen.com>

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- ²³ <http://pm.gc.ca/eng/minister-national-defence-mandate-letter>
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