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AN ENHANCED CANADIAN PUBLIC-PRIVATE SAR PARTNERSHIP - INFORMED BY THE UK'S PRIVATIZED SAR-HELICOPTER SERVICE

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JCSP 43 DL

Exercise Solo Flight

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Introduction

There is no greater love than to lay down one's life for one's friends.

– John 15:13, *The New Testament*

Canada's area of responsibility for Search and Rescue (SAR) covers roughly 18 million square kilometres of land and water, more than 243,800 km of coastline on three oceans, and the Great Lakes and St. Lawrence river system.¹ The Canadian National SAR Program (NSP) responds to approximately 9,000 calls for air and maritime assistance each year² in a very difficult operating environment that experiences some extreme weather conditions. With Canada being signatory to international agreements formed by the International Civil Aviation Organization and International Maritime Organization, the expansion of air and sea travel following World War II brought a sovereign duty to provide assistance in the event of distress within Canada's territory,³ which remains a fundamental responsibility of the Royal Canadian Air Force (RCAF) to this day.⁴ Periodically, the federal government has revisited the requirement for the Department of National Defence (DND) to provide SAR services when

¹ Canada. Department of National Defence. *Quadrennial Search and Rescue Review*. (Ottawa: DND Canada, 2013), 5.

² *Ibid.*, 11.

³ LCol (Ret'd) Clinton Mowbray, "Lessons Forgotten? A Historical Examination of the RCAF Search and Rescue Organization," (JCSP Course Paper, Canadian Forces College, 2014), 15-29.

⁴ Canada. *B-GA-209-001/FP-001, Canadian Maritime and Aeronautical Search and Rescue Manual*. (Ottawa: DND Canada, 2014), I-1.06

looking for ways to cut costs.^{5,6} Ironically, DND's original SAR mandate was assigned because the RCAF could provide the service at the lowest cost to government in the aftermath of WW II.⁷ The current Canadian defence policy, *Strong, Secure, Engaged* reaffirms that to “conduct SAR operations” is one of DND's eight core missions,⁸ however, one of Canada's closest allies, the United Kingdom (UK), recently awarded a £1.6B contract to Bristow Helicopters for provision of all SAR Helicopter (SAR-H) services from 2015-2026.⁹ This paper argues that privatization of SAR in Canada would face a number of challenges, but the best overall solution would result from an enhanced public-private partnership with RCAF oversight. The discussion will consider the Canadian and UK national SAR programs, military and civilian technological and operational capabilities, and SAR policy and regulatory issues. Scope will be limited primarily to helicopter SAR, while some considerations may also apply to fixed wing operations.

Canadian and UK National SAR Programs

The Canadian NSP involves the Canadian Armed Forces (CAF), Canadian Coast Guard (CCG), Parks Canada, provincial and territorial governments, Civil Aviation SAR Association

⁵David Pugliese, “Ottawa may privatize search-and-rescue projects.” *National Post*. 21 July 2011. Last accessed 19 May 2018. <http://nationalpost.com/news/canada/ottawa-may-privatize-search-and-rescue-projects>

⁶Lee Berthiaume, “Liberals considering privatizing search and rescue operations as part of Canadian Forces review.” *National Post*. 11 April 2016. Last accessed 26 May 2018. <http://nationalpost.com/news/canada/liberals-considering-privatizing-search-and-rescue-operations-as-part-of-canadian-forces-review>

⁷ LCol (Ret'd) Clinton Mowbray, “Lessons Forgotten?..”, 18-19.

⁸ Canada. *Strong, Secure, Engaged. Canada's Defence Policy*. (Ottawa: Department of National Defence, 2017), 17.

⁹ George Allison, “Who is responsible for Search and Rescue in the UK now?” *UK Defence Journal*. 15 January 2016. Last accessed 23 May 2018. <https://ukdefencejournal.org.uk/3469-2/>

(CASARA), Coast Guard Auxiliary, and SAR Volunteer Association of Canada (SARVAC).¹⁰ The National SAR Secretariat (NSS) within the Department of Public Safety and Emergency Preparedness (formerly within DND) acts as a central coordinator for the NSP, chairing the Interdepartmental Committee on SAR (ICSAR). DND maintains the responsibility for aeronautical SAR and “effective operation of the coordinated aeronautical and maritime SAR system.”¹¹ An interesting artefact of the historical development of Canada’s NSP is that ground SAR (GSAR) which includes anyone in distress, other than aeronautical or maritime distress, “is conducted under the legal authority of the individual provinces and territories”¹² and is initially the responsibility of the local police forces. The RCAF’s SAR mandate is achieved through three Joint Rescue Coordination Centers (JRCC) in Victoria, Trenton and Halifax, and five SAR squadrons operating a mix of fixed and rotary wing aircraft: six CC115 Buffalo in Comox, 14 CC130H Hercules operated in Winnipeg, Trenton and Greenwood, 14 CH149 Cormorant helicopters in Comox, Greenwood and Gander (see Figure 1) and five CH146 Griffon helicopters in Trenton.¹³ Combat support squadrons operate nine CH146 Griffons in Cold Lake, Bagotville and Goose Bay, but their primary task is to support local fighter wings and they are a secondary SAR resource.¹⁴ SAR squadrons maintain 30-min readiness to be airborne during a 40-hour work week, and otherwise maintain 2-hr readiness.¹⁵ Given the size of the Canadian area of responsibility (AOR) total SAR response times are often dominated by transit times. For

¹⁰ Canada. Department of Public Safety and Emergency Preparedness. “National Search and Rescue Program.” Last accessed 19 May 2018. <https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/rspndng-mrgnc-vnts/nss/prgrm-en.aspx>

¹¹ Canada. Department of National Defence. *Quadrennial Search and Rescue Review...*, 7.

¹² Canada. *B-GA-209-001/FP-001, Canadian Maritime and Aeronautical...*, I-1.02.

¹³ Canada. Department of National Defence. *Quadrennial Search and Rescue Review...*, 12.

¹⁴ The author has spent two operational postings at Combat Support Squadrons, 444 Sqn in Goose Bay and 417 Sqn in Cold Lake.

¹⁵ Canada. Department of National Defence. *Quadrennial Search and Rescue Review...*, 12.

example, a CH149 Cormorant in Comox responding to an aircraft accident in the Alberta Rocky Mountains may require a 4-hr transit time before arriving on-scene.

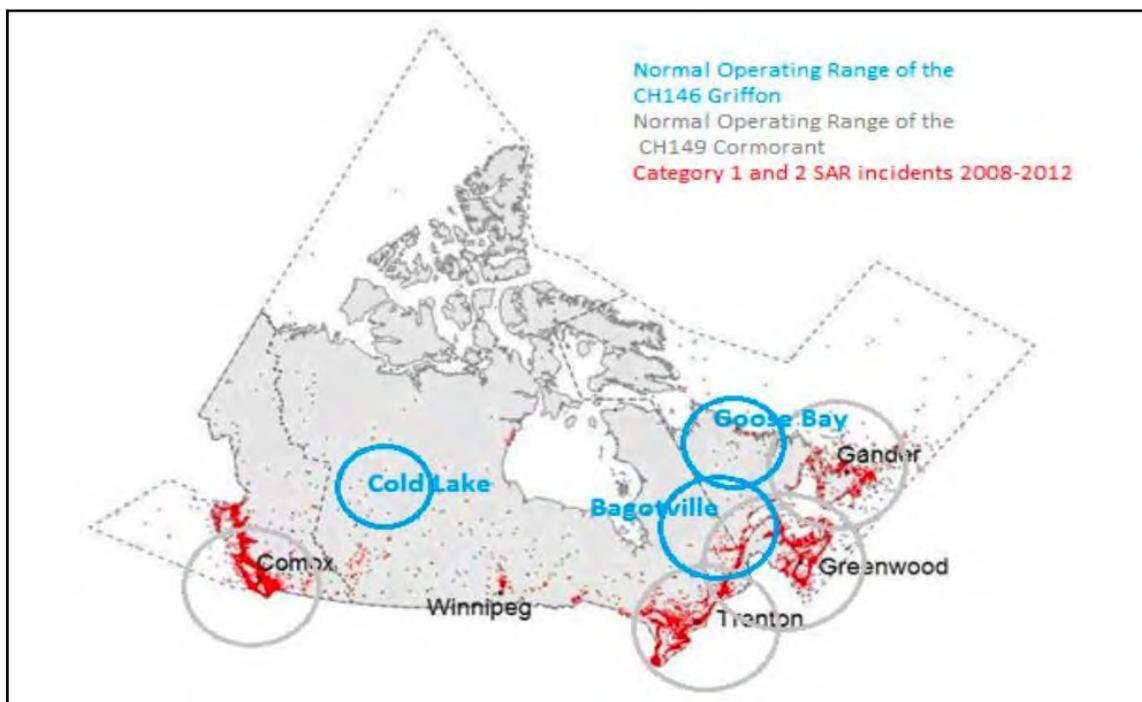


Figure 1 – Map of Canadian SAR AOR that shows the 200NM operating range of the CH146 Griffon and 250NM operating radius of the CH149 Cormorant. Of note, CH149 was replaced by CH146 in Trenton, which map does not depict. SAR incidents from 2008-2012 are shown in red.

Source: Canada. Chief Review Services. *Evaluation of the DND/CAF Contribution to the National Search and Rescue Program*. (Ottawa: DND Canada. 2015), 19.

The UK SAR system is analogous to the Canadian system consisting of a lead agency, the Department for Transport (DfT), responsible for overall provision of aeronautical and maritime SAR and chairing the UKSAR Strategic Committee. Other agencies provide coordinated efforts, including the Ministry of Defence (MoD), Maritime and Coastguard Agency (MCA), police and ambulance services and volunteer SAR organizations.¹⁶ Unlike the Canadian

¹⁶ United Kingdom. *Strategic Overview of Search and Rescue in the United Kingdom of Great Britain and Northern Ireland*. (London: Maritime and Coast Guard Agency. 2016), 21.

system, however, the UK SAR Helicopter Service “responds to land, maritime and aeronautical incidents”¹⁷ and the sole tasking authority for SAR helicopters is the Aeronautical Rescue Coordination Center (ARCC). Helicopter crews are on 15-min readiness to be airborne from 08:00 to 22:00 daily, and 45-min readiness otherwise.¹⁸ The UK SAR AOR is much smaller than the Canadian AOR, covering approximately 5 million square kilometres. The high-risk area covered by SAR-H services is less than 1 million square kilometres and is covered by 10 bases with two helicopters per base as depicted in Figure 2. The dense SAR-H coverage means transit times are drastically reduced, with DfT saying under the contracted SAR helicopter services, approximately 85% of the high and very-high risk areas within the AOR would be reachable within 30 minutes or less.¹⁹ The UK SAR-H coverage also simplifies logistics since helicopters are able to refuel at other SAR bases or return to their own base directly following a mission. In Canada crews would often have to refuel several times and overnight away from home base, adding costs and mission complexity.

¹⁷ Ibid., 12.

¹⁸ Bristow. SAR-H FAQ. Last accessed 28 May 2018. <http://www.scottishmountainrescue.org/wp-content/uploads/2014/05/Bristows-SAR-H-FAQ.pdf>

¹⁹ Aviation Week. “Bristow Wins UK Search-and-Rescue Helo Contract.” 27 March 2013. Last accessed 21 May 2018. <http://aviationweek.com/awin/bristow-wins-uk-search-and-rescue-helo-contract>

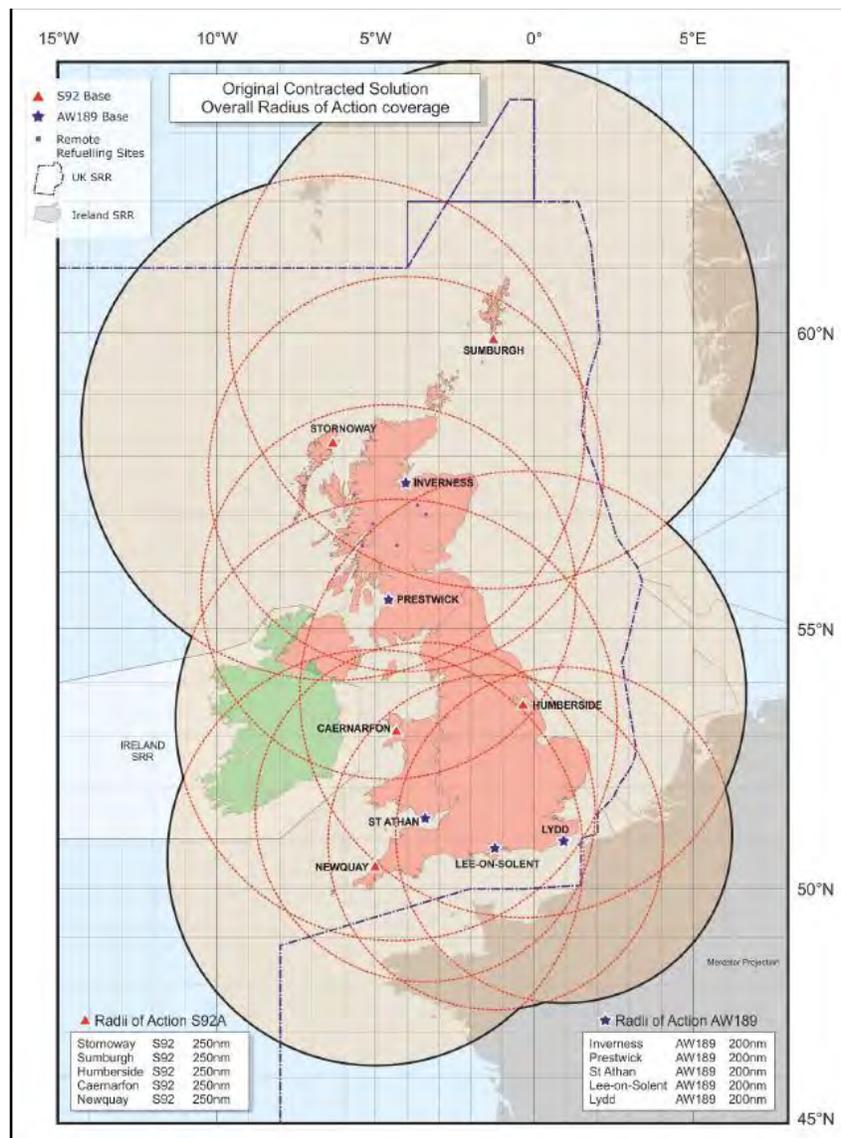


Figure 2 – Map of UK SAR helicopter operating bases with operating radius of 250NM for the Sikorsky S92 and 200NM for the Leonardo AW189.

Source: United Kingdom. *Strategic Overview of Search and Rescue in the United Kingdom of Great Britain and Northern Ireland*. (London: Maritime and Coast Guard Agency. 2016), 21.

Privatization of the UK SAR-H services was strategically timed to replace the aging Sea King fleet that was previously conducting UK SAR operations. Eliminating the cost of an aircraft acquisition helps strengthen the business case for privatization, as it places the costs of acquiring, maintaining and operating the aircraft on the contractor. The UK SAR contract cost

approximately \$2.1B US (£1.6B) over ten years whereas the mid-life update alone for the CH149 fleet is estimated to be as high as \$1.1B US (\$1.5B Cdn).²⁰ The Auditor General Report on SAR highlighted reduced CH149 availability as a result of unpredicted maintenance issues, such as cracking tail rotor half hubs and salt water corrosion.²¹ The UK SAR-H service has demonstrated clearly that privatized SAR is feasible and shifting the cost and risk of fleet operations onto a commercial operator could help generate government cost savings. However, privatized SAR in Canada's significantly larger AOR could incur extra costs and complexity due to logistical challenges associated with long transits away from main operating bases. Overall, a very clear standard for the level of service would be required to ensure that privatized SAR service delivery could achieve its aim in light of potential cost savings.

Canadian SAR Policy Gaps

Canadian SAR policy has been heavily criticized in recent years, and of particular note, a 2013 Office of the Auditor General (OAG) report stated,

In spite of the many reports and recommendations for a national SAR policy, we found that there is still no such policy nor an overall federal policy, planning framework, clear statement of expectations for federal SAR services, or ability to measure overall federal SAR effectiveness.²²

The placement of RCAF SAR units in the highest density areas of the historical SAR cases, as shown in Figure 1, is seen as justification for their location, and RCAF performance is measured

²⁰Chris Thatcher, "Air Force analyzes options for Cormorant upgrade." *Skies Magazine*. 22 May 2018. Last accessed 26 May 2018. <https://www.skiesmag.com/features/air-force-analyzes-options-cormorant-upgrade/>

²¹ Canada. Auditor General. *Report of the Auditor General of Canada. Chapter 7. Federal Search and Rescue Activities*. (Ottawa: Office of the Auditor General of Canada. 2013), 16.

²² *Ibid.*, 23.

by comparing the actual time to get airborne to the 30-min or 2-hr readiness posture.²³ Practically speaking, there is no consistent standard of service as those in more remote regions receive delayed responses due to aircraft transit times, no matter the urgency of their situation. The 2013 OAG report went on to further state that RCAF and CCG were using the CAMSAR to guide their activities in the absence of policy and that,

NSS was given responsibility to develop a national performance measurement framework. However, we found that there is no such performance measurement framework in place. Without performance targets and indicators, it is difficult for federal departments to measure, conclude, and report on federal SAR response activities and their performance.²⁴

The findings of the OAG were further amplified by a review of the Fixed Wing SAR Aircraft Replacement (FWSAR) Statement of Requirement (SOR) by the National Research Council, which found the requirement for the new aircraft to “be at least equivalent to the current capability”²⁵ was ambiguous and that the quoted level of service was “unsupported by government policy,”²⁶ pointing out that the SOR might mean several things to include (i) the same transit time to reach a location, or (ii) the amount of time an aircraft is able to remain on station to search or render assistance. Clearly privatization of SAR would require very clear performance standards to evaluate the delivery of the service provided against taxpayer dollars, which is not possible under current government policy.

²³ Canada. *B-GA-209-001/FP-001, Canadian Maritime and Aeronautical...*, I-2.10.

²⁴ Canada. Auditor General. *Report of the Auditor General...*, 24.

²⁵ Canada. National Research Council. *Review of the Statement of Operational Requirement for the Fixed Wing Search and Rescue Aircraft – FINAL Report* (Ottawa: National Research Council. 12 March 2010), 6.

²⁶ *Ibid.*, 7.

Under the UK privatized SAR model, the performance of the system appears to also be measured by ability to meet the response time of 15-min or 45-min readiness posture.²⁷ Given the high density of SAR coverage compared with Canada, transit times are significantly lower so that response times are a better performance measure than in Canada.²⁸ In addition, a set of detailed statistical reports on the SAR missions flown by the UK were introduced by the UK government, to coincide with the new privatized SAR contract which commenced operation in April 2015.²⁹ The reported statistics include detailed information on the types of tasking, locations, rescue outcomes, taskings by region and base, and helicopter time spent on taskings³⁰ and are clearly meant to help communicate the achievements of the privatized SAR-H services to the public.

Another Canadian policy gap is the lack of standardized level of service across the country, particularly between areas of provincial and federal jurisdiction. Because of the historical development of the NSP that resulted in GSAR being the responsibility of provincial and territorial government “SAR agencies are often operating in parallel to each other with no genuine coordination linking them together.”³¹ Practically speaking this means that if a hunter or hiker is lost in the wilderness, the provincial emergency system will be activated, likely involving RCMP or local police, but the federal SAR system (RCAF, CCG) may not even be

²⁷ Bristow. SAR-H FAQ. Last accessed 28 May 2018. <http://www.scottishmountainrescue.org/wp-content/uploads/2014/05/Bristows-SAR-H-FAQ.pdf>

²⁸ Aviation Week. “Bristow Wins UK Search-and-Rescue Helo Contract.” 27 March 2013. Last accessed 21 May 2018. <http://aviationweek.com/awin/bristow-wins-uk-search-and-rescue-helo-contract>

²⁹ UK. Search and Rescue Helicopter Statistics. Last accessed 28 May 2018. <https://www.gov.uk/government/collections/search-and-rescue-helicopter-statistics>

³⁰ United Kingdom. Department for Transport. *Search and Rescue Helicopter Statistics: Year ending March 2017*. London: Department for Transport. 14 June 2017. Last accessed 21 May 2018. <https://www.gov.uk/government/statistics/search-and-rescue-helicopter-statistics-year-ending-march-2017>

³¹ Leroux, Jean, Maj. “Canadian Search and Rescue Puzzle: The Missing Pieces.” *Canadian Military Journal*. Vol. 18, No. 2 (Spring 2018): 28. <http://www.journal.forces.gc.ca/vol18/no2/PDF/CMJ182Ep24.pdf>

aware of the emergency unless asked to help. The federal system is often engaged as a “last resort” because it has capacity to assist, and in 2013 it was estimated that DND provided about \$10M of humanitarian (GSAR) and medevac missions without cost recovering from the provinces.³² Varying decisions by local on-scene commanders may affect when a decision is made to request federal assistance, sometimes due to concern over cost recovery, resulting in vastly different levels of service³³ whereas in the UK system SAR-H is responsive to land, air and sea distress coordinated by the ARCC. To maximize the cost effectiveness of privatized SAR services in Canada, it would be important to improve the coordination across all jurisdictions such that all persons in distress receive one level of service.

SAR response standards are further complicated by the fact that many provincial health services now have contracted helicopter air ambulance services capable of landing at unprepared areas to render assistance, such as the Shock Trauma Air Rescue Society (STARS) in Alberta. On 5 Sept 2016, a 417 Sqn CH146 SAR crew was tasked to respond to a helicopter accident³⁴ but was stood down enroute because STARS was able to land at the site and render assistance.³⁵ Following an RCAF SAR response, patients would be transferred to provincial health services, so if STARS can be first on scene then it just makes sense. However, it would be inefficient to have privatized SAR services potentially “competing” with air ambulance operators in this manner. This is further evidence to align federal and provincial air resources to provide a consistent level of service between aeronautical, maritime and ground SAR. If it were possible to

³² Canada. Chief Review Services. *Evaluation of the DND/CAF Contribution to the National Search and Rescue Program*. (Ottawa: DND Canada. 2015), 33.

³³ Leroux, Jean, Maj. “Canadian Search and Rescue Puzzle...”, 28-29.

³⁴ Canada. Transportation Safety Board. *Aviation Investigation Report A16W0126*. (Ottawa: Transportation Safety Board of Canada. 2018)

³⁵ The author was the pilot in command of the tasked 417 Sqn CH146 SAR crew.

leverage existing helicopter air ambulance capability as part of the SAR system, this would have the added benefit of vastly increasing SAR coverage in Canada.

Military vs. Civilian Technical and Operational Capabilities

Traditionally, the military has led development of aviation technology, with examples like Night Vision Goggles (NVG), Radar, or Electro-Optical Infra-Red (EOIR) imaging systems whose development was driven for war-fighting roles. Recently, commercial operators have begun to close the technology gap and some have overtaken the RCAF in the SAR role. The Bristow S-92 for example employs NVG-compatible glass cockpit, weather radar, “day/night surveillance turrets,” (EOIR) and “a Trulink wireless system that lets winchman rescuers communicate with the helicopter.”³⁶ None of the current RCAF SAR aircraft have EOIR or wireless communications, and the CH146 does not have weather radar, despite the fact that civilianized DND CH146 helicopters used for pilot training have been retrofitted with radar.³⁷ A number of commercial operators in Canada have implemented NVG operations, such as Helijet³⁸ and STARS³⁹ air ambulance services and Wildcat,⁴⁰ Cougar⁴¹ and Blackcomb helicopters are

³⁶ Defense Industry Daily. “Britain’s Next Search-and-Rescue Helicopters: Civilian Contractors.” 16 October 2015. Last accessed 19 May 2018. <https://www.defenseindustrydaily.com/british-searchandrescue-a-billion-pound-partnership-02271/>

³⁷ Martin Shadwick, “Rescuing Search and Rescue.” *Canadian Military Journal*. Vol. 11, No. 3 (Summer 2011): 67. <http://www.journal.forces.gc.ca/vo11/no3/doc/11-shadwick-eng.pdf>

³⁸ Helijet Press Release. “Helijet and B.C. Ambulance Service to install NVIS technology on air ambulance helicopters.” *Skies Magazine*. 30 August 2017. Last accessed 19 May 2018. <https://www.skiesmag.com/press-releases/287266/>

³⁹ STARS. “Our Helicopter Fleet.” Last accessed 27 May 2018. <https://www.stars.ca/what-we-do/helicopter-air-ambulance/our-helicopter-fleet>

⁴⁰ BC Air Rescue. “BC Air Rescue. About.” Last accessed 19 May 2018. <http://www.bcairrescue.com/about/>

⁴¹ Cougar Helicopters Inc. “Cougar. What We Do.” Last accessed 19 May 2018. <http://cougar.ca/search-and-rescue.html>

conducting hoist operations.⁴² Civilian operators have caught up or surpassed the technology of many RCAF SAR aircraft.

However, operational military flight rules afford more flexibility than civil regulations in several ways due to the ability of the RCAF to self-regulate, mitigate operational risk and accept unlimited liability. For example, helicopter rescue operations at night typically involve operation close to obstacles, so the CH149 is able to open the ramp in flight for crew members on a tether to visually clear obstacles near the tail rotor using specially fitted rear-facing lights, while Transport Canada does not allow civilian S-92 operators to open the ramp in flight for safety reasons. For flight under Instrument Flight Rules (IFR) a civilian aircraft must always maintain fuel to fly to an alternate landing airport after reaching its destination, while a military aircraft can file to a destination under some conditions without the requirement to hold an alternate, leaving more fuel for transit or rescue operations.⁴³ Canadian Aviation Regulations (CAR) 702.21 and 722.21 outline the requirements for Class D external load operations⁴⁴ (Human External Cargo), which includes live hoisting operations, and specify stringent requirements that could preclude a commercial operator from hoisting a crew member down to the pitching and rolling deck of a ship in the north Atlantic as is currently common practice for RCAF SAR crews. Military aircraft with radar are permitted to conduct self-guided over water transitions using radar to clear obstacles in their flight path and descend clear of cloud, to gain visual with a vessel and render assistance. A night overwater transition to a vessel is one of the most

⁴² CBC News. "Squamish paramedics want to add to B.C.'s air ambulance toolbox." Last modified 11 August 2017. <http://www.cbc.ca/news/canada/british-columbia/squamish-paramedics-air-ambulance-1.4243078>

⁴³ Canada. Department of National Defence. *Royal Canadian Air Force Flight Operations Manual*. Winnipeg: 1 Canadian Air Division. 2018.

⁴⁴ Transport Canada. *Canadian Aviation Regulations 702.21 & 722.21, Helicopter Class D External Loads*. Last accessed 27 May 2018. <https://www.tc.gc.ca/eng/acts-regulations/regulations-sor96-433.htm>

challenging procedures that RCAF CH149 SAR crews employ and there is no civil procedure equivalent to the military over water transition down. In fact, a tragic accident occurred 14 March 2017, when an Irish Coast Guard SAR S-92 crashed into Blackrock island off the west coast of Ireland while conducting a night over-water approach to refuel, resulting in the loss of the aircraft and all four crew on board.⁴⁵

Being able to self-regulate, accept unlimited liability and effectively mitigate operational risks gives the military a greater degree of operational flexibility than civilian operators. It seems that privatized SAR enjoys a technology advantage, especially given the notably slow pace of defence procurement, but in order for privatized SAR to have operational flexibility closer to that of the RCAF, changes would be required to regulatory oversight.

SAR Regulatory Oversight

There is currently no Transport Canada SAR pilot training guidance or SAR pilot license in Canada, aside from regulations governing SAR-related tasks such as Class D external loads⁴⁶ and NVG operations,⁴⁷ which means that commercial operators conducting SAR could be subject to unquantified risk. When responding to an emergency call for persons in distress it is very common for the situation to evolve – weather may deteriorate requiring an IFR leg without an alternate, or an urgent situation may require evacuation of more passengers than seats or life raft are available to accommodate – and these deviations would technically be in violation of a civil air operator’s certificate, as well as raising liability or insurance concerns. An example of

⁴⁵ Ireland. Air Accident Investigation Unit. *Preliminary Report: Accident Sikorsky S-92A, EI-ICR*. (Dublin: Department of Transport, Tourism and Sport. 13 April 2017)

⁴⁶ Transport Canada. *Canadian Aviation Regulations 702.21 & 722.21, Helicopter Class D External Loads*. Last accessed 27 May 2018. <https://www.tc.gc.ca/eng/acts-regulations/regulations-sor96-433.htm>

⁴⁷ Transport Canada. *Advisory Circular (AC) No. 603-001 Use of Night Vision Imaging Systems*. (Ottawa: Transport Canada Civil Aviation. 2016)

how a rescue can quickly go wrong occurred when a civilian helicopter broke through the ice of Hudson's Bay and sunk when landing in an attempt to pick up two hunters stranded by sea ice near Arviat – the pilot and hunters were later rescued by a CH146 SAR crew.⁴⁸ The UK Civil Aviation Authority published the UK Helicopter SAR National Approval Guidance, which outlines approval, training and operational requirements for UK SAR crews.⁴⁹ There is no equivalent Canadian document, but a fire-fighting analog is the BC Wildfire Service's Pilot Information Guide, which sets out responsibility, training and operational requirements for helicopter operators engaged in wildfire operations employed by the province.⁵⁰ In order to implement privatized SAR services in Canada safely, detailed regulatory oversight is required on SAR training standards and operational procedures including risk management. The RCAF would be a natural choice for this responsibility due to its SAR experience and the fact that it already maintains oversight of CASARA volunteer pilot and spotter training and operations.⁵¹

Enhanced Public-Private SAR Partnership

Canada has committed to the acquisition of the Airbus C-295 as a fixed-wing SAR platform⁵² and the mid-life upgrade of the CH149 Cormorant SAR helicopter.⁵³ It is clear that

⁴⁸ Parker, Gillian, Capt. "SAR Rescue in Arviat Takes Unexpected Turn." *The Contact*. Volume 48, Issue 4 (January 25, 2013): 1,10. Last accessed 19 May 2018. http://thecontactnewspaper.cfbtrenton.com/archives/2013/12_January_2013/jan_25_2013/thecontact_jan_25_2013.pdf

⁴⁹ United Kingdom. *Civil Aviation Publication 999. UK Helicopter Search and Rescue (SAR) Approval Guidance*. West Sussex: Civil Aviation Authority. 2014.

⁵⁰ British Columbia. British Columbia Wildfire Service. *Pilot Information Guide 2016*. (Victoria: Ministry of Forests, Lands and Natural Resources. 2016)

⁵¹ Canada. *B-GA-209-001/FP-001, Canadian Maritime and Aeronautical...*, I-2.13.

⁵² National Defence and the Canadian Armed Forces. "Fixed-wing search and rescue procurement project." Last accessed 28 May 2018. <http://www.forces.gc.ca/en/business-equipment/fixed-wing-snr.page>

the opportunity to offset the cost of privatization by shifting the costs and risk associated with acquisition, operation and maintenance of SAR fleets to a contractor is not an option the Canadian government will pursue at this time. According to York University professor, Martin Shadwick, “the actual monetary savings of privatization or moving the service somewhere else such as the Coast Guard would likely be very small.”⁵⁴ Privatization would also result in costs to the RCAF that include increased attrition of personnel, reduced morale, loss of connection with the Canadian public and loss of strategic effects such as sovereignty achieved through northern training exercises with SAR aircraft. Given the lack of clear benefits to Canada there is not as strong a case for privatization of Canadian military SAR capabilities at this time, as compared with the UK system.

With the growing capabilities of commercial operators to include NVG and hoist capability there may come a point when the military is perceived as taking commercial opportunities away from industry. Privatized SAR has been argued to have some advantages to Canada such as the better coverage of the AOR by dispersed local helicopter operators resulting in significantly reduced transit times and hence better response times, reduced operating costs, ability to provide helicopters of varying size to fit the mission, local area knowledge, and potentially higher aircraft availability.⁵⁵ Overall there is a case to be made for the benefits of an enhanced partnership between military SAR and the private sector due to the strengths of each. A potential win-win for Canadians would be an enhanced public-private partnership that builds on

⁵³ Canada. Public Services and Procurement Canada. “CH149 Cormorant Mid-Life Upgrade Project – Letter of Notification.” Last accessed 28 May 2018. <https://buyandsell.gc.ca/procurement-data/tender-notice/PW-18-00827470>

⁵⁴ Berthiaume, Lee. “Liberals considering privatizing search and rescue operations...”

⁵⁵ Nicholls, Matt. “The Case for Civilian Helicopter Search and Rescue.” *Helicopters Magazine*. 29 May 2007. Last accessed 15 April 2018. <https://www.helicoptersmagazine.com/sar/the-case-for-civilian-helicopter-search-and-rescue-51>

the existing framework of provincial helicopter air ambulance, and other local helicopter operators, in a more formalized SAR role with RCAF oversight for SAR standards and regulation on behalf of the federal government to ensure sharing of best practices and lessons learned.

Conclusion

Privatization of SAR in Canada would face a number of challenges, but the best overall solution would come from an enhanced public-private partnership with RCAF oversight. This would require that Canadian SAR policy be developed to implement a number of previous recommendations, such as development of national standards for the level of service to Canadians, alignment of federal and provincial jurisdiction to ensure a consistent level of service across aeronautical, maritime and GSAR, as well as implementation of regulatory oversight for civilian SAR operators to ensure safe standards and operating procedures. The UK SAR-H privatization has clearly demonstrated that a commercial service provider can do the job, although Canada's commitment to purchase and update RCAF SAR fleets, as well as the size of the AOR make the potential for cost savings through privatized SAR unlikely. Taking the best that military and privatized SAR has to offer could result in a greater level of service to Canadians with only a modest incremental investment. However, this will only be possible if government is willing to take steps to address Canadian Search and Rescue policy and regulatory oversight.

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