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**NAM/CAR Search and Rescue (SAR) Implementation and Civil-military Coordination Meeting
(SAR/CM)**

Mexico City, Mexico, 5 – 7 November 2018

Agenda Item 3: Civil Military Coordination

SAR: A SHARED RESPONSIBILITY IN CANADA

(Presented by Canada)

EXECUTIVE SUMMARY

This Information Paper presents the multifaceted nature of SAR operations in Canada. SAR is a shared responsibility among federal, provincial/territorial and volunteer groups in Canada. As Canada is vast in size and spreads diverse environments, the country depends on key stakeholders such as government, military, volunteer, academic and industry partners to provide SAR services to the Canadian public. Furthermore, these groups invest both significant time and resources to ensure SAR incidents do not occur. The joint efforts of these partners form the backbone of Canada's National Search and Rescue Program (NSP).

*Strategic
Objectives:*

- Safety
- Air Navigation Capacity and Efficiency
- Security & Facilitation
- Economic Development of Air Transport
- Environmental Protection

1 Introduction

1.1 In Canada, Search and Rescue (SAR) is a shared responsibility among federal, provincial/territorial and volunteer organizations, and there is an organizational distinction between the responsibility for ground SAR, aeronautical and maritime SAR. Due to its vast size and range of environments, the country relies on a diverse group of government, military, volunteer, academic and industry partners to provide overall SAR services to the Canadian public. United by the common theme of “working together to save lives”, the collective work of these partners provides the foundation for Canada's National Search and Rescue Program (NSP)

2 National Search and Rescue Secretariat

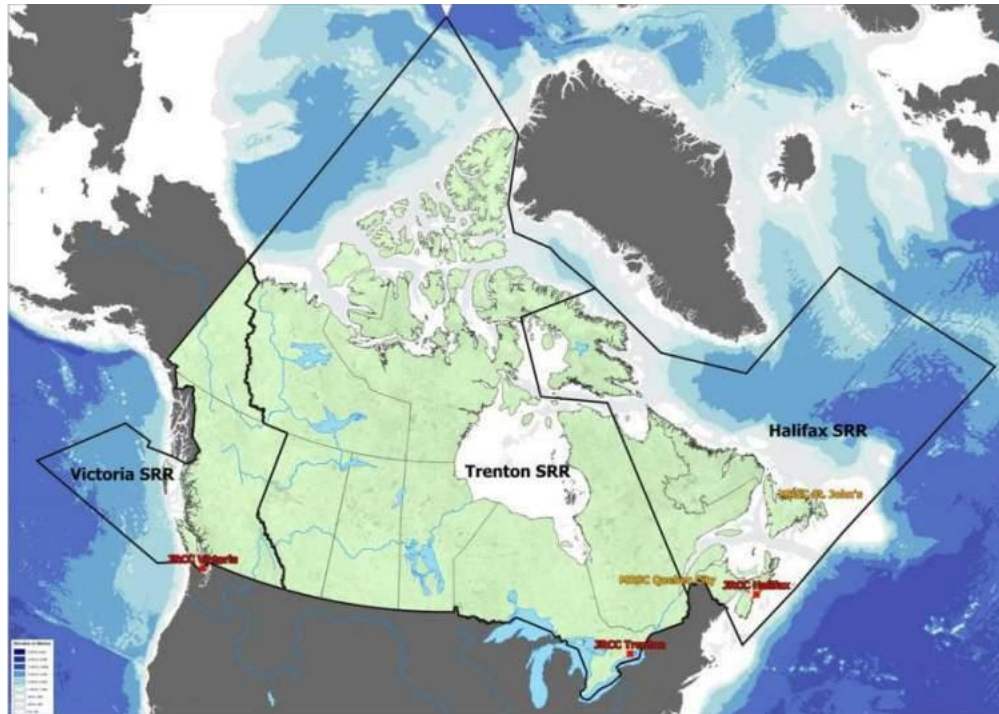
2.1 The National Search and Rescue Secretariat (NSS) is responsible for managing and coordinating Canada's SAR with federal, provincial and territorial partners, and fostering interoperability

and coordination within the SAR community and its 15,000 trained SAR volunteers. The Secretariat also focuses on national and international coordination, policy and program support, and helps facilitate multijurisdictional efforts in areas such as SAR incident prevention and response, distress alerting and interoperability, ensuring best use is made of SAR partners' diverse resources and capabilities. It is responsible for the development and coordination of overall SAR policy in consultation with SAR partners, as well as supporting and promoting the activities of the National Search and Rescue Program (NSP) as a means to achieve highly effective and economically responsible SAR programs throughout Canada.

2.2 Within Canada, SAR activities span a multitude of jurisdictions (incl. the Canadian Armed Forces, Canadian Coast Guard, Parks Canada, provincial and territorial governments, Natural Resources Canada and SAR volunteers). These various jurisdictions necessitate a shared responsibility for safety, and thus the National SAR Program attempts to achieve integration and interoperability amongst partners through coordinated prevention, investigation, education, regulation and enforcement efforts.

3 CAF Organization and Area of Operation for Aeronautical and Maritime SAR

3.1 Responsibility for aeronautical and maritime SAR extends over 18 million square kilometers of land and sea – an area one-and-a-half times that of Canada's landmass. As depicted in the map below, the aeronautical SAR area extends from the U.S. border to the North Pole, and from approximately 600 nautical miles (1,111 km) west of Vancouver Island in the Pacific Ocean to 900 nautical miles (1,667 km) east of Newfoundland in the Atlantic. The maritime SAR mandate includes the oceanic waters within this area, in addition to the St. Lawrence Seaway and the Great Lakes.



3.2 The Canadian Armed Forces have the primary responsibility for the provision of aeronautical SAR services, whereas the Canadian Coast Guard (CCG) is responsible for maritime SAR services. The CAF is responsible for the effective operation of this coordinated aeronautical and

maritime SAR system. The CAF also provides and coordinates the Air response for maritime SAR.

3.3 All SAR cases are coordinated through the three Joint Rescue Coordination Centers (JRCC). The JRCCs are operated around the clock by a team of professional SAR experts from both the CAF and the CCG. At any given time, there are two qualified Search Mission Controllers (SMC), one Air and one Marine to coordinate SAR operations.

3.4 The JRCCs can task dedicated Search and Rescue Units (SRU) consisting of military SAR aircraft and Coast Guard vessels to respond to an emergency in their region. Additionally, SRR commanders can task any CF naval or air resource, as well as Coast Guard resources within their regions, to respond to a SAR mission. If more SAR assets are required to support a particular mission, SMCs can request the assistance of any other federal, provincial, territorial, municipal, volunteer or chartered resource having a capacity to render assistance to those in need as quickly as possible.

4 CAF SAR Resources

4.1 About 950 personnel are delivering these SAR services 24 hours per day, 7 days a week, 365 days a year. Successful SAR operations rely on, among other factors, having the right capability at the right time. These capabilities include the right equipment, highly skilled personnel, the correct response posture, the location of SAR resources and well-established procedures. Thus, The CAF's primary SAR aircraft are strategically located across Canada to provide the most rapid response to areas where, historically and statistically, the greatest number of incidents are the most likely to occur.

4.2 The CH-149 Cormorant and CH-146 Griffon helicopters are the primary rotary-wing (RW) aircraft used to respond to SAR. They offer swift response times, powerful hover and hoist capabilities, and dedicated SAR personnel. SAR fixed-wing (FW) aircraft, such as the CC-115 Buffalo and CC-130 Hercules, offer dedicated SAR personnel and specialized equipment such as air-droppable survival kits, including life rafts and shelters (both aircraft fleets being replaced beginning in 2020 by 16 Airbus CC-295 through the Fixed Wing Search and Rescue project).

4.3 All other Royal Canadian Air Force (RCAF) aircraft, such as the CH-124 Sea King helicopter and the CP- 140 Aurora Long-range patrol aircraft, can be called upon as secondary SAR resources. The Royal Canadian Navy also maintains two ready-duty ships on standby, one on each of the Atlantic and Pacific coasts, which are available for SAR missions. Other naval assets can be tasked by the SRR Commanders as necessary.

5 Search and Rescue Technicians

5.1 Every CAF primary SAR aircraft deployed on a SAR mission includes SAR Techs. These individuals are highly trained specialists who provide advanced prehospital medical care and rescue for aviators, mariners and others in distress in remote or hard-to-reach areas. They are trained to a Primary Care Paramedic national standard with additional advanced skills. They are also land and sea survival experts who specialize in rescue techniques, including: Arctic rescue, parachuting, diving, mountain-climbing and helicopter rescue.

6 COSPAS-SARSAT

6.1 The search component of the CAF SAR is generally carried out with space-based sensors and FW aircraft, operated by either the CAF or CASARA. When unable to utilize surface units for extraction, the rescue component is generally carried out with RW aircraft operated by the CAF, or it is contracted out.

6.2 The space-based sensors come from the COSPAS-SARSAT Programme which includes a Ground Component in Canada with four Land User Terminals (LUTs) and one Mission Control Centre and also linked to all three JRCCs. Public Safety and Emergency Preparedness Canada (PS) is currently recognized as Canada's Cooperating Agency to the International COSPAS-SARSAT Programme.

7 Response Posture

7.1 Current policy requires each SRR to have one of each type of aircraft (RW and FW) on Alert posture for an immediate response. Eight high readiness CAF air SAR resources (four SAR helicopters and four SAR FW aircraft) are located in proximity to historically high concentrations of incidents in order to be on scene (in 90% of cases) in the least amount of time (4 hours from notification). They accomplish this by being on a 30-minute response posture for 40 hours per week during peak time periods and on a two-hour response posture the remainder of the time. The SRR Commanders have the discretion to increase the posture during times of heightened risk.

7.2 The CCG has over 50 SAR lifeboats on a 30-minute response posture along with one large off-shore vessel on 30-minute response in each CCG Region. In addition, during the summer months they have 26 Inshore Rescue Boats (IRBs) manned through a student program strategically located around high risk maritime recreational areas.

8 Ground Search and Rescue (GSAR)

8.1 Ground Search and Rescue in Canada is conducted under the legal authority of the individual provinces and territories. This authority is delegated for operational response to the police service of jurisdiction. At the provincial level, the Royal Canadian Mounted Police are the operational authority for GSAR in all Canadian provinces and territories except Ontario, Quebec, and parts of Newfoundland and Labrador. The Ontario Provincial Police, Sûreté du Québec and Royal Newfoundland Constabulary have the authority in these jurisdictions. The provinces and territories have appointed representatives to a working group to establish provincial and territorial GSAR standards of training and competency.

9 Volunteer Civilian SAR Partners

9.1 The CAF also sponsors and funds the Civil Air Search and Rescue Association (CASARA), a volunteer organization established in 1986 that augments the military's capacity to respond to air incidents by making available private aircraft and trained volunteer crews for search missions. CASARA aircraft and crews provide search and communications services.

9.2 The CCG has the primary responsibility to provide marine SAR assets. Like the CAF, it also sponsors a volunteer organization, the Canadian Coast Guard Auxiliary (CCGA), which provides

vessels and crews which are fully capable of marine rescue, to support CCG primary SAR marine resources. Annually, CCGA crews and vessels respond to 27 per cent of all maritime SAR incidents in Canada.

9.3 In addition to volunteers in the aeronautical and marine SAR sectors, volunteer ground search and rescue services are provided by the Search and Rescue Volunteer Association of Canada (SARVAC). SARVAC is a not for profit volunteer educational organization and has representation in every province/territory with more than 12,000 trained volunteers across Canada, that provide support to those ground SAR efforts.

10 Agreement on Aeronautical and Maritime SAR Cooperation in the Arctic

10.1 In May 2011, Canada and the seven other Arctic Council member states (Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States) signed *The Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic* in Nuuk, Greenland, to cooperate in Arctic search and rescue (SAR). Commonly known as the Arctic SAR Agreement, it builds upon previous UN and other agreements addressing SAR to strengthen cooperation between the Arctic states and to improve the way Arctic Council countries respond to emergencies in the Arctic.

10.2 In Canada, the CAF has the capability to provide aeronautical and maritime search and rescue services into the farthest and most remote locations in our Arctic region. The CCG is capable of providing search and rescue services to the Arctic on a seasonal basis through the deployment of icebreakers and some science vessels.

11 Mass Rescue Operations (MRO)

11.1 Both the CAF and the CCG are prepared to quickly respond to MRO through contingency plans and by having additional high readiness resources and specialized support equipment/supplies (provided by CAF) available that can be quickly loaded on heavy transport aircraft and delivered anywhere within Canada's AOR within 24 hours. These consist of prepackaged supplies that are delivered by para-drop in a scalable response capable of supporting up to 380 survivors in austere conditions. In addition, the CAF has pre-positioned caches of Arctic clothing and support equipment in five strategic locations throughout the Canadian Arctic.

12 Regulation and Prevention

12.1 Transport Canada is the regulatory body for all sectors of transportation and regulates the carriage of 406 MHz Beacons such as Emergency Locator Transmitters (ELTs) for aircraft and Emergency Position Indicating Radio Beacons (EPRIBs) for marine vessels.

12.2 Various federal, provincial and territorial programs are also in place to promote SAR prevention. Examples include Adventure Smart, Paddle Smart, Smart Pilot, Fish Safe and Safe Boating Canada.

13 Search and Rescue New Initiatives Fund

13.1 The SAR New Initiatives Fund (SAR NIF) was established by the federal government in

1988 and is managed by Public Safety in partnership with other federal, provincial and territorial SAR organizations. SAR NIF provides annual funding for projects that will improve the National Search and Rescue Program.

13.2 SAR NIF projects must address at least one of the National SAR Program Annual Priorities. Potential applicants must contact one of the federal, provincial or territorial SAR partners to express interest in the program and develop proposals that address program and partner priorities. Each proposal is carefully reviewed and ranked in order of merit. The annual funding for these projects is then distributed in that order.