

# SAR Challenges

**Despite immense challenges, Canada's Search and Rescue system has become one of the best in the world.**



Jean Murray

Canadians face some of the world's greatest search and rescue (SAR) challenges. Canada's SAR area of responsibility covers an immense expanse of more than 10 million square kilometres from the North Pole, 1,000 kilometres west into the Pacific Ocean and 1,300 kilometres east into the Atlantic Ocean. Outside of the heavily populated strip of land near the U.S. border, SAR incidents are likely to occur far from roads, airports and harbours.

The terrain in Canada varies from permanently frozen ice caps north of the Arctic Circle to almost-impenetrable forest cover on British Columbia's west coast. Temperatures range from  $-40^{\circ}\text{C}$  in January to  $35^{\circ}\text{C}$  in July. These geographic extremes are both a cause of SAR incidents and a hindrance in responding to them.

SAR incidents can be divided into three types.

**Maritime SAR** includes Canada's oceanic area of responsibility under International Maritime Organization agreements, as well as Canadian waters of the St. Lawrence Seaway and the Great Lakes. Response is managed by three Joint Rescue Coordination Centres (JRCCs) and two Maritime Rescue Sub-Centres. Operations are carried out by Canadian Coast Guard and Canadian Coast Guard Auxiliary and by Canadian Forces aircraft.

**Aeronautical SAR** covers any type of search for aircraft, over land or water. Response to this type of incident is also coordinated by the three JRCCs. Operations are carried out by: Canadian Forces; Civil Air Search and Rescue Association aircraft; and, when a missing aircraft's route includes portions over water, by Coast Guard and Auxiliary vessels.

**Ground and inland water SAR** is managed by provincial and territorial

emergency measures organizations and carried out by police, emergency services personnel and an extensive network of skilled volunteers. Within Canada's national parks – ice-field or avalanche rescues, for example, or wilderness searches – SAR is handled by specialists and volunteers from Parks Canada.

## Challenges and Pressures

Demographic changes in Canada's population are a factor in the increasing frequency with which SAR activities are needed. Evidence suggests that Canada's aging population, many of whom remain active longer, is devoting significant resources to more demanding leisure pursuits.

An increase in rugged outdoor recreational activities such as kayaking and rock climbing have also contributed to new demands, as have the rise in travel in the Canadian North.

The face of the volunteer community, so essential to SAR, is also changing. As more and more people move from regional to urban centres to pursue education and career opportunities, the number of SAR volunteers in rural areas is declining.

SAR in Canada has felt the effects in recent years of a widening recognition that volunteers provide a trained and organized resource that can be called upon in the event of natural disasters. The vessels, aircraft, vehicles and trained personnel (including volunteers) that are used for search and rescue are increasingly being asked to perform other tasks, such as disaster response.

In the past three years, the terrorist threat and Canada's security have required maritime SAR assets to be ready for more multi-tasking, and have led to the need for

more flexible use of federal resources. This trend is certain to continue for some years to come.

The prevention of SAR incidents is receiving more and more emphasis, however, prevention depends heavily on volunteers and public-sector funding.

Technological developments in satellite communications and in position-finding equipment have increased the ability of people to summon assistance. As beacons and Global Positioning Systems become more affordable, the demand for SAR response increases, but at the same time it becomes easier to locate someone in distress.

Federal SAR responders have received new and better equipment, including helicopters and lifeboats, over the past three years. As SAR capability has increased, so has the need for training, for both personnel and volunteers, to work with increasingly sophisticated equipment. The introduction of a new Fixed Wing Search and Rescue Aircraft will continue this trend.

Interoperability – the ability to coordinate equipment, training and procedures among SAR responders – continues to be a challenge. More effective coordination and standard equipment are needed to achieve seamless SAR delivery. Realistic exercises that simulate SAR incidents are one of the most effective ways to ensure the system works when it is needed, but in a multi-jurisdictional environment they are expensive and require a great deal of planning.

Canada's north presents unique challenges. Increasing activity in the region – particularly those related to tourism and resource extraction – have led to new challenges in responding to distress incidents in this part of the country.

Overcoming these and other challenges has been the impetus for building a Canadian SAR system that is respected worldwide. The efforts of SAR professionals and volunteers provide an effective response that saves lives, as this special issue of *FrontLine* magazine demonstrates. **FL**

*Jean Murray is the Executive Director of the National Search and Rescue Secretariat. Established in 1986, the Secretariat represents federal SAR organizations working to address these and other issues, in consultation with provinces and territories. The Secretariat reports directly to the Lead Minister for Search and Rescue who is the Minister of National Defence.*