

At a Glance



Evaluation of the Weather Observations, Forecasts and Warnings Program

About the program

The objective of the Weather Observations, Forecasts and Warnings Program (Weather Program) was to provide authoritative weather and related environmental information to support Canadians in making decisions about their health and safety and to protect their property.

The program is delivered by the Meteorological Service of Canada (MSC). In 2021, ECCC celebrated its 50th year of operation and the MSC celebrated its 150th anniversary of providing weather-related services to Canadians.

What the evaluation found

- National meteorological services such as the Weather Program have a critical role to play in supporting the vital functions of governments as well as decision making by individuals, households and businesses.
- There is clear evidence that target audiences are accessing ECCC weather and environmental services. As well, clients are receiving the information they need and are using it to inform their decision making.
- Perceived strengths of the Program include high-quality customer service and responsiveness to the client's needs; seamless, efficient provision of daily, 24/7 services; strong technology transfer from research to operations to services; strong collaborative relationships with external partners and stakeholders, including ECCC's strong international presence and global leadership; and the highly specialized expertise and dedication of ECCC staff.
- Although the program is perceived as having responded effectively to emerging issues and challenges, there is a need for the program to keep pace with developments and to continue to adapt its activities so that it can remain relevant. Areas for ongoing effort include enhancements to observation, modelling and data management capacity; adaptation of delivery platforms to suit changing consumer preferences; and engagement and collaboration with external stakeholders. In addition, there is a need for the program to enhance its services for vulnerable and diverse populations.



- Challenges to the efficient delivery of the program include the housing of key enabling functions outside of the MSC and the reliance on special funds in a context of declining permanent funds for operations and maintenance. This was widely perceived as jeopardizing the program's ability to carry out lifecycle management of observation networks and keep up with information technology, data management and infrastructure needs.
- Although this is a departmental result, the Weather Program has not collected recent data on the extent to which the Canadian public uses authoritative weather and related information to make decisions about their health and safety.

Recommendations and management response

As the senior departmental official responsible for the Weather Program, 3 recommendations are directed to the Assistant Deputy Minister of the Meteorological Service of Canada.

Recommendation 1: Ensure that the program is positioned to keep up with evolving technology and the changing context.

Management response: Canada's Weather Observations, Forecasts and Warnings Program will continue evolving its operations and supporting science to ensure that Canadians are better prepared for unprecedented weather and more resilient to climate change. ECCC's MSC will prepare a forward-looking business plan (2023 to 2033) that will span the hydro meteorological value chain, from observations to services. This plan will guide the continued transformation of observation networks, including testing and implementing new technologies and approaches, as well as enhance the delivery of impact-based, fit-for-purpose information and services to Canadians, public authorities and other specialized clients. The importance of leveraging international collaboration in science and collaboration data exchange will continue to be a key driver. Therefore, the MSC will also continue supporting Canadian leadership and participation in the World Meteorological Organization's governance bodies to access global data, stay abreast of major technology shifts, leverage other countries' know-how through collaboration and actively engage in specific areas of science and technology evaluation of direct importance to our future business plan.

Recommendation 2: Enhance efforts to identify the needs of, and improve services and supports for, vulnerable and diverse populations.

Management response: ECCC's Weather Program provides foundational data and services that help Canadians make decisions about their health and safety and support public authorities as they prepare for and respond to weather-related emergencies. Historically, the Weather Program has provided services broadly targeting all Canadians and some targeted

services to specialized clients. Going forward, the Weather Program will add a focus on vulnerable Canadians and communities, particularly in the context of Canada's changing climate and associated unprecedented weather. The Air Quality Health Index program, which provides targeted health messages for at-risk individuals who may be more sensitive to air pollution, is an example that the MSC can build on to develop other services streams for vulnerable and diverse Canadians and communities.

Recommendation 3: Enhance performance measurement to support reporting on the achievement of the departmental result “Canadians use authoritative weather and related information to make decisions about their health and safety”.

Management response: The Weather Program has been managed with a robust performance and verification program, since the 1980s. Since 2007, the organization has regularly maintained ISO certification on all elements of the operational programs and some elements of the enabling functions. As part of this Quality Management System (QMS), the organization conducts regular mid-year and year-end reviews, which include client feedback and benchmarking. The MSC has been and will continue to be committed to continuous improvement on key performance metrics and mechanisms for client feedback. In addition to performance and verification through the QMS, the Weather Program collects and reports on numerous performance indicators at various levels, including those that assess progress toward wide-ranging outcomes through the Departmental Performance Report, the Federal Sustainable Development Strategy, the Canadian Environmental Sustainability Indicators program and departmental integrated planning, which includes reporting on risks and performance.

The MSC will continue to use omnibus surveys every 2 years to seek client feedback. Considering the evolving context in which the Program operates, the MSC is exploring the use of targeted surveys as a potential mechanism to assess the extent to which Canadians had access to specific weather warnings and took action or modified their behaviour in response to them.

About the Evaluation

The evaluation covered the period from FY 2015 to 2016 to FY 2018 to 2019 and included all program activities, with the exception of Meteorological Areas, Air Quality and Health Related Services and Water and Climate Services. Due to delays in the conduct phase of this evaluation related to the COVID pandemic, some information concerning FY 2019 to 2020 was captured in this report. The objectives of the evaluation were to examine issues of relevance and performance (effectiveness and efficiency) as per the 2016 Treasury Board [Policy on Results](#), and to identify recommendations for possible improvements.