



Evaluation At A Glance

Evaluation of ECCC's contribution to the Emergency Management Strategy

About the initiative

The Emergency Management Strategy (EMS) is a whole-of-government initiative with multiple objectives targeting five priority areas, as approved by federal, provincial, and territorial (FPT) Ministers: 1) Enhance whole-of-society collaboration and governance to strengthen resilience; 2) Improve understanding of disaster risks in all sectors of society; 3) Increase focus on whole-of-society disaster prevention and mitigation activities; 4) Enhance disaster response capacity and coordination and foster the development of new capabilities; and 5) Strengthen recovery efforts by building back better to minimize the impacts of future disasters.

To support these objectives, which are led federally by Public Safety Canada (PS), funding was provided to ECCC for the following two specific initiatives.

- 1) Floodplain mapping (\$1.5M): To modernize best practices for the promotion of consistent floodplain mapping through the improvement of the pan-Canadian Federal Flood Mapping Guideline Series. A national engagement framework for floodplain mapping is also to be established to facilitate common national best practices and increase the sharing and use of flood hazard information.
- 2) Predicting and Alerting for Coastal Flooding (PACF) (\$5M): To develop a national prediction system with the capability to generate forecasts and alerts for coastal flooding. This initiative aims to cover all five basins (Great Lakes, Saint Lawrence, Atlantic, Pacific, and Arctic coasts) to support public safety, resilient coastal communities, and safer near-shore marine navigation. The goal is to establish predictions based on a range of potential water levels to enable emergency management communities to better prepare for possible impacts via a thorough understanding of the range of uncertainties and potential effects of a given coastal flooding event.

About the evaluation

The evaluation was conducted from January to June 2023. It focused on ECCC's role over the 4-year period from 2019-2020 to 2022-2023 and examined the following themes: relevance; governance; program design and delivery; effectiveness and results achieved; and use of performance information. It used multiple methods, including: document and file review; analysis of administrative, performance and financial data; 15 interviews with ECCC representatives; interviews/meetings with three federal partners and four provinces; and participation to a face-to-face retreat.



What the evaluation found

There is a continued need for ECCC's involvement in both floodplain mapping and predicting and alerting for coastal flooding. The science is clear that impacts due to flooding are expected to increase as a result of climate change. ECCC's expertise in hydrology, hydraulics, weather, and climate allows for leadership in advancing these initiatives and potentially lessening the impacts of these catastrophic events. Both Departmental and external interviewees made it clear that ECCC's expertise and leadership are welcomed by partners across Canada.

The Department was strategic in using a mix of existing governance structures where possible, and creating new ones where these facilitated the advancement of initiatives. For the floodplain mapping initiative, a new Community of Practice for Flood Modelling and Mapping in Canada (CoP) was established with membership from provinces and territories (PTs) and other federal departments. For the PACF initiative, new structures like a project board and working group were established to make decisions and support the initiative. With regards to PACF consultations with PTs, reliance on existing relationships built by ECCC was favoured, with varying results based on individual PT circumstances. Likewise, Indigenous consultations have not been a primary focus for the initiative, with only some groups involved.

The design of both initiatives stemmed from earlier work the Department had initiated, in the first case improving an already established guideline and filling a gap by establishing a new CoP, and in the second case expanding and improving coastal flooding predictions and alerts for all. However, it was found that for some of the partners of the PACF, there was limited interest in what the Department is currently proposing, which could have been mitigated by earlier consultations. For the PTs that have embarked in advancing the PACF products, there remain challenges in securing impact-based data typically housed by provinces, territories, and municipalities, which is a systemic issue across Canada. With that said, exchanges between the Department and partners are viewed as very good, with excellent collaboration and flexibility.

With regards to the delivery of both initiatives, the Department has maximized the use of its existing knowledge and resources, on top of the funding received. It built upon the varied expertise of the Department and its relationships with partners. It also strategically leveraged resources of other budgetary initiatives to advance these files. Finally, at this juncture, there is recognition that there is low likelihood that the complete, impact-based flood product will be available for all Canadian coasts by the end of April 2024, as initially targeted. Nonetheless, the baseline product will be built and is expected to offer a promising product to help flood forecasting and alerting in coastal areas that should help Canadians and emergency management organizations provide more lead time in flooding scenarios.

Both initiatives have so far delivered promising results. For the Floodplain Mapping initiative, a complete overhaul and update to the Federal Hydrologic and Hydraulic Procedures for Flood Hazard Delineation has been undertaken, with partners' input being integrated and a target publication scheduled for Fall 2023. Furthermore, the Community of Practice for Flood Modelling and Mapping in Canada was established as part of this initiative.

For the Predicting and Alerting for Coastal Flooding initiative, work has advanced significantly in the development of the prediction of coastal flooding, with testing taking place, and roll-out expected to first focus on basic coastal flood forecasting. As of July 2023, only the province of PEI had managed to provide the detailed information to allow for impact-based coastal flood warning. Work is ongoing in the other PTs to obtain this information, based on individual PT priority areas.

Overall, both initiatives were supported by quality information that enabled decision-making. Furthermore, management indicated they had all of the information required to advance their work on the initiative. There were challenges in selecting a proper indicator for one initiative, but this did not hamper progress and work conducted was in line with the spirit of the initiatives.