

Report 2—Mitigating the Impacts of Severe Weather

What we examined (see Focus of the audit)

This audit focused on the federal government's actions to support Canada's long-term mitigation efforts. It examined key federal organizations' data, information, tools, and funding that could help decision makers mitigate the effects of severe weather. The audit also examined whether the federal government was meeting its responsibilities to make Canada's infrastructure more resilient against severe weather events. Federal organizations audited were Environment and Climate Change Canada (formerly Environment Canada), Public Safety Canada, National Research Council Canada, Natural Resources Canada, and Infrastructure Canada.

Why we did this audit

This audit is important because severe weather events are increasing—resulting in higher costs to governments at all levels and, by extension, to Canadians. Studies show that dollars spent on mitigation efforts save money over time. But to mitigate the effects of severe weather and ultimately save lives and money, decision makers need timely information and tools to inform their actions.

What we concluded

We concluded that the federal government has not provided adequate information and tools needed to support decision makers in their long-term efforts to mitigate the effects of severe weather. We also concluded that the federal government has not put in place funding provisions to significantly improve the resilience of Canada's infrastructure.

Overall, we concluded that the federal government has not made it a priority to help decision makers mitigate the anticipated impacts of severe weather.

What we found

Federal government coordination for disaster mitigation

Overall, we found that the federal government had not done enough to help mitigate the anticipated impacts of severe weather events. Activities of Public Safety Canada and Environment and Climate Change Canada did not focus on giving decision makers information and tools to address long-term severe weather effects. Coordination and consultations to define long-term user needs were also limited. Similarly, National Research Council Canada did not incorporate climate change trends into National Building Code updates, which could impact buildings and structures for decades to come. Although federal information and tools largely met departmental mandates, they did not fully meet decision makers' needs.

This is important because decision makers increasingly require certain types of information, such as floodplain maps and tools to measure the intensity, duration, and frequency of severe weather. The federal government is uniquely positioned to support Canada-wide mitigation activities—helping avoid needless overlaps and gaps, and using government resources more efficiently.

- **Departments did not always provide decision makers with the information and tools they needed**

Recommendation. Environment and Climate Change Canada should work with partners to determine how intensity-duration-frequency curves should be produced for decision makers.

Recommendation. Public Safety Canada, working with key stakeholders, should develop guidelines and standards for floodplain maps and encourage their consistent application in all provinces and territories.

Recommendation. National Research Council Canada should incorporate climate change trends into the National Building Code's structural design provisions, to take into account the expected increase in frequency and severity of weather events that can directly affect buildings.

- **Federal efforts to define decision makers' needs were insufficient**

Recommendation. Working with key federal partners, Public Safety Canada should coordinate consultations with decision makers to better understand the information needed to support their disaster risk reduction efforts, including those related to severe weather.

Federal programs to support disaster mitigation

Overall, we found that federal government efforts and programs did not successfully encourage provinces and territories to invest in projects that reduce severe weather impacts. Although the federal government made funds available through various programs since 2008, it spent little on mitigation projects. We also found that the design of the mitigation programs did not encourage investments in infrastructure projects.

This is important because mitigation activities reduce recovery costs, avoid disruption of the Canadian economy, and can protect Canadians' safety and security.

- **Little federal money was spent on disaster mitigation projects**

Recommendation. We made no recommendations in this area of examination.

- **Funding programs were not designed to encourage major investments in disaster mitigation projects**

Recommendation. Public Safety Canada, working with other departments, should examine the federal government's mitigation programs to identify potential changes that facilitate provincial and territorial investments in disaster mitigation projects. It should encourage both large- and small-scale structural projects and continue to support non-structural projects.

Entity Responses to Recommendations

The audited entities agree with our recommendations, and has responded (see List of Recommendations).

Related Information

Report of the	Commissioner of the Environment and Sustainable Development
Type of product	Performance audit

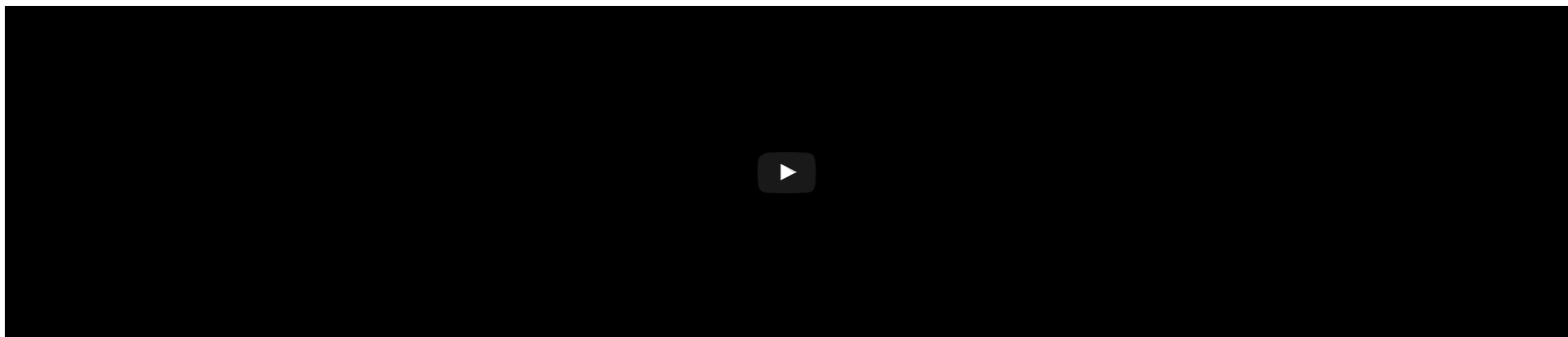
Topics	<ul style="list-style-type: none"> • Environment • Financial Management and Government Spending • Health • Land • Safety and Security
Audited entities	<ul style="list-style-type: none"> • Environment and Climate Change Canada • Infrastructure Canada • National Research Council Canada • Natural Resources Canada • Public Safety Canada
Completion date	30 November 2015
Tabling date	31 May 2016
Related audits	<ul style="list-style-type: none"> • Chapter 2 – Managing Severe Weather Warnings – Environment Canada, 2008 December Report of the Commissioner of the Environment and Sustainable Development

For more information

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The Commissioner's Comments



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