

WEBINAR

REPORT

Canada in a Changing Climate

Regional Perspectives

Government of Canada / Gouvernement du Canada

CHAPTER 1

Atlantic Provinces

REGIONAL PERSPECTIVES REPORT

Government of Canada / Gouvernement du Canada

Canada

This collage features two report covers. The top cover is for 'Canada in a Changing Climate: Regional Perspectives', showing a close-up of autumn leaves. The bottom cover is for 'Atlantic Provinces: Regional Perspectives Report', featuring a lighthouse on a rocky shore with waves crashing against the rocks. Both covers include the Government of Canada logo.

CLIMAtlantic

Home About Risks Impacts Adaptation Data Help Desk

Français

Enhancing Atlantic Climate Resilience

ABOUT US

CLIMAtlantic facilitates access to data and information that supports adaptation to climate change in Atlantic Canada through collaboration, networking, and partnerships.

Why does adaptation matter?

Due to the greenhouse gases released into the atmosphere over many years, simply reducing emissions is no longer enough to prevent the worst effects of climate change.

As a result, adaptation is required and is key to managing the risks and worst-case scenarios from climate change.

MORE

What are the impacts of climate change?

The impacts of a warming planet are sea-level rise, inland flooding, storm surges, saltwater intrusion, biodiversity loss, increased extreme heat, drought, and erosion. The level of damage caused by these impacts can be reduced and sometimes prevented. The cost of prevention is far less than reactive measures after impacts.

MORE

How CLIMAtlantic can help

As awareness of climate change grows, so does the demand for climate services. Accurate data supports decisions to reduce the impacts of climate change.

Our focus is on creating a strong network, generating a wealth of information sharing amongst colleagues, in addition to supporting specific place-based work.

MORE

1

This screenshot shows the CLIMAtlantic website. At the top, there is a navigation menu with links for Home, About, Risks, Impacts, Adaptation, Data, and Help Desk, along with a search icon and a 'Français' language option. The main header features the CLIMAtlantic logo. Below this is a large hero image of a coastal landscape with a person walking on a path, overlaid with the text 'Enhancing Atlantic Climate Resilience' and an 'ABOUT US' button. A central text block states: 'CLIMAtlantic facilitates access to data and information that supports adaptation to climate change in Atlantic Canada through collaboration, networking, and partnerships.' The bottom section contains three columns of text, each with a 'MORE' button. The first column discusses the importance of adaptation, the second lists various climate impacts, and the third describes how CLIMAtlantic helps through networking and place-based work. A page number '1' is visible in the bottom right corner.

Canada in a Changing Climate: Advancing our Knowledge for Action

Intro and Overview of the Assessment Process
Atlantic Provinces Chapter Release
December 17, 2021

Fiona Warren

Knowledge Assessment Manager
Fiona.Warren@nrcan-rncan.gc.ca

1. Our assessments and process
2. The Regional Perspectives Report
3. Digital Delivery

What are assessments?

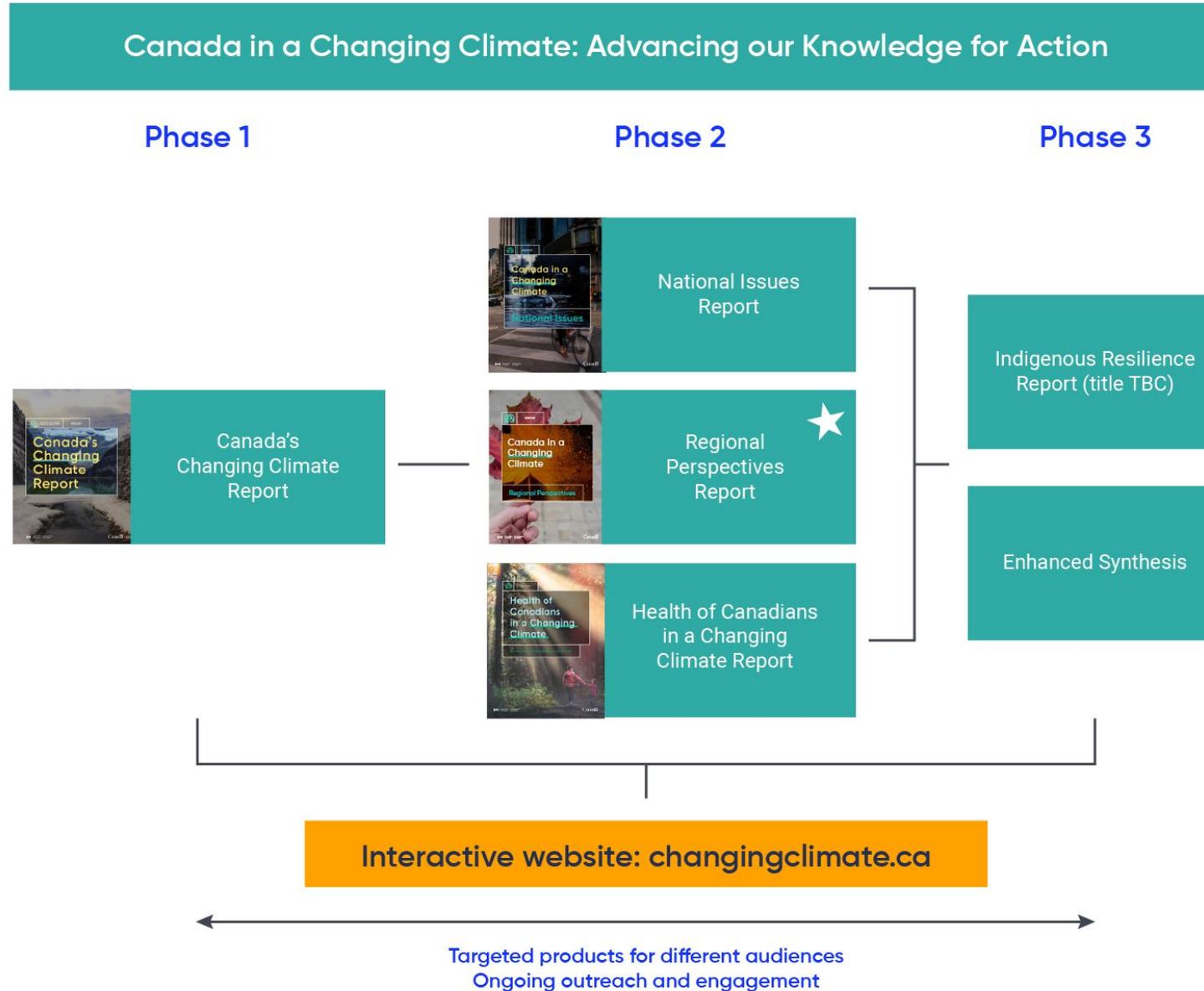
*Credible, useful and decision-relevant products that synthesize **existing knowledge** on climate change **risks, opportunities and adaptation***

Assessment goals:

- **raise awareness** of issues
- **provide a foundation** for decision-making
- **build capacity** on adaptation through the assessment development process



Canada in a Changing Climate Reports



The *Regional Perspectives Report*

- Provides regional perspectives on how climate change is impacting our communities, environment and economy, and how we are adapting.
- Includes case stories of adaptation in practice
- Chapters from this report are being released on a rolling basis from 2020 to 2022

Chapter 1 – Atlantic Provinces (release planned Dec. 2021)

Chapter 2 – Quebec

Chapter 3 – Ontario

Chapter 4 – Prairie Provinces (*released Dec. 2020*)

Chapter 5 – British Columbia

Chapter 6 – Northern Canada



Over 230 experts contributed to the *Regional Perspectives Report*



Highlights of what's new in this assessment process

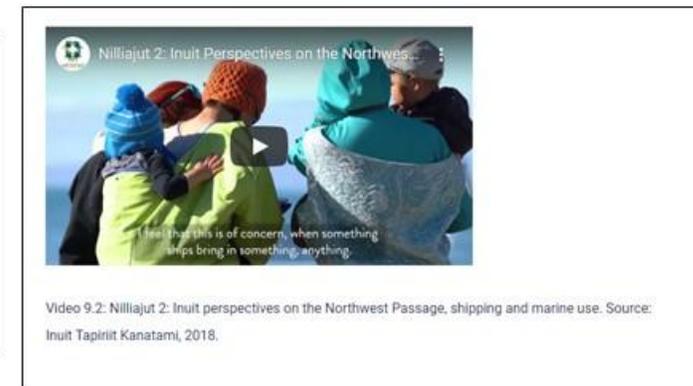
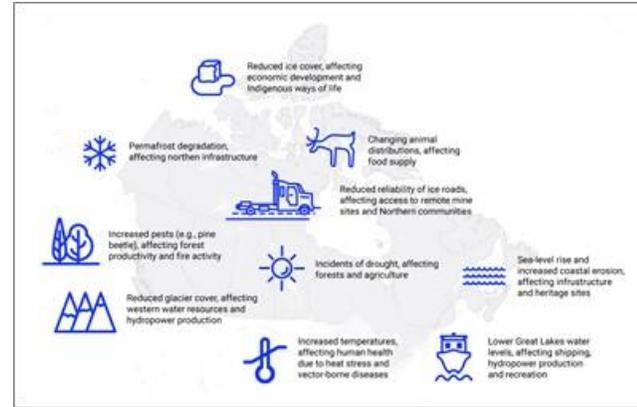
- A **suite of products** (2019-2022 releases), rather than a single report
- Enhanced **engagement and communications** before, during and after release
- **Layers of information** to address needs of different audiences
 - e.g., **Key message approach**, layers of information/tiers, boxes, case stories
- Stronger inclusion of **multiple sources of knowledge**, including Indigenous Knowledge
- Explicitly discuss **knowledge gaps and emerging issues** to establish a baseline
- Fully designed for **digital delivery** (changingclimate.ca)

All reports are being delivered digitally

Key features include:

- Embedded video;
- Illustrative photos;
- Shareable content;
- Downloadable figures (some interactive);
- Hyperlinks between sections and reports;
- Frequently asked questions; and
- Case Story map.

Interactive website: changingclimate.ca



Chapters also available as accessible PDFs on the NRCan website and on changingclimate.ca

Map of Adaptation Actions provides examples of adaptation in practice

An interactive, searchable map with examples of adaptation in practice from a range of sources in Canada, including the National Knowledge Assessment:

- Targeted to decision-makers and adaptation practitioners
- Available at changingclimate.ca/case-studies

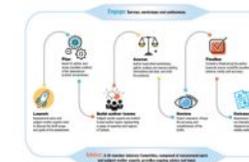


For more information

- Visit changingclimate.ca to access the reports, check out the FAQs and share findings
- Visit adaptation.nrcan.gc.ca to learn more about the assessment process
- Questions? Email:
 - NRcan.adaptation.RNCan@Canada.ca
 - Fiona.Warren@Canada.ca



Learn more about the assessment process



Reports



Share your Views



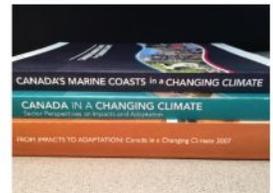
Meet the Team



Follow our Progress



Check out Canada's completed assessments

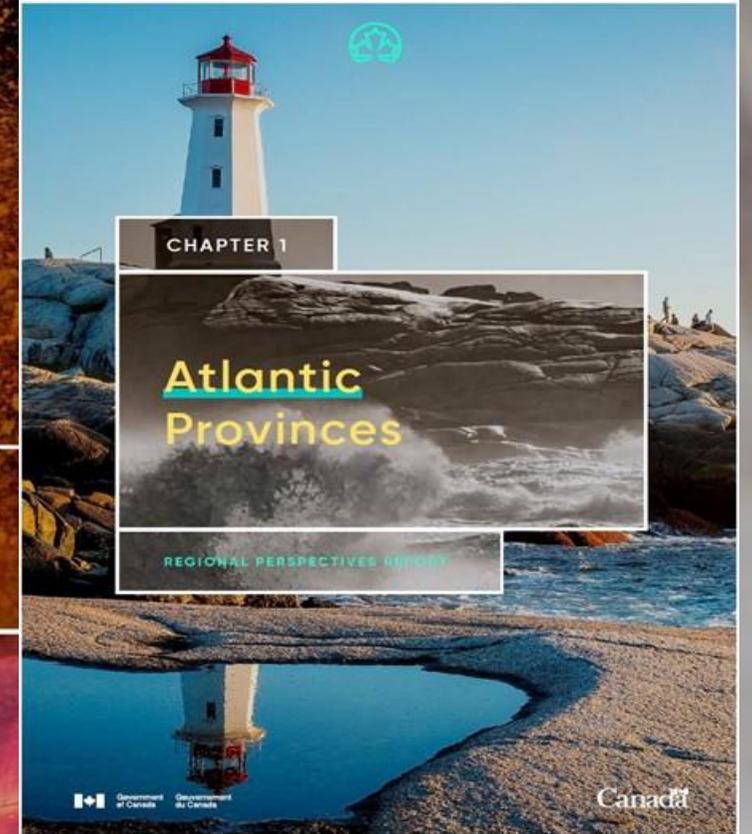




REPORT

Canada in a Changing Climate

Regional Perspectives



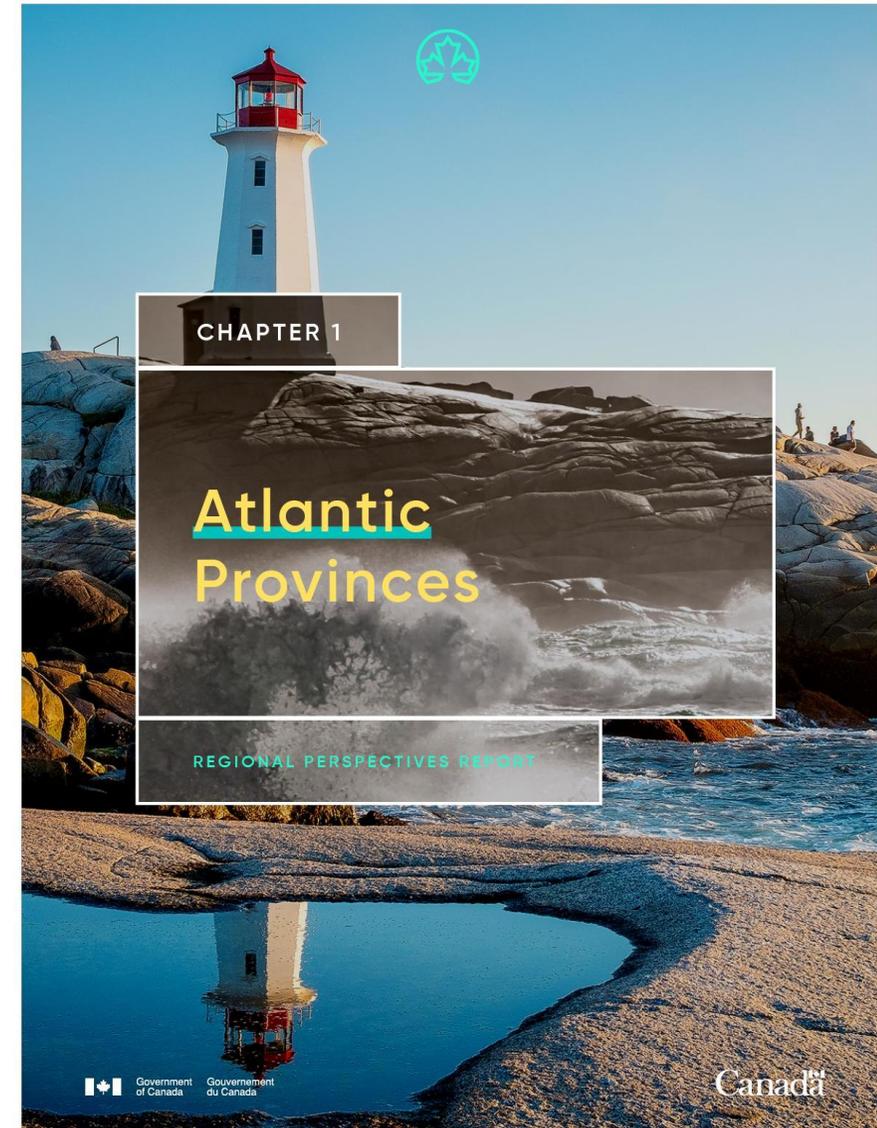
Government
of Canada

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Canada

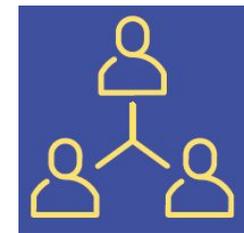
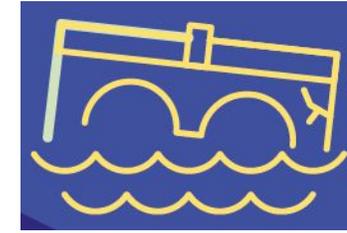
Atlantic Provinces Chapter, *Regional Perspectives Report*

- Impacts in Atlantic Canada
- Approach to chapter
 - Broad engagement process
 - Nunatsiavut in NL not included (included in Northern Chapter)
- Recognizing previous work
- Based on section authors and contributing authors
- Areas of focus
 - Coastal flooding & erosion, infrastructure, natural solutions
 - Health risks associated with climate change, including social vulnerability
 - Indigenous experiences
 - Resource economies
 - Approaches to build adaptive capacity

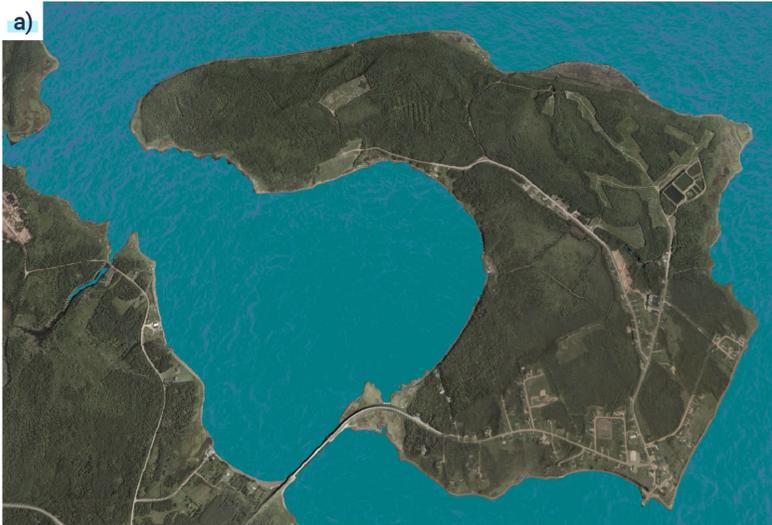


Key messages

- **Key message 1:** Infrastructure is being threatened by increased flooding and erosion.
- **Key message 2:** Climate change is exacerbating risks to health and well-being.
- **Key message 3:** Indigenous experiences inform adaptation in Atlantic Canada.
- **Key message 4:** Forestry, agriculture and fisheries are vulnerable to climate change.
- **Key message 5:** Building adaptive capacity will strengthen resilience.



Indigenous experiences inform adaptation in Atlantic Canada.



Lennox Island, PEI
3 m sea-level rise

- The Mi'kmaq, Wolastoqiyik and Peskotomuhkati Nations of the Wabanaki Confederacy have occupied the Maritimes since time immemorial and have adapted to changes in climate and the environment over countless generations.
- Partnerships with, and leadership by, local Indigenous peoples are vital to ensuring that the knowledge, perspectives and experiences that they hold from living on the land, inform adaptation in their communities and in the region.

Climate change is exacerbating risks to health and well-being.

2017 ice storm in New Brunswick



- People living in Atlantic Canada are facing significant risks to their physical and mental health and well-being from climate change.
- Climate change exacerbates health issues associated with existing vulnerabilities in the region, which are influenced by factors such as socioeconomic status, ethnicity, employment and living arrangements.
- Adaptation measures include public education, vulnerability mapping and actions to address health risks and their underlying factors.

Case Story 1.7: Social vulnerability mapping

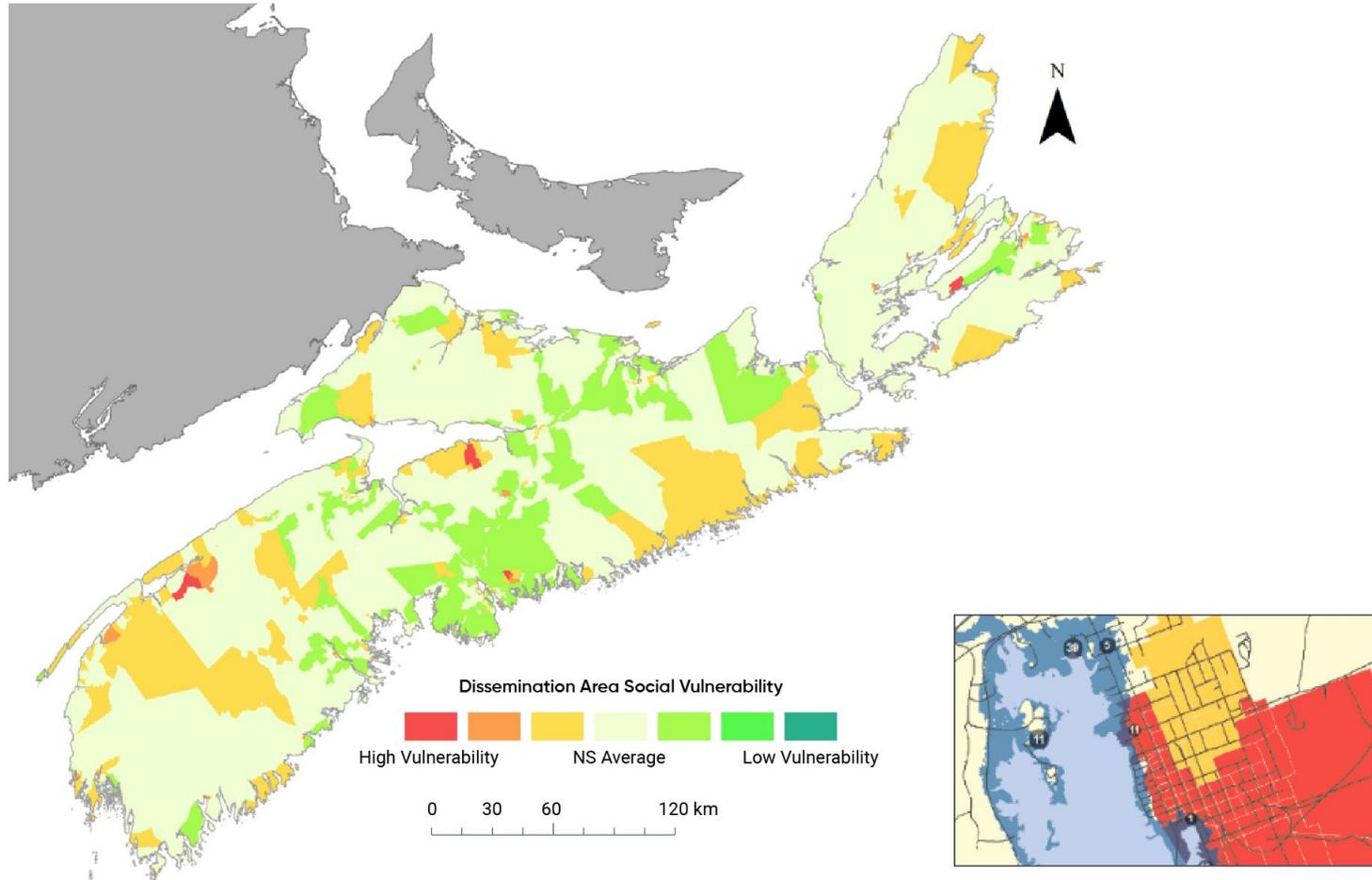


Figure 1.12: Map of Dissemination Areas in Nova Scotia showing levels of social vulnerability, based on a Social Vulnerability Index (SVI). The inset map from a coastal community illustrates the integration of the SVI mapping with a proxy representation (i.e., the dark blue overlay) of projected worst-case relative sea-level rise and storm-surge flooding to 2100. The inset map also shows a count of residential buildings and the distribution of roads within the proxy flood area. Sources: Government of Nova Scotia, n.d.; Richards and Daigle, 2011; Statistics Canada, 2011.

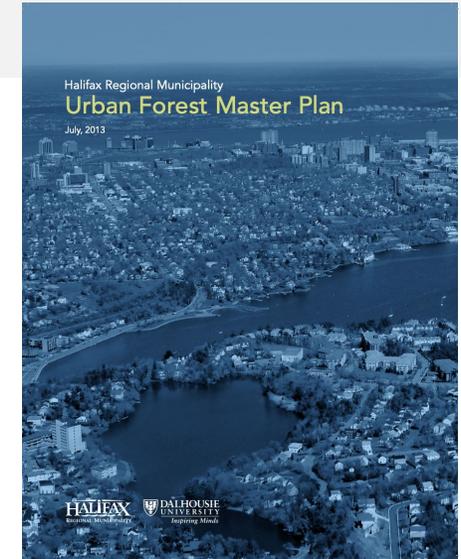
Forestry, agriculture and fisheries are vulnerable to climate change.



- Atlantic Canada's natural resource industries are vulnerable to the impacts of climate change.
- While examples of adaptation are found in each sector—forestry, agriculture, fisheries and aquaculture—there remains a lack of collaboration amongst stakeholders to reduce risks from climate change.

Case Story 1.10: Halifax's Urban Forest Master Plan

- Adaptive management
- Tree planting & pruning
- Build resilience to climate change

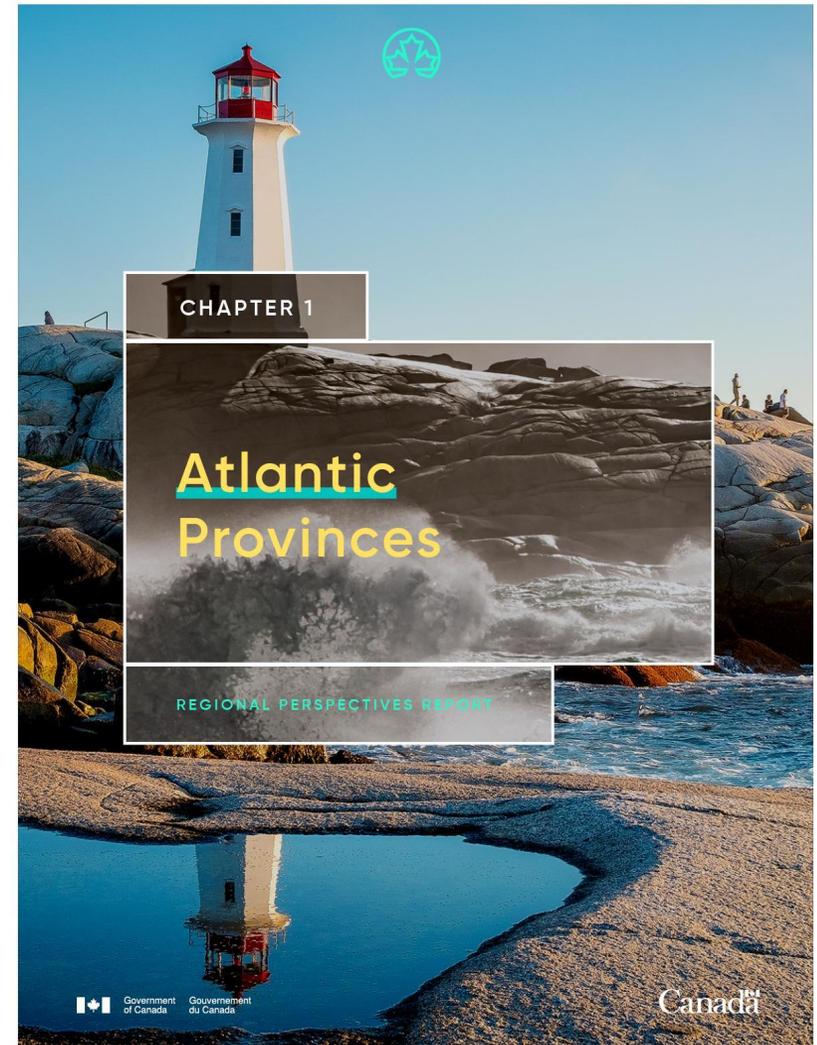


Case Story 1.4: Living Shoreline in Halifax Regional Municipality

- Partnerships
- Engagement
- Education

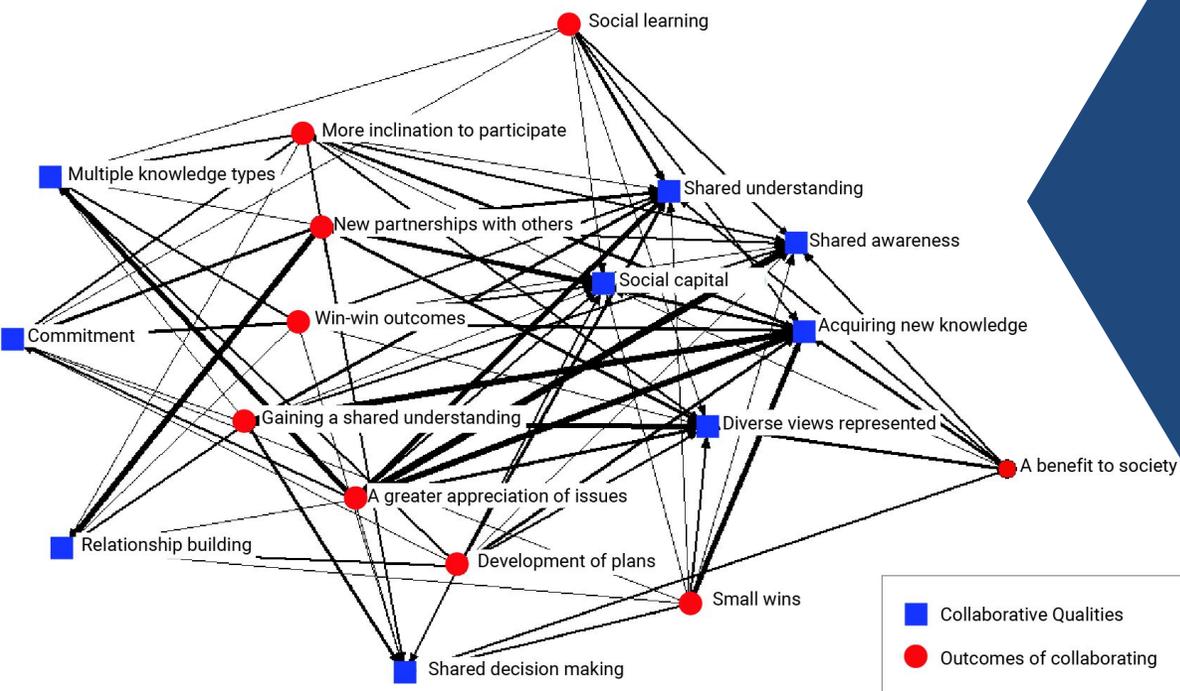
Questions?

- Please add questions to the chat.
- You can also add a question, and provide your e-mail address in case we do not get to your question here.



Building adaptive capacity will strengthen resilience.

Effective collaboration



- Adaptive capacity in Atlantic Canada is often constrained by limited human and financial resources.
- Partnerships and collaboration between different stakeholders—including governments, NGOs, academia and the private sector—are important for driving adaptation in the region.
- Outreach, public education and effective communication are key for building adaptive capacity in Atlantic Canada.

Collaborative initiatives

Natural and Nature-Based Climate Change Adaptation Community of Practice

HOME NEWS CALENDAR CASE STUDIES RESOURCES CALL FOR KNOWLEDGE WEBINARS DIRECTORY ABOUT US FRANÇAIS

Welcome to the Online Community of Practice: Natural and Nature-Based Climate Change Adaptation!

A platform for peer-to-peer learning, information exchange and sharing of best practices for natural and nature-based climate change adaptation approaches...

Why should I be involved?

Are you an engineer, land-use planner or a member of an environmental organization? Do you want to learn more about natural and nature-based approaches for adaptation to climatic change? This is a great platform for you to connect, learn and exchange knowledge with a range of stakeholders.

Connect with Practitioners!

The platform offers an opportunity to connect with experts from the field through member profiles and private messaging. Have a look at different organization's work are working in the case studies section.

Upcoming Workshops, Webinars and Training!

Check out upcoming webinars, field visits, training and workshops around natural and nature-based adaptation. Find links to the past webinars and training sessions. Share information about your events, projects, reports and much more.

Tools and resources

Turn back the tide.

CLIMATE CHANGE IN NEWFOUNDLAND & LABRADOR



EFFECT

SEA-LEVEL RISE

Rising global sea and air temperatures have been causing waters to expand as they warm and ice sheets and glaciers to melt, resulting in higher sea levels around the world. According to a 2010 study by the Geological Survey of Newfoundland and Labrador, sea-level rise in this province could be as high as 40 centimeters by 2050, and 100 centimeters by 2100 (compared to 1990 levels).



POTENTIAL IMPACTS

Increasing rates of coastal erosion

Greater risks of damage to coastal homes and infrastructure

Increased risks to low-lying areas

Increased occurrences of salt water intrusion

Infrastructure is being threatened by increased flooding and erosion.

- Climate change is amplifying existing flood risks in Atlantic Canada's coastal areas and in locations that are prone to overland flooding and erosion.
- Recognizing the risks, a range of adaptation measures are being implemented, including changes to infrastructure design, such as using engineered protective structures, as well as nature-based approaches to protect the coast.



a) O'Donnells, N.L.



b) Clements Cove, N.L.



c) Ferryland, N.L.

Key Message 1/5

Case story 1.1: Intertidal reefs at Souris, Prince Edward Island



Case story 1.3: Managed dyke realignment, Nova Scotia



Knowledge Gaps & Research needs

- Better understanding and addressing viewpoints of Indigenous communities:
applying two-eyed seeing
- Developing monitoring and evaluation tools
- Effective communication methods
- Policy planning and adaptation budgeting
- Managed relocation
- Applying an equity lens



- Inability to keep pace with the rate of change
- Coping with impacts on nature
- Added complexity of shared responsibilities across jurisdictions (e.g., Chignecto Isthmus)
- Lack of adaptation planning for new development

High tides threaten low-lying Isthmus of Chignecto

🔒 Premium content
Francis Campbell (fcampbell@herald.ca)
Published: Oct 10, 2018 at 10:53 a.m.
Updated: Jan 24 at 1:35 p.m.

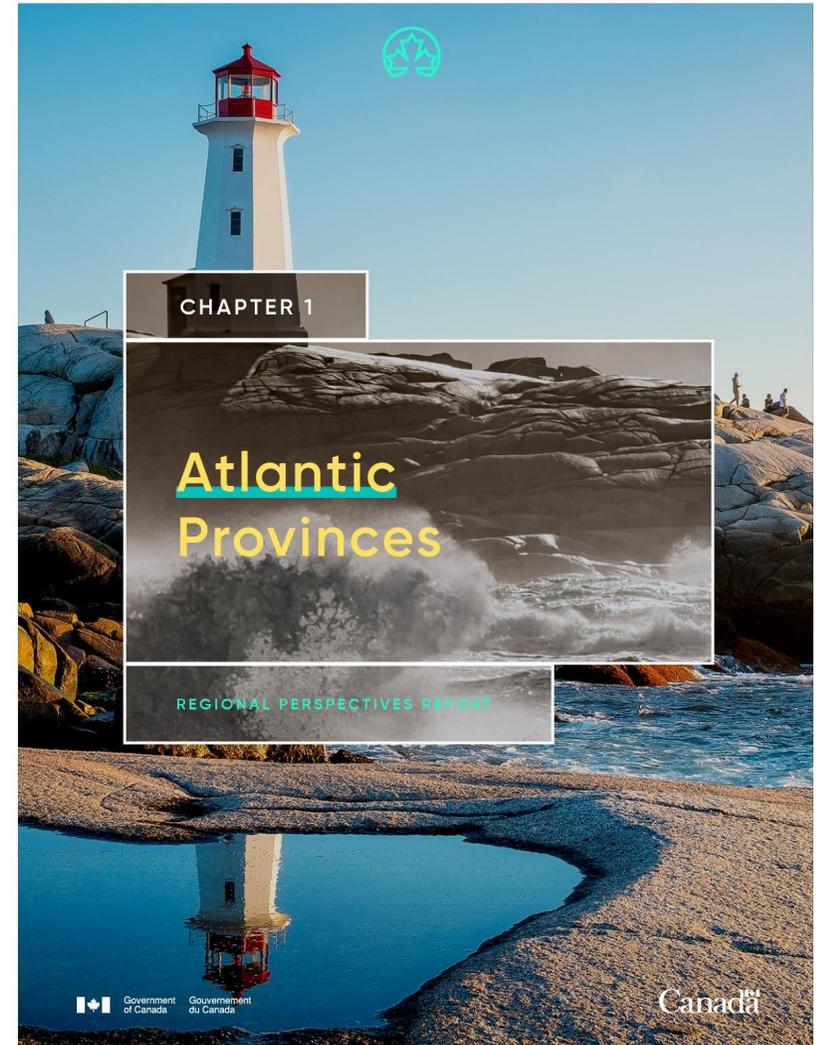


Rising waters from the Bay of Fundy rush up against the CN rail line along the Isthmus of Chignecto route from Nova Scotia to New Brunswick. - Mike Johnson



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CLIMAtlantic

**VISIT OUR
WEBSITE**

**VISITEZ NOTRE
SITE WEB**



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MORE

<https://youtu.be/0WmA-uUsA4A>



CLIMAtlantic Atlantic Canada Climate Services Hub

CLIMAtlantic works throughout Atlantic Canada, all of which is part of the unceded and traditional territories of the Mi'kmaw, Wəlastəkwiyyik, Peskotomuhkati, Innu, and Inuit Peoples.

- 
- **What is CLIMAtlantic**
 - **How will CLIMAtlantic advance adaptation in Atlantic Canada?**

Non-profit organization funded by the federal & provincial governments (Atlantic Canada)

Work in collaboration with and in support of existing initiatives

Mandate:

- deliver climate services driven by user needs
- provide access to climate information
- build local capacity
- offer training and support

How will CLIMAtlantic advance adaptation in Atlantic Canada?

What we do:

- Locate data, facilitate access to data, interpret data;
- Respond to requests for data, information etc.;
- Jointly develop tools, or adapt tools for regional & local use;
- Website, easy access, bilingual, links to tools, data, information;
- Provide curated access to information, resources & tools, guidelines;
- Ongoing needs identification across all sectors, with sectors;
- Collaborative training & mentoring with regional organizations;
- Provide information about partners & collaborators, service providers;
- Collaborate on projects, delivery, development of project ideas.



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[MORE](#)

Green Brook, NB

OPTIONS: Annual values 30 year averages 30 year changes

[? How to read this](#)

[DOWNLOAD DATA](#)

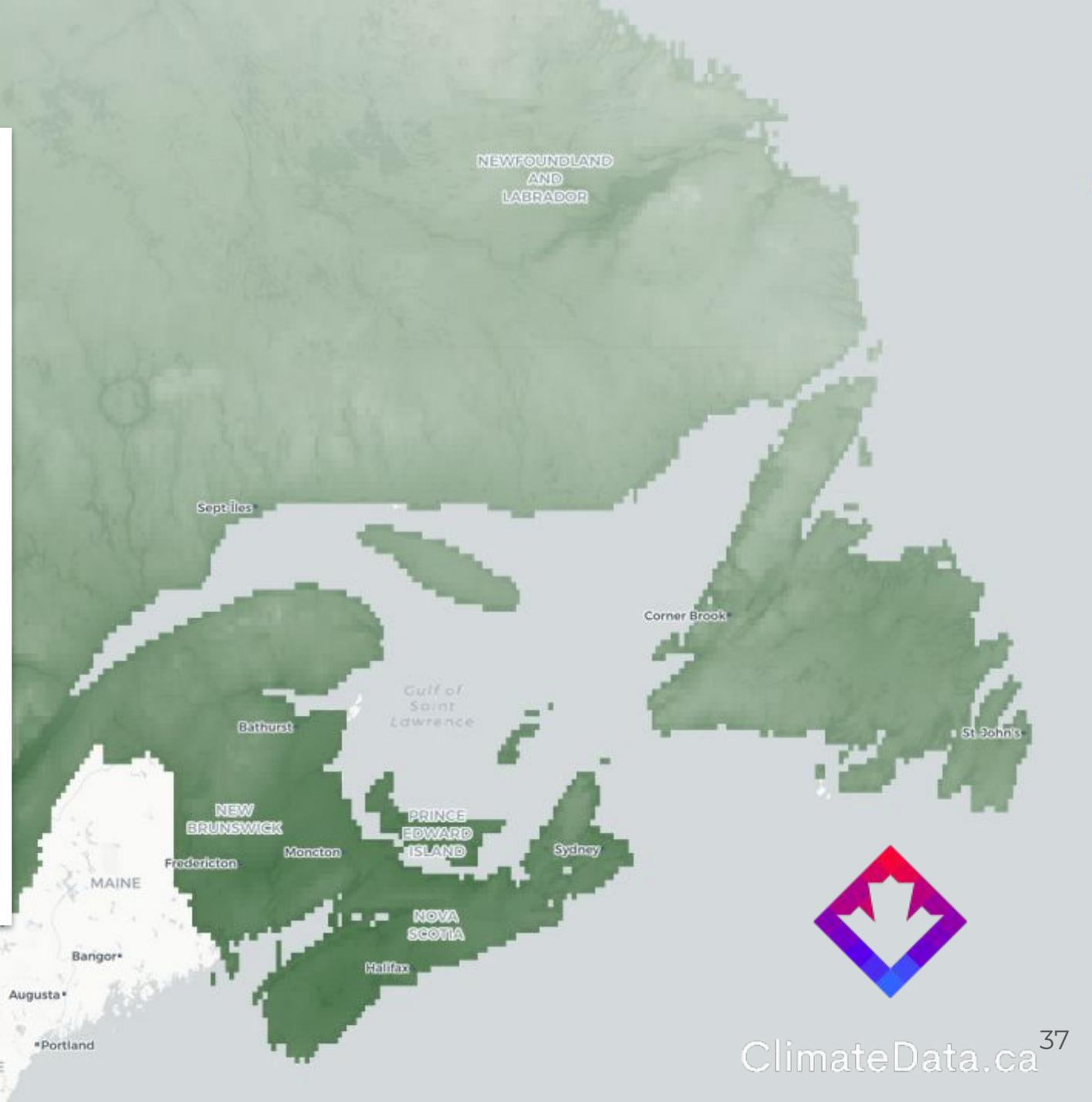
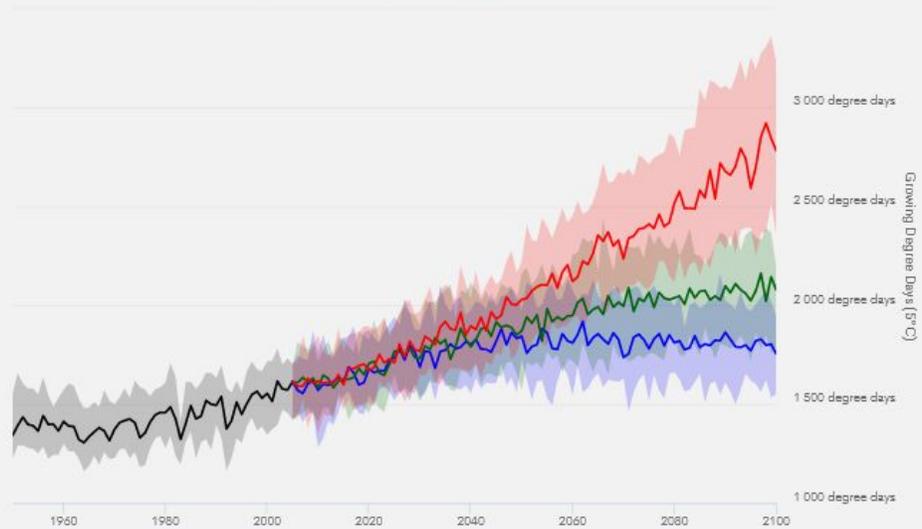
[CSV](#)

[DOWNLOAD IMAGE](#) [PNG](#) [PDF](#)

Growing Degree Days (5°C)

Click and drag in the plot area to zoom in

— GRIDDED HISTORICAL DATA — MODELED HISTORICAL — RCP 2.6 MEDIAN
— RCP 4.5 MEDIAN — RCP 8.5 MEDIAN



The Government of Canada launched the Canadian Centre for Climate Services (CCCS) in October 2018, and as part of the program's mandate, began supporting the establishment of regional hubs to build capacity across the country and provide access to localised information and support needed to make communities and the economy more resilient to the impacts of climate change.

This project was undertaken with the financial support of:
Ce projet a été réalisé avec l'appui financier de :



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

CLIMAtlantic was created in partnership with all Atlantic Canada's Provincial governments, and the support from the Ecology Action Centre, New Brunswick Environmental Network (NBEN), and Aster Group Environmental Services Co-op.



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Questions?

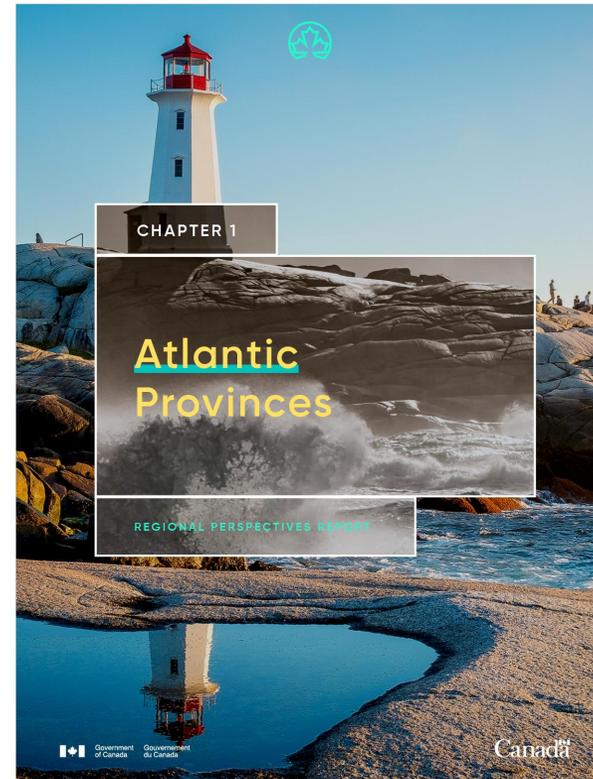


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