



# National Adaptation Strategy Symposium

## REPORT

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### SUBMITTED TO

Climate Change Adaptation Policy Division

Environment and Climate Change Canada

### PREPARED BY

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A healthy planet. A productive and engaged society. A clean, diversified and inclusive economy.

## Our Mission

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# Introduction

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In February 2021, Environment and Climate Change Canada (ECCC) started engaging with provinces and territories, Indigenous governments, and other targeted partners and stakeholders in Canada and abroad to help develop the country's first National Adaptation Strategy (NAS). Domestic and international discussions were followed with a multi-partner and stakeholder strategy development forum held in June 2021. As a result of this forum discussions, five thematic areas emerged as potential key pillars of a NAS Framework. In fall 2021, the Government of Canada launched five expert advisory tables to propose goals and objectives for each of thematic areas, which include:

- Health and Wellbeing
- Resilient Infrastructure
- Thriving Natural Environment
- Strong and Resilient Economy
- Disaster Resilience and Security

During winter 2022, ECCC planned for a National Adaptation Strategy Symposium to initiate meaningful public participation and discussion about the NAS, building on the Government of Canada's ongoing engagement with key partners throughout the development process.

The Symposium on the National Adaptation Strategy took place virtually on Monday May 16<sup>th</sup>, 2022 through Zoom webinar. The key messages that emerged from the different panels included the importance of collaboration and using the tools and science available to implement adaptation initiatives in a timely manner. The panelists spoke to the importance of leadership and communities feeling empowered to come up with novel solutions, and building long-term resilience into their policies, programs, and projects. They also emphasized the importance of communicating the real costs and solutions which will help people make informed decisions. They said that as a society we need to restore our relationship with nature and this would be beneficial for our health and for the environment. Lastly, they advised that adaptation measures be inclusive and equitable, taking into account multiple perspectives including Indigenous knowledge systems.

## Event Overview

The Symposium took place virtually during 4½ -hour and was attended by nearly 1,400 participants from across the country. The Symposium centred on four panels covering a broad range of actors with technical, market, and policy expertise, as well as decision-making influence on climate change adaptation. The objectives were to bring leaders together to showcase adaptation efforts across the country; to kick off discussions on potential short-term actions under the Strategy; and, to update Canadians on the work to date in the development of the Strategy. It also marked the official launch of the National Adaptation Strategy online platform to engage Canadians on specific, measurable, and achievable short-term actions to support long-term transformational goals and medium-term objectives: <https://letstalkadaptation.ca/>. A [discussion paper](#) was also shared with Symposium participants.

Elder Lorraine Netro of Old Crow, Yukon opened the event by bringing the impacts of climate change to life through examples of what communities are facing in Canada and called for immediate action. The Minister of Environment and Climate Change, Steven Guilbeault, then provided opening remarks livestreamed in from the town of Roxboro, Quebec, a community that has been impacted by flooding and that has invested in nature-based solutions to prepare for future flooding. He announced the 78launch of engagement on the NAS, new measures and funding on adaptation initiatives, and the importance of data to build smarter, harness nature, and protect communities.



Elder Lorraine Netro of Old Crow, Yukon

The first panel brought together leaders across orders of government to discuss the important roles of provinces, territories, municipalities, and Indigenous governments to develop and implement adaptation initiatives in Canada, including the National Adaptation Strategy. It was moderated by Alain Bourque, Executive Director of Ouranos, and the panelists were:

- The Honourable Bill Blair, President of the Queen’s Privy Council for Canada and Minister of Emergency Preparedness
- Terry Duguid, Parliamentary Secretary to the Minister of Environment and Climate Change
- The Honourable George Heyman, Minister of Environment and Climate Change Strategy, British Columbia
- The Honourable Nils Clarke, Department of Environment, Yukon
- Cassidy Caron, President of the Métis National Council
- Kluane Adamek, AFN Yukon Regional Chief
- Chris Boivin, FCM Chief Development Officer

The second panel, also moderated by Alain Bourque, consisted of private sector, NGOs, and think-tanks to share their lived experiences on adaptation and how actions can be scaled to the national level. Panelists included:

- Dr. Melissa Lem, physician, Board Director, Canadian Association of Physicians for the Environment
- Don Forgeron, President & CEO, Insurance Bureau of Canada
- Graham Saul, Executive Director, Nature Canada
- Rick Smith, President, Canadian Climate Institute
- Ehren Cory, Chief Executive Officer, Canada Infrastructure Bank

The third panel was moderated by Deputy Minister of Environment and Climate Change Canada (ECCC), Christine Hogan and included presentations by Dr. Greg Flato, Acting Director of the Climate Research Division at ECCC and Dr. Heather Morrison, Executive Director of Canadian Centre for Climate Services. They covered the latest science on future warming and impacts to which Canada must adapt to reduce climate change risks.

The fourth and final panel brought together NAS advisory table co-chairs to reflect on their efforts in the development of the Strategy so far and to initiate a conversation on short-term actions that the Strategy will advance. The panelists included:

#### *Health and Well-being*

- Carolyn Tateishi, Director, Safe Environments Directorate, Health Canada
- Dr. Sherilee Harper, Associate Professor / Canada Research Chair in Climate Change and Health, School of Public Health, University of Alberta

#### *Resilient Natural and Built Infrastructure*

- Lo Cheng, Director General, Environment and Infrastructure Policy, Infrastructure Canada
- Caroline Larrivée, Scientific Program Director, Ouranos

#### *Thriving Natural Environment*

- Jeff MacDonald, Director General, Environment and Climate Change Canada
- Graeme Reed, Senior Advisor, Assembly of First Nations

#### *Strong and Resilient Economy*

- Rory Gilson, Director General, Hazards, Adaptation and Operations Branch, Natural Resources Canada
- Dr. Sarah Burch, Executive Director, Interdisciplinary Centre on Climate Change, University of Waterloo

#### *Disaster Resilience and Security*

- Stéphanie Durand, Director General, Policy and Outreach, Public Safety and Emergency Preparedness Canada
- Craig Stewart, Vice President, Federal Affairs, Insurance Bureau of Canada

## About this Report

This report details the key messages that emerged from each panel, including those from participants, and outlines recommendations for the National Adaptation Strategy based on what we heard.



The Honourable Steven Guilbeault, Minister of Environment and Climate Change

# Panels

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## Panel 1: Climate Action and Opportunities Across Orders of Government



Alain Bourque, Ouranos (Moderator); Hon. Bill Blair, Minister of Emergency Preparedness; Parliamentary Secretary Terry Duguid, ECCC; Hon. George Heyman, Minister of Environment and Climate Change of BC; Hon. Nils Clarke, Department of Environment for Yukon, Cassidy Caron, Métis National Council; Regional Chief Kluane Adamek, Assembly of First Nations; Chris Boivin, Federation of Canadian Municipalities

### Key Messages

*Working together is critical as we prepare for, and respond to, climate change impacts*

Minister Bill Blair stated that in his experience, “It was very important to reach out to other orders of government, municipalities, and regional councils” to prepare and respond to emergencies. Municipalities have much to say on how responses should be organized, planned, and prepared for, and they are currently talking about prevention, adaptation, and building greater resilience in their communities. He emphasized that collaboration is not just about occasional communication, but rather active partnership.

Minister Nils Clarke emphasized the need to listen to “communities’ priorities for climate change adaptation and to design programs and policies that work with and for them.” He also mentioned that collaboration should mean finding ways to support partnerships through funding, building capacity, and listening. Bringing together science and Indigenous knowledge was important for the Yukon’s adaptation work, where they developed a funding agreement supporting applied research on climate change in the region.

President Cassidy Caron stated that there “needs to be a clear framework for collaboration and mechanisms to provide adequate resources to support [Métis Peoples’] contributions as an equal part of the solution.” She also mentioned that we must encourage cross-jurisdictional and cross-sectoral approaches.

Parliamentary Secretary Terry Duguid mentioned that attempts to address climate change impacts have been reactive rather than proactive. The National Adaptation Strategy would help find a shared vision and framework to set clear targets and timelines to determine where and how much we should invest, and who is best positioned to make those investments. More importantly, he emphasized, it will determine how we can work together across government sectors and communities to become aligned. “The goal is to protect our people, our communities, and our economy by building smarter, sharing climate data, using nature-based solutions, and changing the way we do business.”

### ***Long-term resilience that considers future generations must be built into policies, programs, and projects***

Minister George Heyman spoke to BC’s Preparedness and Adaptation Strategy to improve knowledge around risks and potential impacts that will help the province rebuild from flooding damages with climate resilience in mind. Their approach involved working closely with Indigenous Peoples acknowledging their long history of understanding river flows and wildfires, and the impacts climate change can have on these ecosystems. His vision for British Columbians is that “they are aware of the risks across the province and that we take actions to prepare and adapt to the risks”. It is also about finding solutions that both adapt to and mitigate climate change, like restoring watersheds which protect communities from flooding and help store carbon.

Regional Chief Kluane Adamek spoke to the vast experience Indigenous peoples have adapting to climate changes and the need to listen to their voices, especially young people. She spoke to the need to acknowledge the legislative/policy ecosystem and the lived reality, as well as looking at adaptation through these two lenses. She said “we cannot make decisions now or for 50 years; we have to make decisions for generations to come and that has always been an Indigenous approach that has been part of our values and worldview.”

Chris Boivin spoke to the municipal perspective and provided recommendations for the National Adaptation Strategy that included the need to invest in climate data and local and regional climate risk and vulnerability assessments. These risks must then be integrated into public sector decision-making in order to “extend the life of existing infrastructure to generate more climate resilient projects.” He said we must continue to strengthen natural infrastructure and invest in nature-based solutions to both adapt to and mitigate climate changes impacts. He also called for scaled up support for disaster mitigation, and climate resilience projects to protect communities from climate change impacts.

### ***Communities need to feel empowered to lead and come up with novel solutions***

President Cassidy Caron said that in these critical times we need “to explore how new institutions, governance, practices, and jurisdictional arrangements can enable climate solutions and adaptation strategies created for

Indigenous peoples.” Initiatives around ecotourism and conservation, and the revitalization of Indigenous stewardship must be part of the strategy.

Regional Chief Kluane Adamek stated that adjustments are required “in terms of some of those jurisdictional ways we approach climate, some of the legislative and policy processes that currently exist, and how we may need to think about structuring things differently.” She encouraged us to consider how plans can support collective efforts to achieve these targets, and how we can mobilize and energize the next generation to be part of these solutions.

Minister Clarke said that resilience and adaptability are embedded in Indigenous cultures and ways of knowing. “Bringing together diverse worldviews may lead to innovative approaches of working together to adapt to climate change impacts, share limited resources, and maintain Indigenous cultures and ways of life.”

Chris Boivin said there needs to be awareness, knowledge, and capacity to act; this is integral to ensure successful action at the end of the day and not lose sight of the investment in the human capacity. We need to enable local actors to develop transformative projects and make space for the smaller scale solutions.

## Panel 2: Climate Actions and Opportunities with Key Partners and Stakeholders



Alain Bourque, Ouranos (Moderator); Dr. Melissa Tam, Canadian Association of Physicians for the Environment; Don Forgeron, Insurance Bureau of Canada; Graham Saul, Nature Canada; Rick Smith, Canadian Climate Institute; Ehren Cory, Canada Infrastructure Bank

## Key Messages

### *Restoring our relationship with nature will help us better adapt to climate change*

Graham Saul opened the conversation with an important question about the application of the National Adaptation Strategy. He asked whether the NAS is designed solely for human communities, or if it applies to other species (flora, fauna) as well. He invited people to consider the intrinsic value of nature and proposed that nature-based solutions be prioritized, which would have added benefits, like helping some species adapt to climate change. He also stated that Western worldviews are often embedded in a set of assumptions about our relationship to nature that we need to begin questioning. Indigenous communities and their worldviews have something profound to teach us, and we can turn to the example of fire suppression and how prescribed burning was prohibited but then later accepted as a means to restore habitat.

Dr. Melissa Lem spoke about the impacts of climate change on health and wellbeing, noting that Canadians have been affected both physically and mentally. She brought up the importance of protecting and restoring nature, and connecting people to it because “healthy people depend on healthy ecosystems.” About a year ago, Canada started a national nature prescription program where doctors can prescribe parks to patients. This initiative has inspired people around the world and the WHO recently recognized the program as a way to restore nature and human health. Dr. Lem noted that the program is improving people’s health which in turn is also increasing their resilience against the effects of climate change, while building support for investments in natural infrastructure. She concluded by noting that research has also shown that people who are more connected to nature are more likely to work to protect it.

### *There is an urgent need for action on climate change adaptation*

Don Forgeron explained that while adaptation means dealing with a slower set of events such as sea-level rise and melting permafrost, and other longer-term changes, there are impacts that are already affecting Canadians in very real ways. He called for a national flood program through engagement with various leaders to design a roadmap with clear and ambitious targets.

Rick Smith outlined various statistics on climate change highlighting the urgency of action, one being that “the cost of weather-related disasters and extreme events has increased to 5-6% of Canada’s GDP, which is up from an average of 1% in previous decades” representing an enormous and accelerating impact. He also spoke to the costly impacts on health and infrastructure anticipated in the short and long term. Canada simply cannot afford to let the existing adaptation gap grow any wider and called for an immediate and massive increase in the scope and scale of adaptation efforts.

*Communicating costs and solutions will help people make positive choices for themselves and their communities*

Dr. Lem mentioned how health framing is effective for building public support for climate change initiatives. A multinational study published last year examined different frames used to garner support and concluded that health framing was more effective than economic or environmental framing. Health framing was particularly effective among those who were not concerned about climate change.

Ehren Cory spoke about innovative financing and funding solutions to accelerate infrastructure investment. He stated that if these solutions are not leveraged across the public and private sector, there is no realistic way to adapt to climate change. He emphasized the importance of using long timeframes when planning for infrastructure, and that the payback is there but it is long term and diffuse.

Rick Smith concluded the panel by mentioning that discussing the business case is key, “from things that might be explicitly labelled adaptation to a discussion about evaluating the costs of continuing the non-adaptive status-quo.”

### Panel 3: Climate Science on Adaptation



Christine Hogan, Deputy Minister, Environment and Climate Change Canada (Moderator); Dr. Greg Flato, Climate Research Division, ECCC; Dr. Heather Morrison, Canadian Centre for Climate Services, ECCC

## Key Messages

***Future warming is inevitable, but the magnitude of the change that we must adapt to is under our collective control***

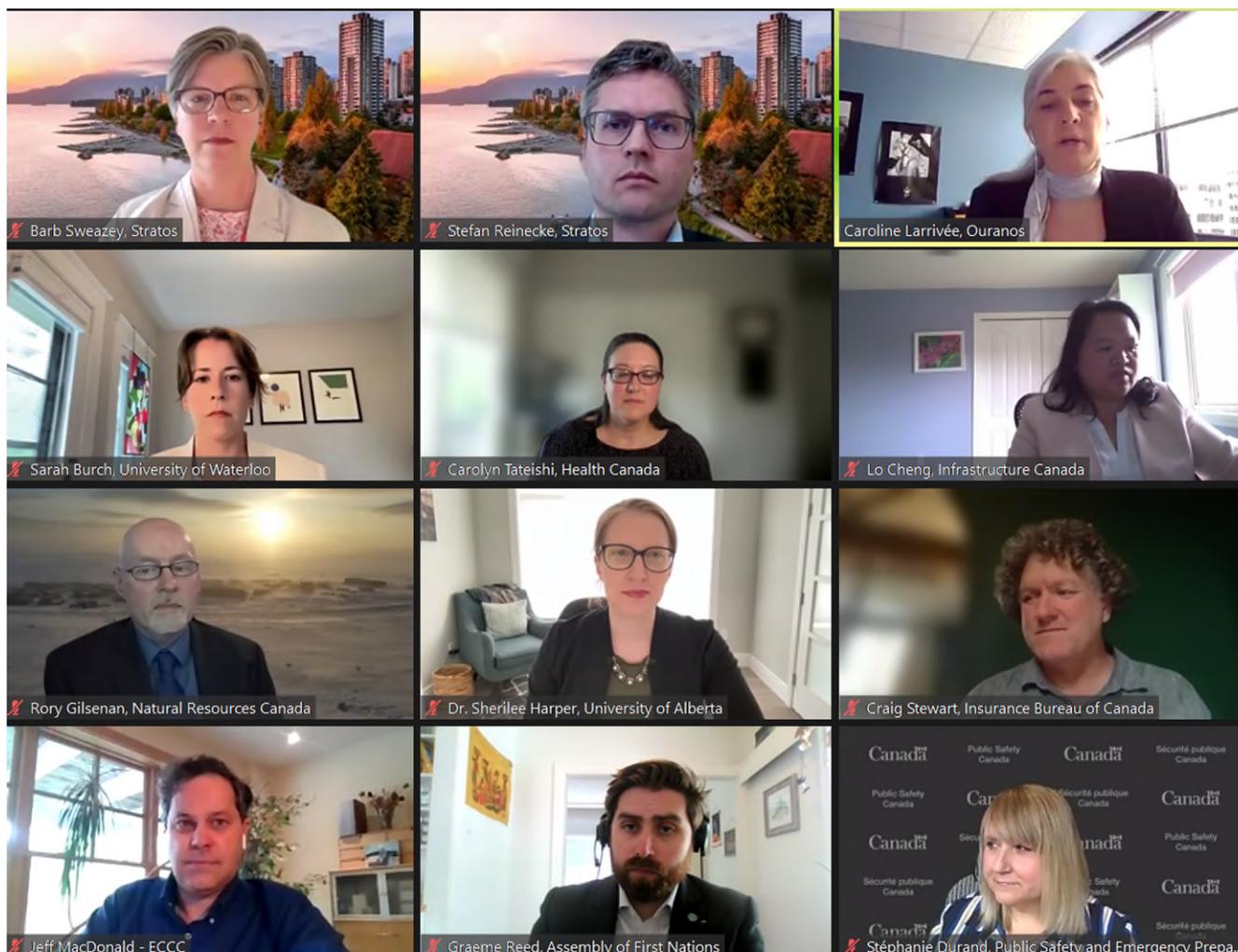
Dr. Greg Flato started his presentation by describing the relationship between human activities and greenhouse gas emissions. He showed projections under various future scenarios, including if we continue with the status quo or if we take action to reduce emissions. The projections show that further warming will persist even with rapid emission reductions, but that the extent of that future warming is under our control. Different levels of warming will determine the frequency and intensity of extreme events (heatwaves, precipitation), stresses on the food system, health impacts, and socioeconomic impacts. He noted that “comprehensive models and supercomputing capabilities can directly inform adaptation planning and the rebuilding of infrastructure that is climate-resilient.”

He also presented findings on maladaptation and the need to understand the cumulative impacts of local decisions that may unintentionally result in an increase in overall risk. Dr. Flato recommended cross-sectoral policies and economy-wide measures and actions with synergies to both mitigate and adapt to climate change. Rapid and transformative changes will be needed in the energy, transportation, building, industrial, and agricultural sectors.

***We have the scientific foresight to take the preventative measures needed to lessen our risks and vulnerabilities***

Dr. Heather Morrison said that we need to continue to be ambitious in our efforts to reduce GHG emissions and understand the implications of climate change on Canada, mobilizing evolving science and knowledge. She explained that the climate will continue to warm until we reach net-zero, and systems and structures that are not designed for current and future climatic conditions will experience the consequences. We have seen examples of this in British Columbia and Quebec with increased repair and maintenance costs for infrastructure and increases in catastrophic losses from extreme weather events. However, Dr. Morrison stated that many of these risks and impacts can be lessened or eliminated by taking our scientific understanding of future climatic conditions into account when designing our plans and actions. “Just because you know the climate is changing, doesn’t mean you know how strong your roof needs to be, how the drainage system needs to look like in your municipality, or what your health system needs to prepare for.” The provision and use of data, information, tools, and training will enable consideration of climate information in decision-making.

## Panel 4: Developing the National Adaptation Strategy – How Partners, Stakeholders, and Adaptation Experts Can Contribute



Barb Sweazey, Stratos (Moderator); Stefan Reinecke, Stratos (Moderator); Caroline Larrivée, Ouranos; Sarah Burch, University of Waterloo; Carolyn Tateishi, Health Canada; Lo Cheng, Infrastructure Canada; Rory Gilsonan, Natural Resources Canada; Dr. Sherilee Harper, University of Alberta; Craig Stewart, Insurance Bureau of Canada; Jeff MacDonald, Environment and Climate Change Canada; Graeme Reed, Assembly of First Nations; Stéphanie Durand, Public Safety and Emergency Preparedness Canada

### Key Messages

*Adaptation measures must be inclusive, equitable, and maximize co-benefits*

**Resilient Natural and Built Infrastructure.** Lo Cheng and Caroline Larrivée mentioned that adaptation is a shared responsibility, and that we have to include all levels of government and Indigenous people. As we work collectively through the NAS, it is important to foster synergies, whether it is through building on existing networks or creating new collaborations. We need robust ways of working together and to hear from the

different voices to share priorities, scale up what we need to do to make progress, and include stakeholders that we do not usually hear from.

**Strong and Resilient Economy.** Dr. Sarah Burch talked about the importance of maximizing co-benefits and avoiding maladaptation; it's important in the context of co-benefits to acknowledge that we need our adaptation actions to align with and accelerate our greenhouse gas reductions. She also mentioned that there are opportunities to strengthen our communities, our economy and the environment simultaneously. Rory Gilsean noted that a strong and resilient economy needs to address the conditions that make some people more vulnerable, and also consider equity and consumer protection. Dr. Burch stated that a strong and resilient economy is one that values nature by applying a holistic valuation of it. This requires the integration of multiple perspectives, including Indigenous knowledge systems and economies to help represent non-market-based and intrinsic values. Rory Gilsean mentioned that we will be better at reducing the impacts of catastrophic events if we draw on both science and Indigenous knowledge systems.

**Health and Well-being.** Carolyn Tateishi and Dr. Sherilee Harper noted that all people living in Canada can be affected by climate change, but that some populations are at higher risk of health impacts than others, due to underlying factors often rooted in inequity, colonialism, and other injustices. Effectively responding to climate change requires that we also address these issues. Maladaptation can exacerbate existing inequalities for vulnerable groups, or create long-term locked-in vulnerability. Therefore, we must involve many different societal groups in planning and decision making. Dr. Harper further emphasized the point that we must draw on multiple different knowledge systems, including Indigenous knowledge.

**Disaster Resilience and Security.** Stéphanie Durand and Craig Stewart stated that building disaster resiliency is a key component of the NAS. Canadians need to know what adaptation action means at the macro and the micro level. For example, individuals need to be provided with information to protect their households from devastating floods, wildfires, and heat events. At the macro level, they said the NAS requires an inclusive governance structure with clear accountabilities. It also needs to support greater coordination across sectors, increased awareness of risks, and to build capacity and tools to deal with our new reality.

**Thriving Natural Environment.** Jeff MacDonald and Graeme Reed invited us to view ourselves as part of nature and not separate from it, and not to view nature simply as an extractable resource. They also stated the need to integrate different perspectives in our actions wherever possible, including those of Indigenous peoples. This will require Indigenous peoples to be in positions to make those decisions. We need to shift towards stewardship, from an “ego-based to an eco-based approach”. “Indigenous knowledge and participation need to be part of the way we make decisions on how we use the land, how we use our waters and natural resources in Canada.” They also emphasized the importance of encouraging youth to engage on the NAS, and to get involved in understanding how we are making decisions to adapt to climate change.

## *Concerted effort is needed using a whole-of-society approach*

Stéphanie Durand and Craig Stewart emphasized that we need to reflect on a whole society approach that includes people within and outside of government. The strategy must outline a whole society plan to prepare for, not just react to, these increasing hazards. This includes establishing desired outcomes and associated targets. Rory Gilsean added that workers need training to build skills and capacity, and there is also a need for risk-based data and risk assessments for communities and businesses. Lo Cheng stated that leadership is “needed from all parts of society at all levels; everyone has a role to play.”

## Participant Insights

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In addition to listening to the panel discussions, symposium participants were invited to participate in the Q&A function<sup>1</sup>, as well as to provide answers to questions posted on the screen through the Mentimeter survey platform (which are summarized below).

The first question posed through Mentimeter was “how is climate change impacting your region/community?” Participants responded with a wide range of impacts including flooding, heat waves, wildfires, drought, and mental health.

The second question asked how the NAS can be inclusive of all Canadian perspectives. Recurring themes that emerged from the 184 responses included:

- We need to engage all stakeholders through different forums to ensure that as many Canadians as possible can meaningfully participate.
- We should pay special attention to vulnerable and marginalized communities.
- There needs to be transparency, and access to information in different languages.
- Engagement must include municipal and local governments and organizations, and the implementation of adaptation initiatives should be community driven.
- We must also be inclusive of Indigenous perspectives and the rights of nature.

The third question was a scaled question asking how significantly local adaptation actions are impeded by a lack of access to scientific information on a scale from *not impeded* (1) to *strongly impeded* (4). The average result from the 174 respondents was that actions were impeded (2.5 out of 4).

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<sup>1</sup> ECCC will be reviewing the input from Q&A and integrating it, as appropriate, into the Let’s Talk Adaptation engagement platform, as additional input for consideration in the development of the NAS.

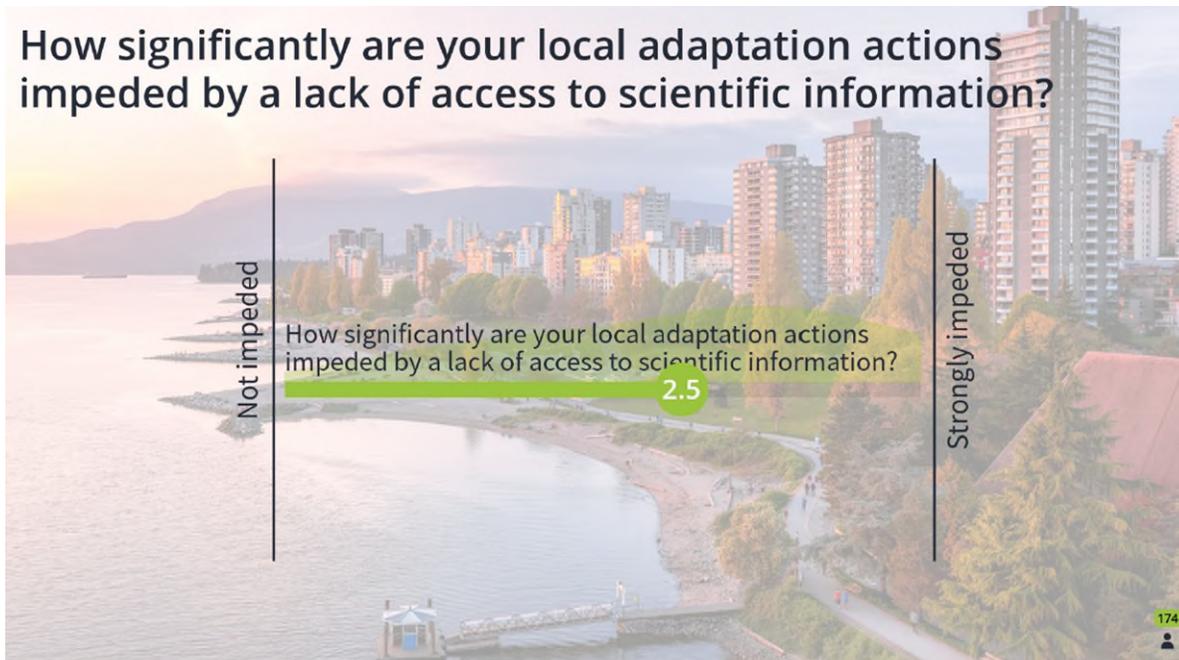


Figure 1: Mentimeter results for question three

The fourth question posed to participants was what new science, information, and tools are needed to enable adaptation actions that prepare us for future conditions. A total of 120 participants responded with a variety of suggestions (See Appendix B) and the top responses were flood and hazard maps, open source and reliable data, and regionally adapted information that communities can reference.

The fifth and final question posed to participants was what the single most urgent action is needed to advance climate change adaptation in Canada where participants responded in short answer format. The top four types of actions that emerged by the 140 respondents were:

1. increased funding for adaptation initiatives
2. collaboration across all levels of government
3. education and training
4. data accessibility and transparency.

Other more specific actions mentioned by respondents included greening the electricity grid and implementing more stringent land use planning regulations to restrict development in flood zones.

# Event Analytics

## Event Data

The below sections provide an overview and breakdown of event data related to engagement from attendees during the webinar, and registration versus actual attendance by country and by sector.

### Engagement from Attendees

- Total questions and comments posed by participants: 142
- Total participant responses in Mentimeter: 530

### Registration vs. Actual Attendance

- Total registrations: 1,904
- Total actual attendance: 1,369

**Table 1: Participant Registration vs. Actual Attendance by Country and Province**

| Country                          | # Registered | # Actual attendance |
|----------------------------------|--------------|---------------------|
| <b>Canada</b>                    | <b>1,819</b> | <b>1,315</b>        |
| Alberta                          | 134          | 93                  |
| British Columbia                 | 206          | 135                 |
| Manitoba                         | 78           | 54                  |
| New Brunswick                    | 58           | 39                  |
| Newfoundland and Labrador        | 36           | 26                  |
| Nova Scotia                      | 117          | 92                  |
| Northwest Territories            | 23           | 16                  |
| Nunavut                          | 8            | 5                   |
| Ontario                          | 831          | 625                 |
| Prince Edward Island             | 13           | 10                  |
| Quebec                           | 260          | 182                 |
| Saskatchewan                     | 34           | 24                  |
| Yukon                            | 21           | 14                  |
| <b>International</b>             | <b>85</b>    | <b>54</b>           |
| Argentina                        | 1            | 0                   |
| Bangladesh                       | 1            | 1                   |
| British Indian Ocean Territory   | 1            | 1                   |
| Cameroon                         | 1            | 1                   |
| Democratic Republic of the Congo | 1            | 0                   |
| Costa Rica                       | 1            | 1                   |

| Country                  | # Registered | # Actual attendance |
|--------------------------|--------------|---------------------|
| Egypt                    | 2            | 0                   |
| France                   | 12           | 8                   |
| Germany                  | 2            | 1                   |
| India                    | 4            | 0                   |
| Iraq                     | 1            | 1                   |
| New Zealand              | 1            | 0                   |
| Nigeria                  | 1            | 1                   |
| Pakistan                 | 1            | 0                   |
| Philippines              | 1            | 1                   |
| Saudi Arabia             | 1            | 1                   |
| Senegal                  | 1            | 0                   |
| Switzerland              | 1            | 0                   |
| United Arab Emirates     | 1            | 0                   |
| United Kingdom           | 12           | 7                   |
| United States of America | 38           | 30                  |

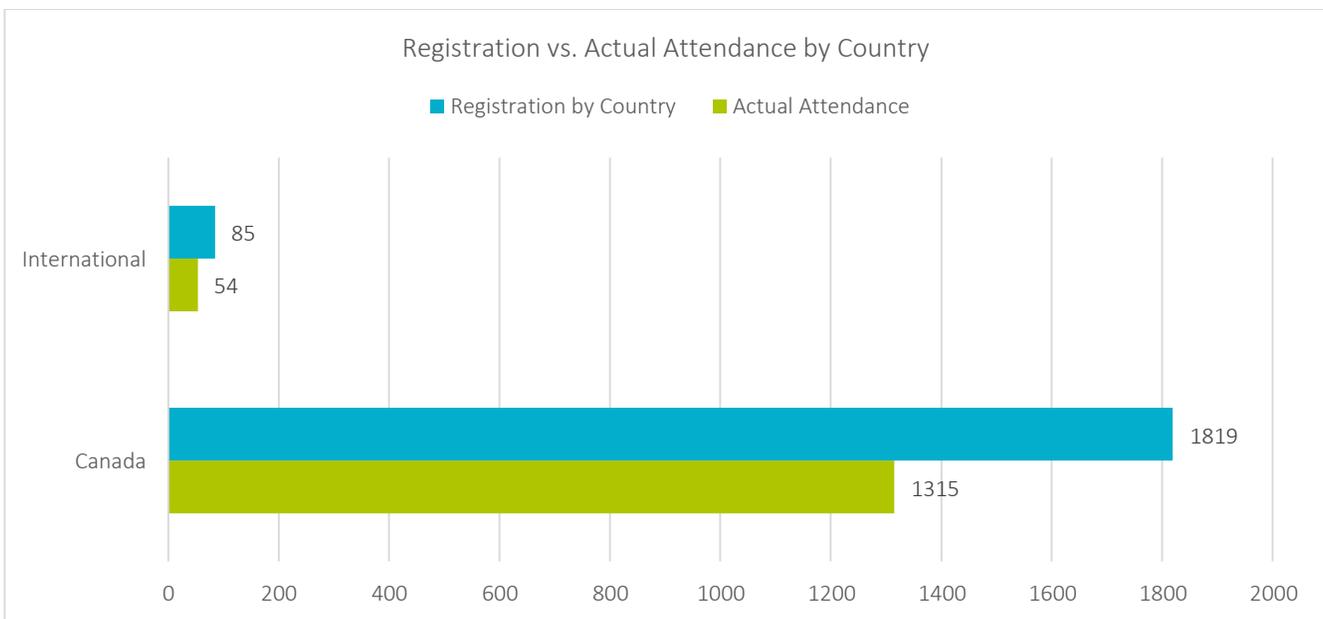
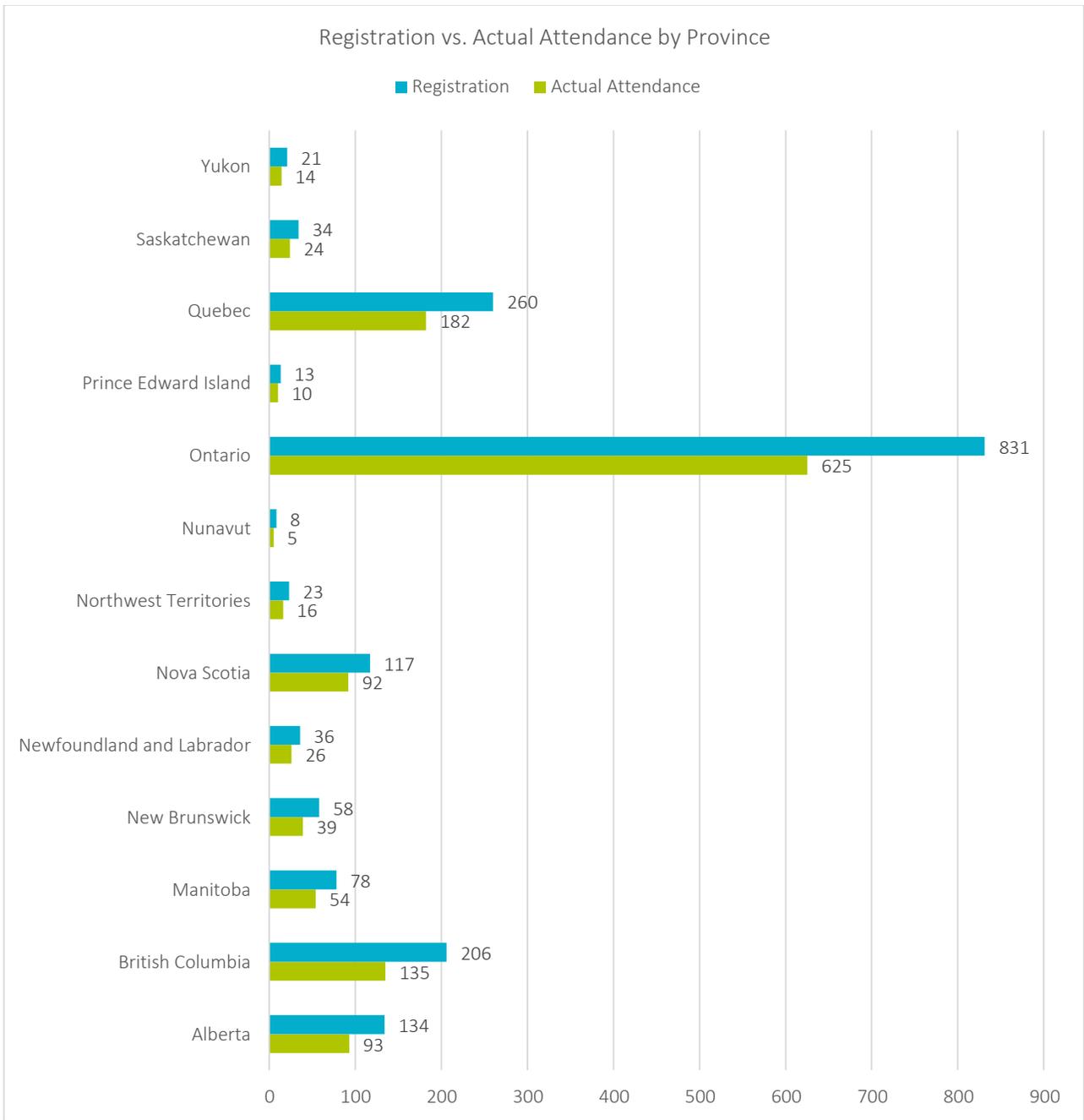


Figure 2: Participant Registration vs. Actual Attendance by Country



**Figure 3: Participant Registration vs. Actual Attendance by Province**

## Sector Participation Data

Table 2: Participant Registration vs. Actual Attendance by Sector

| Sector / Industry                  | # Registered | # Actual attendance |
|------------------------------------|--------------|---------------------|
| Government                         | 1033         | 786                 |
| General Public                     | 28           | 18                  |
| Industry                           | 155          | 107                 |
| Media                              | 10           | 3                   |
| Academia                           | 193          | 125                 |
| Non-Government Organization        | 324          | 228                 |
| Indigenous Partner or Organization | 41           | 26                  |
| Other                              | 118          | 76                  |
| Blank (did not indicate)           | 1            | 0                   |

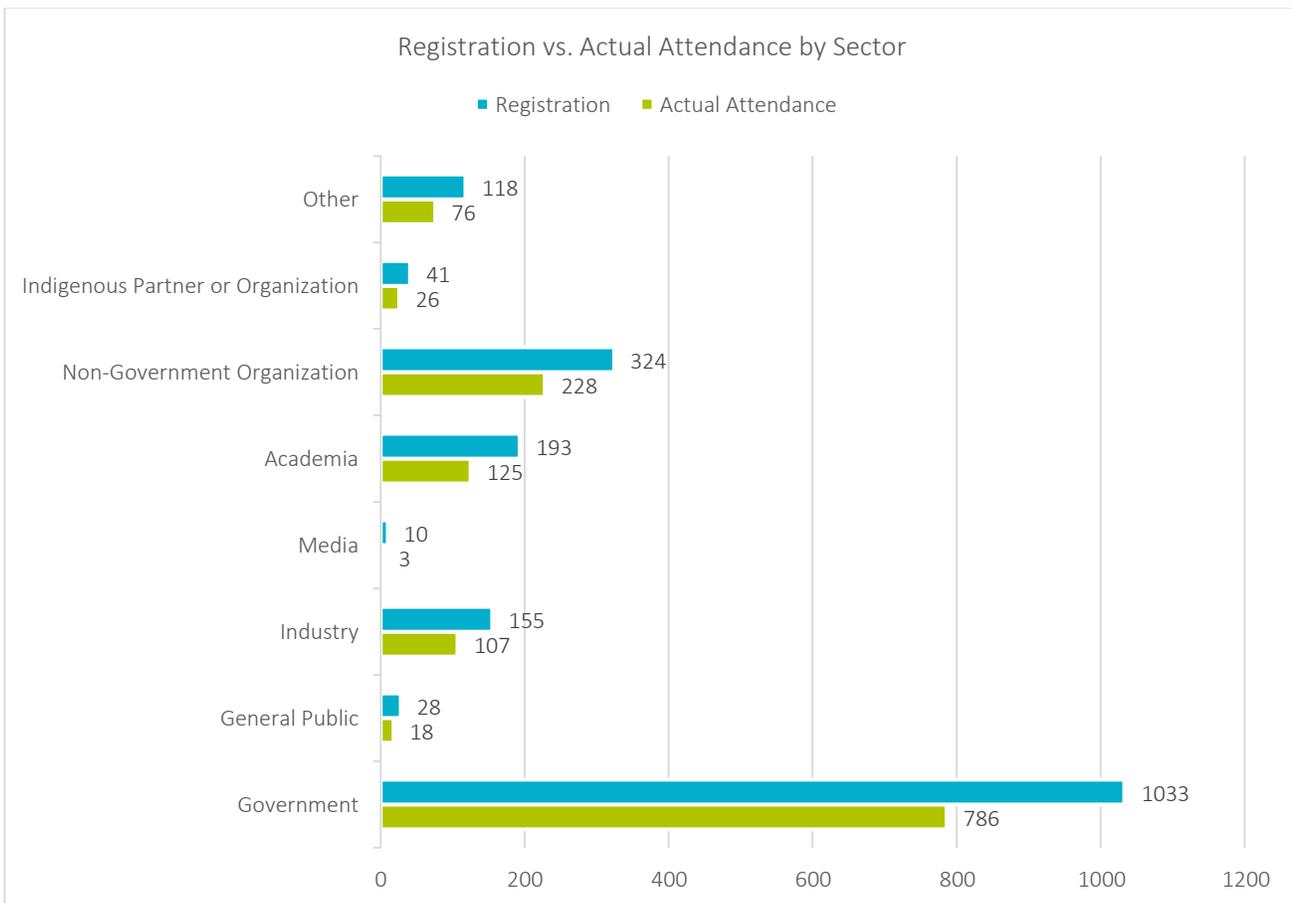


Figure 4: Participant Registration vs. Actual Attendance by Sector

## Next Steps

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The Government of Canada will continue to collect ideas and comments for the purpose of developing Canada's first National Adaptation Strategy. This engagement initiative will run from May to July 15, 2022. During this time, the Government of Canada will engage Canadians on specific, measurable, and achievable short-term actions to support long-term transformational goals and medium-term objectives identified during the Symposium and on this discussion paper.

We hope that you continue to join the discussions on [letstalkadaptation.ca](https://letstalkadaptation.ca) – the National Adaptation Strategy's interactive consultation website.

# Appendix A: National Adaptation Strategy Symposium Agenda

May 16, 2022

| Pacific        | Mountain      | Central        | Eastern        | Atlantic       | Newfoundland   |
|----------------|---------------|----------------|----------------|----------------|----------------|
| 8:00am-12:30pm | 9:00am-1:30pm | 10:00am-2:30pm | 11:00am-3:30pm | 12:00pm-4:30pm | 12:30pm-5:00pm |

## About the Symposium

The Symposium will launch public engagement on the development of Canada's first National Adaptation Strategy (NAS). Provincial, territorial, Indigenous, and private sector leaders will showcase adaptation efforts across the country, while NAS Advisory Table co-chairs will provide a high-level update on the work to date in the development of the Strategy, and set the stage for public engagement over the coming months.

## To note

- The event will include participation of a diversity of voices representing the different orders of government, Indigenous leaders, and key stakeholders from the private sector, NGOs, academia, youth, and local communities.
- Following the Symposium, the Government of Canada will host additional engagement events and platforms to support further dialogue, including identifying short-term actions that could support the goals and objectives of the National Adaptation Strategy.

## Registration Information

The Symposium will be hosted on Zoom Webinar. To register for the symposium, click [here](#)!

## Symposium Agenda

|   |
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| <b>Part 1: Welcome Remarks and Opening Plenary (11:00am – 11:40am)</b>  |
| <b>Spotlight Videos: Launch of Public Engagement on the National Adaptation Strategy (2 min)</b>  |
| A short video, by Minister Steven Guilbeault, launching public engagement on the National Adaptation Strategy will be shared with the audience. The video will highlight the importance of a National Adaptation Strategy.  |
| <b>Welcome and Opening Prayer (10 min)</b>  |
| <ul style="list-style-type: none"><li>• <b>Barb Sweazey</b>, Director of Organizational Effectiveness, Stratos, an ERM Group Company</li><li>• <b>Stefan Reinecke</b>, Principal Consultant, Stratos, an ERM Group Company</li><li>• <b>Elder Lorraine Netro</b>, Old Crow, Yukon</li></ul> |
| <b>Press conference and Opening Remarks (20 min)</b>  |
| Live stream of a press conference on the National Adaptation Strategy.  |
| <b>The Hon. Steven Guilbeault</b> , Minister of Environment and Climate Change, Government of Canada  |

### Light Orientation (8 min)

- **Barb Sweazey**, Director of Organizational Effectiveness, Stratos, an ERM Group Company
- **Stefan Reinecke**, Principal Consultant, Stratos, an ERM Group Company

### Part 2: High-Level Panels with Key Partners and Stakeholders (11:40 am – 1:40pm)

#### From a National Strategy to Local Action: Provincial, Territorial, Municipal and Indigenous Leadership and Strategies

Leaders will share their lived experiences on adaptation and highlight the important roles of provinces, territories, municipalities, Indigenous Peoples, and private sector through the development and implementation of adaptation initiatives in Canada, including the National Adaptation Strategy.

#### Potential Deliverables/Calls to Action that can be outlined in this dialogue:

- Ensuring that the National Adaptation Strategy is inclusive of all Canadian perspectives

*Moderator: Alain Bourque*, Executive Director, Ouranos

#### Panel 1: Climate Action and Opportunities: Across Orders of Government

- **Hon. Bill Blair**, Minister of Emergency Preparedness
- **Terry Duguid**, Parliamentary Secretary to the Minister of Environment and Climate Change
- **Hon. George Heyman**, Minister of Environment and Climate Change Strategy, British Columbia
- **Hon. Nils Clarke**, Department of Environment, Yukon
- **Cassidy Caron**, President of the Métis National Council
- **Kluane Adamek**, Yukon Regional Chief, Assembly of First Nations
- **Joanne Vanderheyen**, President, Federation of Canadian Municipalities and Mayor of Strathroy-Caradoc, Ontario

#### Panel 2: Climate Action and Opportunities: Key Partners and Stakeholders

- **Dr. Melissa Lem**, physician, Board Director, Canadian Association of Physicians for the Environment
- **Don Forgeron**, President & CEO, Insurance Bureau of Canada
- **Graham Saul**, Executive Director, Nature Canada
- **Rick Smith**, President, Canadian Climate Institute
- **Ehren Cory**, Chief Executive Officer, Canada Infrastructure Bank

### Health Break (1:40pm – 1:50pm)

### Part 3: Sessions on Cross Cutting Issues with the Deputy Minister of Environment and Climate Change Canada (1:50pm – 2:20pm)

#### Understanding the Future – Climate Projections, Science, and Services in Canada

This session will highlight the latest science on future warming and impacts to which Canada must adapt to reduce climate change risks; draw connections between projected climate scenarios and impacts, and planning effective adaptation actions; and illustrate how climate services mobilize science and knowledge to help decision makers consider climate change.

*Moderator: Christine Hogan*, Deputy Minister, Environment and Climate Change Canada

#### Panel 3: Climate Science on Adaptation

- **Dr. Greg Flato**, Acting Director, Climate Research Division, Environment and Climate Change Canada
- **Dr. Heather Morrison**, Acting Executive Director, Canadian Centre for Climate Services, Environment and Climate Change Canada

#### Part 4: Advisory Tables Co-Chairs Session (2:20pm – 3:20pm)

##### Developing a National Adaptation Strategy for Canada – What we Have Heard and Future Opportunities

To inform the development of Canada’s National Adaptation Strategy, the Government of Canada launched five Advisory Tables in fall 2021 on: Health and Well-being; Resilient Natural and Built Infrastructure; Thriving Natural Environment; Strong and Resilient Economy; and, Disaster Resilience and Security. The Advisory Tables were charged with providing advice on transformational long-term goals and medium-term objectives. In this panel, advisory table co-chairs will reflect on their efforts in the development of the Strategy so far, and initiate a conversation on short-term actions that the Strategy will advance.

*Moderator:* **Barb Sweazey**, Director of Organizational Effectiveness, Stratos, an ERM Group Company

##### Panel 4: Developing the National Adaptation Strategy: How Partners, Stakeholders and Adaptation Experts can Contribute

###### *Health and Well-being*

- **Carolyn Tateishi**, Director, Safe Environments Directorate, Health Canada
- **Dr. Sherilee Harper**, Associate Professor / Canada Research Chair in Climate Change and Health, School of Public Health, University of Alberta

###### *Resilient Natural and Built Infrastructure*

- **Lo Cheng**, Director General, Environment and Infrastructure Policy, Infrastructure Canada
- **Caroline Larrivière**, Scientific Program Director, Ouranos

###### *Thriving Natural Environment*

- **Jeff MacDonald**, Director General, Environment and Climate Change Canada
- **Graeme Reed**, Senior Advisor, Assembly of First Nations

###### *Strong and Resilient Economy*

- **Rory Gilsean**, Director General, Hazards, Adaptation and Operations Branch, Natural Resources Canada
- **Sarah Burch**, Executive Director, Interdisciplinary Centre on Climate Change, University of Waterloo

###### *Disaster Resilience and Security*

- **Stéphanie Durand**, Director General, Policy and Outreach, Public Safety and Emergency Preparedness Canada
- **Craig Stewart**, Vice President, Federal Affairs, Insurance Bureau of Canada

#### Closing Remarks (3:20pm – 3:30pm)

- **The Hon. Steven Guilbeault**, Minister of Environment and Climate Change, Government of Canada

## Appendix B: Mentimeter Results for Q4

**Table 3: Mentimeter results for Q4 - what new science, information, and tools are needed to enable adaptation?**

| New Science/Information   | Tools   |
|---|---|
| <ul style="list-style-type: none"> <li>• Evidence-based case studies</li> <li>• Open-source reliable data</li> <li>• Future precipitation and temperature projections</li> <li>• Extreme events probability analysis</li> <li>• Threats to food security</li> <li>• Financial and health information</li> <li>• Unique impacts for the North, more sampling locations in the North for all kind of data (i.e., weather), forecasts and models on different themes (i.e. erosion, flooding, permafrost, etc.)</li> <li>• Demographic information (including an analysis of social inequities to identify marginalized groups)</li> <li>• Data that is accessible for decision-makers and the Canadian public (i.e., easy to use, simple, concise)</li> <li>• How to build community resilience</li> <li>• Inclusive and diverse scientific information</li> <li>• Information to help ecosystems adapt through active adaptation actions</li> <li>• Standards for spatially reporting risk to watersheds</li> <li>• Adaptation ideas and examples that weave Indigenous Traditional Knowledge and Western Science together</li> <li>• More publicly accessible data and funding, tools, and resources to leverage data to inform short and long-term decision making</li> <li>• Quantification of adaptation (and other) services provided by ecosystems</li> <li>• Better understanding of how to move from adaptation planning to implementation</li> <li>• Information on changing ocean conditions</li> <li>• Innovative solutions focused on reducing consumption rather than transitioning to solutions that maintain same levels of consumption</li> <li>• How citizens are being impacted</li> <li>• Economic/macro-level impacts</li> <li>• Observational science</li> <li>• Groundwater studies</li> </ul> | <ul style="list-style-type: none"> <li>• Flood maps (including coastal, fluvial, and pluvial)</li> <li>• Hazard and risk maps</li> <li>• Local and regional tools/regionally-adapted information</li> <li>• Hydrological modelling for infrastructure development</li> <li>• Wildfire risk assessment and information on how to reduce impacts of wildfires, and mitigate them</li> <li>• Cost/benefit analysis tool for natural adaptation and green infrastructure</li> <li>• Policy tools</li> <li>• Tools that can visualize the impact of adaptation actions</li> <li>• LiDAR mapping throughout the prairies to aide with flood forecasting rural areas of the provinces</li> <li>• Mapping of critical ecosystems to provide a baseline for monitoring and advancing ecosystem protection and restoration.</li> <li>• Public access to GIS tools</li> <li>• Need process for enabling tool development in different fields (engineering, water management, public health, etc.)</li> <li>• Tools to better utilize water in agriculture, more drought-tolerant species with equivalent nutritional value, implementation of carbon sequestration tools, and development of new water resources</li> <li>• Frost impact map updates, shift in agriculture (zones, types of crops that can be grown), drought likelihood in areas</li> <li>• Investment in weather stations</li> <li>• Better prediction models for system integrity</li> <li>• Local heat island maps, dissemination block (DB) level; data to inform targets to aim for</li> </ul> |

| New Science/Information   | Tools   |
|---|---|
| <ul style="list-style-type: none"> <li>• Methods to mitigate coastal erosion</li> <li>• Data or knowledge about impacts of individual vs industry changes in behaviour/resource use</li> <li>• The level of soil contamination and its impact on health and biodiversity</li> <li>• How to build affordable resilient infrastructure and retrofits/changes to existing buildings</li> <li>• Local data centres like climatlantic.ca</li> <li>• Citizen science projects in small, rural communities for weather data collection</li> <li>• More literature on return on investment (ROI)</li> </ul> | <p>(e.g., % tree coverage, % greenness, street tree targets, etc.)</p> <ul style="list-style-type: none"> <li>• Tools to integrate socio-economic vulnerability</li> <li>• A comprehensive framework to mainstream adaptation into federal (and provincial) government operations</li> <li>• Science communication tools (e.g., ThinkHazard tool or Climate Change Knowledge Portal)</li> </ul> |