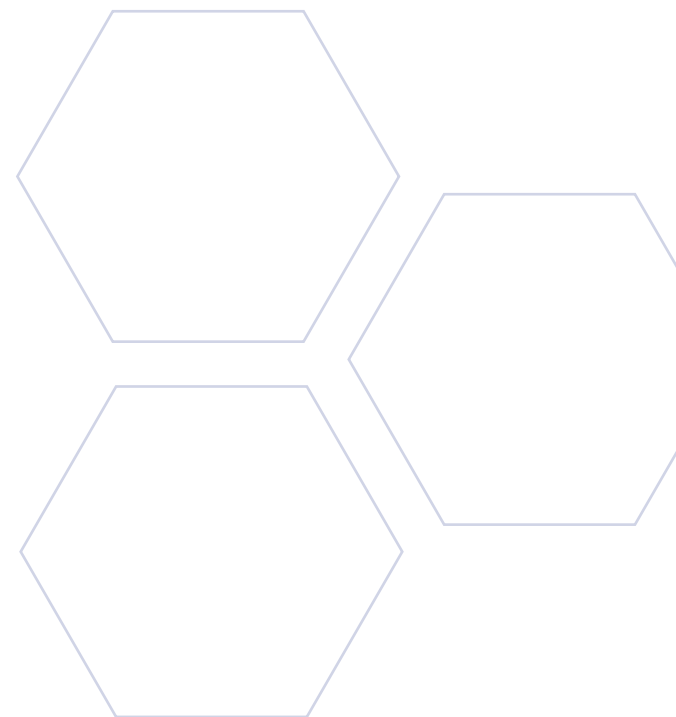
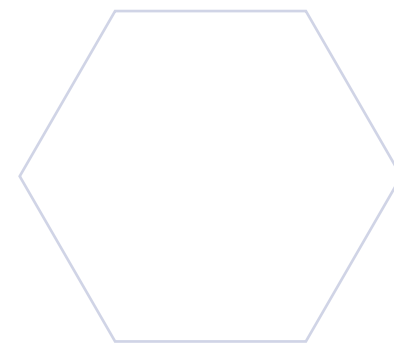
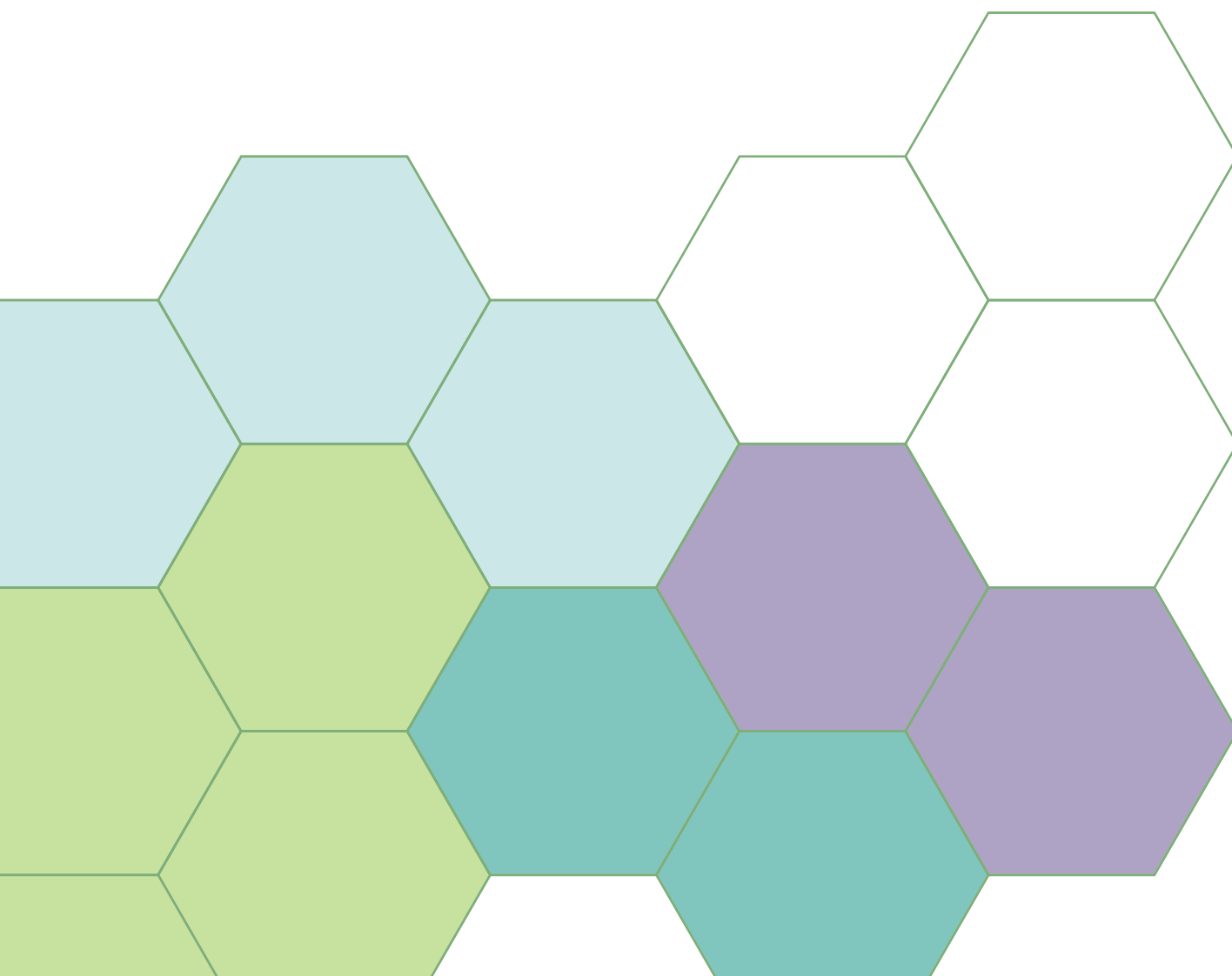


# THE ADAPTATION PLATFORM

Equipping Canadians for a Changing Climate



2nd Annual Report  
April 2014

# PLATFORM PLENARY MEMBERS (2013–2014)

- Plenary Chair — Natural Resources Canada;  
Niall O’Dea / Nick Xenos

## TERRITORIAL AND PROVINCIAL GOVERNMENTS

- Alberta — Alberta Energy and Utilities Board;  
Bob Savage / Kate Rich
- British Columbia — Ministry of Environment  
Climate Action Secretariat; Thomas White
- Manitoba — Manitoba Conservation and  
Water Stewardship; Neil Cunningham
- New Brunswick — Department of Environment;  
Darwin Curtis
- Newfoundland and Labrador — Department  
of Environment and Conservation;  
John Drover / Jackie Janes
- Northwest Territories — Environment and  
Natural Resources; Lisa Dyer
- Nova Scotia — Climate Change Directorate;  
Jason Hollett
- Nunavut — Department of Environment;  
Rob Eno
- Ontario — Ministry of Environment;  
John Vidan
- Quebec — Ministère du développement  
durable de l’environnement et des parcs;  
Geneviève Moisan (*observer*)
- Prince Edward Island — Environment,  
Labour and Justice; Jim Young

- Saskatchewan — Ministry of Environment;  
Kim Graybiel
- Yukon — Climate Change Secretariat;  
Rebecca World

## FEDERAL GOVERNMENT DEPARTMENTS AND AGENCIES

- Aboriginal Affairs and Northern Development  
Canada; Catherine Conrad
- Agriculture and Agri-Food Canada;  
Alex Lefebvre
- Environment Canada; Matt Parry /  
Mallika Nanduri Bhatt
- Fisheries and Oceans Canada; Helen Joseph
- Health Canada; Daniel Wolfish
- Infrastructure Canada; Sonya Read
- Natural Resources Canada — Earth Science  
Sector; Mary Preville
- Natural Resources Canada — Energy Sector;  
David Henry
- Natural Resources Canada — Forestry;  
Kelvin Hirsch / Vincent Roy
- Natural Resources Canada — Mining;  
David McNabb
- Parks Canada; Mike Wong
- Public Health Agency of Canada; Stephen Parker
- Public Safety Canada; Jacqueline Randall
- Standards Council of Canada; Michel Girard
- Transport Canada; Christian Pilon

## PRIVATE SECTOR AND RESEARCH ORGANIZATIONS

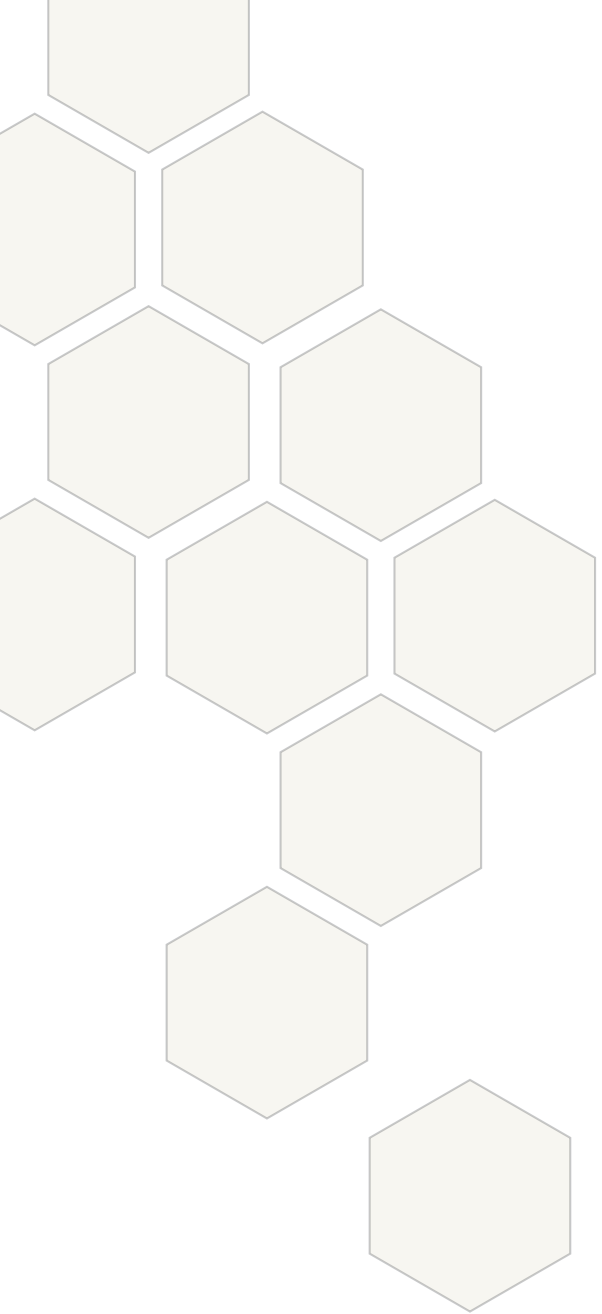
- Canadian Electricity Association;  
Michelle Turner
- Chartered Professional Accountants of Canada;  
Gordon Beal
- Engineers Canada; Marie Carter
- Forest Products Association of Canada;  
Etienne Bélanger
- Insurance Bureau of Canada; Robert Tremblay
- Mining Association of Canada; Ben Chalmers
- Ouranos; Alain Bourque

## SECRETARIAT

- Natural Resources Canada — Elizabeth  
Atkinson, Plenary Vice-chair and  
General Secretary
- Natural Resources Canada — Marie-Caroline  
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# THE ADAPTATION PLATFORM

The Platform brings together key groups from government, industry and professional organizations to collaborate on climate change adaptation priorities. By providing the structure to pool financial resources, knowledge, and people, the Platform works to create new information and tools for adaptation and get these products to the right users.

Adaptation involves making adjustments in our decisions, activities and ways of thinking in response to observed or expected changes in climate, with the goals of (a) reducing harm and (b) taking advantage of potential opportunities. Adaptation can include behavioural changes, operational modifications, technological interventions, planning changes and revised investment practices, regulations and legislation. While adaptation in the natural environment occurs spontaneously, adaptation in human systems often benefits from careful planning that is guided by both scientific research and detailed understanding of the systems involved.

Collaboration between the public and private sectors, and across jurisdictions and disciplines, is essential to address the complex and cross-cutting issue of adapting to a changing climate. The Adaptation Platform is a unique mechanism in Canada that brings together national industry associations, national professional organizations, representatives from federal, provincial and territorial governments, as well as other relevant organizations to tackle shared adaptation priorities. Platform participants are both end-users and producers of adaptation knowledge and tools. As a result, the Platform's work is demand-driven, facilitating the analysis and implementation of adaptation action, and directly responding to the needs of decision-makers in the public and private sectors in Canada.

Launched in March 2012, through Natural Resources Canada's program *Enhancing Competitiveness in a Changing Climate (2011–2016)*, the Adaptation Platform is structured around

two components: a plenary body and a series of working groups. The Plenary, comprised of senior-level representatives, meets twice yearly to identify critical and emerging adaptation priorities in Canada, channel efforts to focused areas of work, and mobilize new and more efficiently direct limited resources. Plenary members also generate support for adaptation action within their organizations and extended networks.

Working groups focus efforts on the shared adaptation priorities. Plenary members nominate people from their organizations and networks who bring the resources (time, money, expertise) needed to develop and carry out the working group activities. Each working group identifies adaptation needs and establishes a Program of Work. By jointly defining the nature of the problem, the type of actions needed, and by investing resources in delivering activities, working group members co-create the Adaptation Platform knowledge and products.

[Adaptation.NRCan.gc.ca](http://Adaptation.NRCan.gc.ca)

# MESSAGE FROM CHAIR AND PLENARY CO-HOSTS

Getting Platform products into the hands of those who need them

## PLENARY CHAIR

This is a very exciting time to be part of the Climate Change Adaptation Platform. With its launch in March 2012, our combined forces focused primarily on planning the work to help make Canadians safer and our industries more competitive in the face of changing climate.

This year marked an important shift in the life of the Platform with our objectives no longer focused solely on preparing to do work; rather we have moved to:

- creating the products, tools and analysis;
- disseminating Platform products;
- optimizing opportunities for Plenary and working groups; and
- assessing the effectiveness of the Platform.

Being new to the Platform, I've had the opportunity to review the work to date and to talk to Platform members and I'm struck by the innovative nature of the Platform in terms of its bringing together key partners and resources to produce decision-useful information and tools. Adapting to a changing climate requires concerted efforts by governments, industry, professional organizations and academia. The Platform provides a unique forum for this concerted action.

In the past year, the Platform produced 43 new climate change adaptation products. These products include case studies that provide practical examples of how communities, governments, and the private

sector are taking action to adapt to a changing climate. There are products in new thematic areas or nascent adaptation issues, including a review of actions taken in environmental assessments in the mining sector with recommendations to further the role of environmental assessments in supporting adaptation in that sector. New mainstreaming and decision-support tools were also produced, such as the software-based ADAPTool, designed to help policy-makers integrate climate concerns in their design of a new policy, program or initiative.

We are all investing in creating this useful knowledge and these practical tools. Our challenge now and in the future is to facilitate their successful application across the country. The new Platform communications plan will go a long way towards this objective and it will require the continued efforts of Plenary Members and Platform participants to engage our networks in order to be truly successful.

I am honoured to chair the Platform in this unique and innovative partnership and I look forward to working closely with you.

**Nick Xenos**, Director, Climate Change  
Impacts and Adaptation Division

*Natural Resources Canada and Chair,  
Adaptation Platform Plenary*

## CO-HOST PLENARY MARCH 2013

British Columbia released its provincial adaptation strategy, *Preparing for Climate Change*, in 2010 with the aim of ensuring that British Columbia is prepared for and resilient to the impacts of climate change. The strategy was developed in recognition that the evidence base for climate change is robust, that climate change will impact the quality of life of British Columbians if unaddressed and that preparing for unavoidable and anticipated changes in advance is cost effective and complements the province's efforts to reduce emissions. BC's strategy provides a guiding framework for government action. It identifies three defining positions for the role of the provincial government:

- provide foundational knowledge that supports action across the province
- implement best practices in its own decision making
- work with stakeholders to identify solutions

It also emphasizes that adaptation is a shared responsibility, with local governments, the federal government, First Nations and other stakeholders. The province recognizes that it cannot achieve its vision of ensuring that British Columbia is prepared for and resilient to the impacts of climate change acting alone and that partnerships are vital. Collaboration is inherently part of our approach.

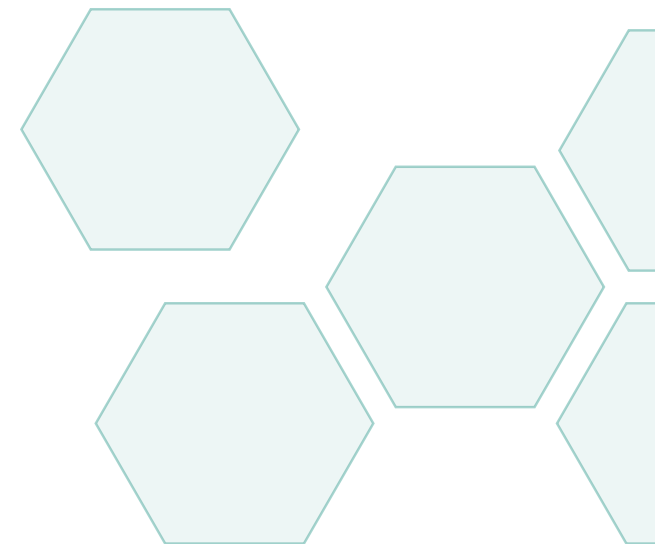
British Columbia has a long history of partnering with Natural Resources Canada and collaborators within the province and across the country, to advance adaptation to climate change. These collaborations have benefitted the province, for instance with the production of technical studies and guidance related to sea level rise, the design of sea dikes, and coastal floodplain management. Local governments are referring to these guidelines in developing individual and collaborative plans to manage risk related to sea level rise, including major municipalities in the Vancouver and Capital regions and several smaller municipalities on Vancouver Island and the Sunshine Coast.

Within government, several ministries are considering climate change in plans and decisions, aided and informed by work conducted through the Adaptation Platform, in areas including agriculture, transportation and natural resource management. Professionals too, are active, with the Association of Professional Engineers and Geoscientists of BC and the Association of BC Forest Professionals releasing position papers on climate change. Natural Resources Canada investments in the Adaptation Platform to enhance climate adaptation decision support tools will support the important work of these professionals.

British Columbia is pleased to work with Natural Resources Canada and partners across Canada as part of the Adaptation Platform to advance the province's goals — job creation, sustainable communities, green economic development — in the face of a changing climate. This partnership provides an important and unique mechanism to share experiences and lessons learned with other jurisdictions across Canada.

**Thomas White**, Manager, Science and Adaptation, Climate Action Secretariat, B.C. Ministry of Environment

*Plenary Meeting March 26–27,  
Victoria, British Columbia*



## CO-HOST PLENARY OCTOBER 2013

As a coastal province, Nova Scotia is experiencing the impacts of climate change first-hand. Extreme weather, coastal erosion, sea level rise, and storm surges are becoming a more frequently used part of our lexicon. In 2012, the community of Truro was flooded for the second time in a decade, resulting in a call for meaningful action with climate change adaptation and community resiliency a prominent part of the discussion.

The implications for the province are becoming clearer and there is an imperative to act. However, this is a problem that is still relatively new. We've been building infrastructure based on our known environments for centuries. Adapting to a changing climate is something government is just beginning to contemplate.

That's why strong regional and national collaboration between all levels of government, the private sector and not-for-profits is so important. The Adaptation Platform has been designed to enable that collaboration and, although it's only been around for two short years, it has been an essential component of Nova Scotia's adaptation program.

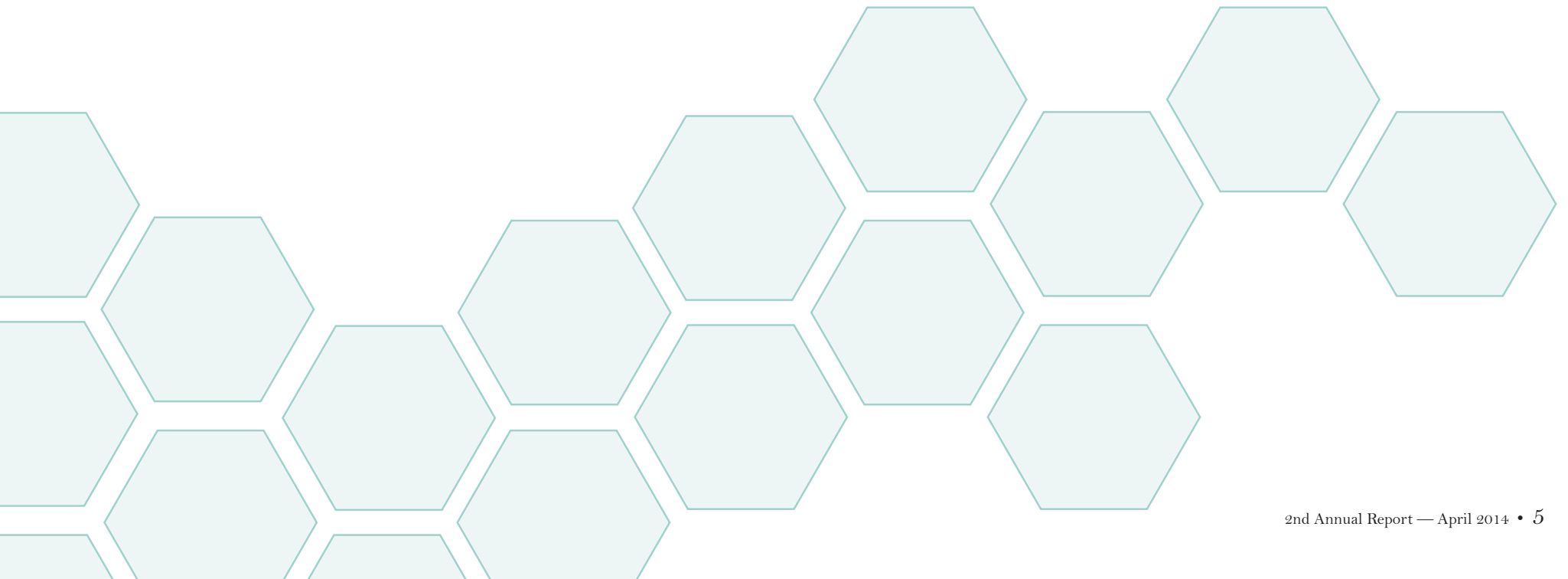
The Platform provides a venue for dialogue, knowledge sharing and partnership development that's unparalleled. It facilitates not just between governments, but with the private sector as well. It has created a connection between Nova Scotia and all of the other provinces and territories to discuss adaptation in a way that's never existed before. We've learned that no matter

our geographical differences, the issues are similar across the country and a strong national network provides exponential benefits. It has provided access to, and collaboration with, industry experts and sector association that would not have otherwise happened.

For Nova Scotia, the result has been a more sophisticated, more robust climate change program. We continue to be committed to the model, and look forward to the continued collaboration.

**Jason Hollett**, Director, Climate Change Directorate, Nova Scotia

*Plenary Meeting October 22–23,  
Halifax, Nova Scotia*





# THE ADAPTATION PLATFORM: CONNECTING PEOPLE, IDEAS AND RESOURCES

Bringing new ideas, people and resources together is at the heart of effective adaptation. However, collaboration does not simply mean putting people together and expecting a better result. It entails providing the structure to pool financial resources, to share expertise, and to dedicate the necessary time, which are beyond the reach of any one participant. In 2013–14 the Adaptation Platform demonstrated its value by successfully connecting these resources to produce a wide range of Platform products using the Plenary, working groups, the Regional Adaptation Collaboratives, and knowledge sharing technology.

## RESOURCES INVESTED

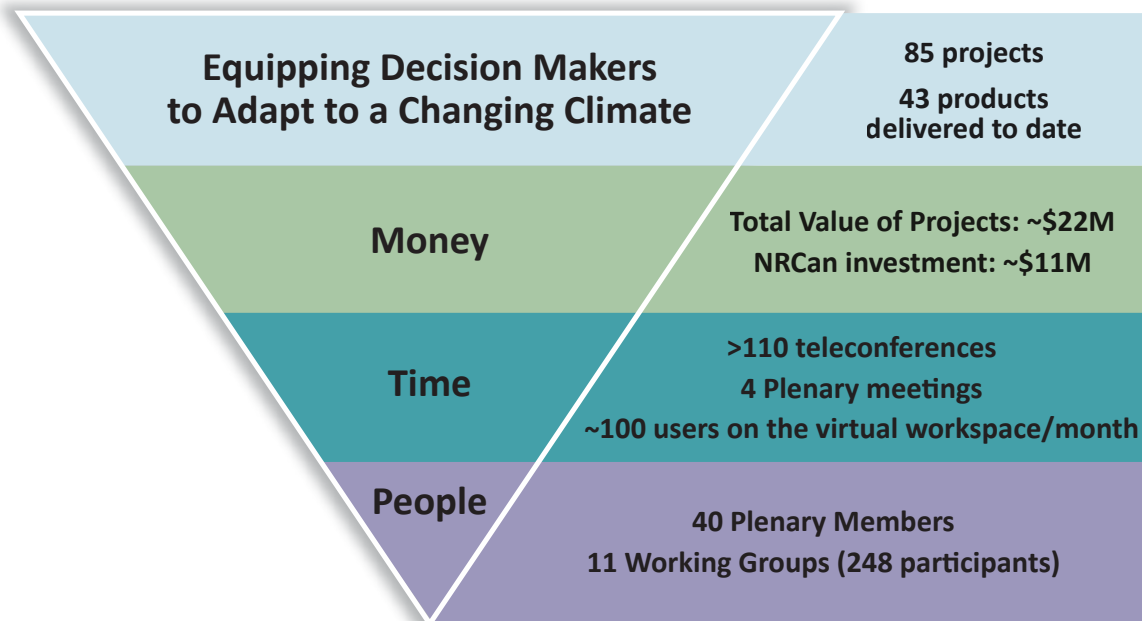
In 2013–14, Adaptation Platform investments in new adaptation knowledge, tools or approaches resulted in 39 new cost-shared projects initiated, bringing the total number of Platform projects to 85 and representing an investment of more than \$22 million since 2012. The projects are led by more than 30 organizations, and involve multiple partners contributing in-kind and financial resources.

The dissemination, quality, and range of Platform products being generated will rely heavily on Platform members' continued commitment, expertise and connectivity to users. In the past

year, Platform participants dedicated significant amounts of expertise and time at the Working Group and project level. Engagement of the working group members in the various project advisory committees means added expertise to the project and increased relevance, usability and uptake of resulting products. Some 250 working group members also took part in more than 40 teleconferences to discuss working group activities. Executive-level commitment and leadership from Platform members' organizations continued, with sustained attendance and contribution to the Plenary meetings of the 40 Plenary members.



**Figure 1 — Platform Investments since March 2012**



These financial and in-kind investments also optimize the use of available knowledge and resources, and allow organizations to undertake activities that they might have been unable to carry out alone. All Platform working groups do this but to give just one example, understanding the regional impacts from a changing climate and the relative costs and benefits of possible adaptation measures requires coordination and pooling of resources between multiple organizations. The Platform Economics Working Group provides the structure to do this.

## PLENARY

This year, the Plenary focused on reinforcing the newly created working groups with the required resources, identifying additional collaborative opportunities, and fine-tuning mechanisms for transferring adaptation knowledge and products within and outside the Platform. Plenary members’ dedicated attendance and contribution to Plenary events continue to inspire creativity, innovation, and collaboration amongst sectors and jurisdictions. These meetings resulted in:

1. strengthening the trust and relationships needed for joint work;
2. connecting members to new ideas and approaches that can be integrated into adaptation activities;
3. providing strategic directions to new working groups; and
4. identifying the actions needed to facilitate effective transfer of the Platform knowledge and tools to end users.

In a context of increasing limited resources to address complex challenges like climate change adaptation, Plenary meetings are a unique space for senior-level representatives across sectors and jurisdictions to identify what new approaches and new resources can be combined to advance adaptation knowledge and practice in Canada.

## SPRING PLENARY — VICTORIA, BRITISH COLUMBIA

**MARCH 26–27, 2013**

Hosted by the Government of British Columbia, the spring 2013 meeting provided guidance to four new working groups: Economics, Energy, Water and Climate Information and Infrastructure & Buildings. Plenary members also explored the value of science assessments in informing adaptation actions, and learned about adaptation mainstreaming experiences in the mining and transport sectors in B.C. and in New York City.

## BOX 1 — INTEGRATING ADAPTATION INTO PLANNING AND OPERATIONS: SPOTLIGHT ON THE GOVERNMENT OF BRITISH COLUMBIA

*(CONTRIBUTOR: CLIMATE ACTION SECRETARIAT IN THE B.C. MINISTRY OF ENVIRONMENT)*

Dirk Nyland, Chief Engineer at the British Columbia Ministry of Transportation, shared with Plenary Members their application of the Public Infrastructure Engineering Vulnerability Committee (PIEVC) tool developed by Engineers Canada with funding from Natural Resources Canada. This standardized protocol to assess vulnerability was successfully used to identify the engineering adaptation required in planning the design, management, and decommissioning of highways in British Columbia.

Since then, the B.C. Ministry of Transportation and Infrastructure and the Ministry of Environment in partnership with the Pacific Climate Impacts Consortium and with funding support from Natural Resources Canada through the Adaptation Platform, have completed two additional studies examining potential changes in the frequency and intensity of extreme precipitation events, which can dramatically impact highways in B.C.'s mountainous terrain, and best management practices for transportation infrastructure exposed to extreme rainfall.

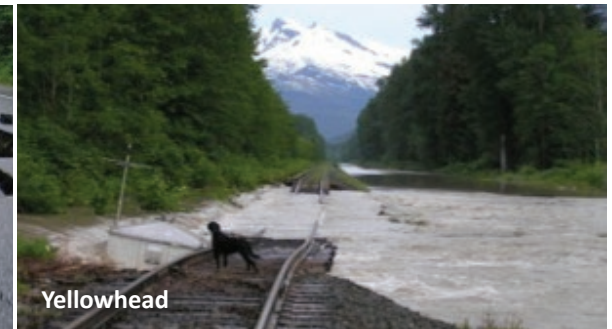
Marking the first anniversary of the Adaptation Platform, the meeting was also an opportunity to present the first Platform Annual Report and members reflected on a year of collaboration (available at [adaptation.nrcan.gc.ca](http://adaptation.nrcan.gc.ca)).

Members identified various approaches to effectively and efficiently carry out the activities proposed in the Programs of Work for the Economics and Energy Working Groups. They also endorsed establishment of the Water and Climate Information and the new Infrastructure & Buildings working groups. These two groups are led by Environment Canada and the Government of Nova Scotia, and Engineers Canada and the Institute for Catastrophic Loss Reduction, respectively.

The 2013 super-storm Sandy in the United States significantly affected New York City (NYC), reigniting the discussion around adaptation and the need to integrate climate change concerns in urban planning and development. Cynthia Rosenzweig from the New York City Panel on Climate Change presented the city's adaptation planning process, as well as lessons learned after

the storm. Adaptation planning was already championed at all levels of government, from municipal, to state, to federal, but the storm provided an opportunity to reinforce messaging around the need to address climate change risks. Post-Sandy, the city also allocated resources to study the impacts of the storm to inform adaptation planning. Dr. Rosenzweig stressed the importance of champions and supportive leadership for adaptation mainstreaming to occur in the public and private sector. Chris Adachi, from the Canadian mining company Teck Resources Limited, reiterated the importance of collaboration and supportive leadership to trigger adaptation planning. Teck successfully developed a tool to assess risks to water resources in collaboration with the Pacific Climate Impacts Consortium, a regional climate service center at the University of Victoria in British Columbia.

How climate change concerns are assessed and integrated into the British Columbia Ministry of Transportation's work was at the heart of a presentation from the Ministry's Chief engineer, Dirk Nyland (See Box 1).



Source: Dirk Nyland BC Ministry of Transportation and Infrastructure

Don Lemmen from Natural Resources Canada, who is co-leading the development of the upcoming report *Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation*, and Kathy Jacobs, Assistant Director for Climate Assessment and Adaptation at the White House Office of Science and Technology Policy, presented the role of science assessments in informing adaptation action in Canada and the United States. Members recommended that the new Canadian science assessment report include targeted communication products that could feed directly into adaptation decision-making. As a result, the report *Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation*, to be released in spring 2014, will be followed by the release of a business-relevant summary targeted at the private sector.

Connecting Platform products and product users was a critical concern for Plenary Members. The primary action item arising from the meeting was to develop a communications plan to convey the Adaptation Platform objectives, activities and products within and beyond the Platform.

## FALL PLENARY — HALIFAX, NOVA SCOTIA OCTOBER 22–23, 2013

The Fall Plenary meeting, hosted by the Government of Nova Scotia, covered three major themes: the development and uptake of tools for adaptation; practical approaches to implementing adaptation actions; and fine-tuning Platform mechanisms to better connect knowledge, products and users.

Source: Dirk Nyland BC Ministry of Transportation and Infrastructure



The meeting identified core messages describing the Platform’s *raison d’etre*, highlighted the need for each working group to have a tailored communication strategy, and specified the necessity for uptake and use of the knowledge and tools. Discussions on the role of a communication strategy and the working groups in connecting products with users directly informed the new Platform communications plan, which will be presented in the Spring 2014 Plenary.

Guest speakers from Australia and the United Kingdom joined the meeting through video-conferencing. They offered insights on past and current efforts to increase the uptake and usage of adaptation tools and practices across sectors and regions. They identified enabling factors associated with increasing the dissemination of innovative practices and the uptake of tools in order to generate impact at scale. Bob Webb of the Fenner School of Environment and Society at the Australian National University Environment and Sustainability Institute observed that tool

dissemination and uptake is best facilitated by an enabling environment that includes leadership, the presence of a community of practice, and training. Caitlin De Silvey of the University of Exeter-Cornwall (UK) described how challenging ideas of stability and constancy helped coastal communities and the UK National Trust with managing coastal land and infrastructure.

Isabelle Charron from Ouranos presented a guide to assist decision-makers in identifying their specific climate information needs and how to deal with uncertainty. This Platform tool allows users to more effectively request and obtain information appropriate to their needs from climate service providers and will be available in 2014. Platform members contributed their experience in developing and facilitating the uptake of adaptation decision support tools.

Graham Fisher from the Government of Nova Scotia’s Department of Service Nova Scotia and Municipal Relations demonstrated that incentives are also an effective means of increasing the use of adaptation planning tools.



## BOX 2 — PRACTICAL APPROACHES TO IMPLEMENTING ADAPTATION ACTIONS: SPOTLIGHT ON THE GOVERNMENT OF NOVA SCOTIA

(CONTRIBUTOR: NOVA SCOTIA CLIMATE CHANGE DIRECTORATE)

Graham Fisher, a senior planner at Service Nova Scotia and Municipal Relations, gave an explanation of the “Municipal Climate Change Action Plans” (or MCCAPs), garnering much interest and attention by those in attendance at the fall 2013 Plenary meeting. The MCCAP process is a key component of Nova Scotia’s overall approach to climate change adaptation. Its primary objective is to build knowledge and capacity at the local level in order to help communities to effectively respond to climate change. After all, many of the impacts of climate change will be felt at the local level and municipal/local governments will need to respond. The MCCAPs satisfy both a need and an opportunity to take proactive action on climate change.

The MCCAP is a Municipal reporting requirement resulting from an amendment to Nova Scotia’s Gas Tax Agreement and Municipal Funding Agreement programs. All 54 municipal units in

the province are required to complete the process and submit a MCCAP by the end of December 2013 as a condition to receive federal gas tax payments (as administered by the province). Through a six-step process, municipalities identify adaptation priorities and the information and knowledge needed to make adaptation decisions. Many valuable lessons were learned by both the province and municipalities in working through the steps in the MCCAP process. These lessons encompass a variety of issues oriented around process, information, capacity and governance. The next steps for Nova Scotia’s MCCAPs will be for the province to review all of the submitted MCCAPs and then for the province, municipalities and other relevant partners to collaborate together to support implementation of the priority actions identified within MCCAPs. Since the time of the presentation, all of the province’s 54 municipal units have submitted an MCCAP, and they are presently undergoing review.

Indeed, the Government of Nova Scotia requires municipalities to develop *Municipal Climate Change Action Plans* (See Box 2).

## REGIONAL ADAPTATION COLLABORATIVES: SHARING KNOWLEDGE WITH AND FROM THE REGIONS

As part of the Government of Canada’s *Clean Air Agenda* (2007–2012), Natural Resources Canada created the Regional Adaptation Collaboratives (RACs) Program. Recognizing that adaptation is a cross-cutting issue, the program was designed using a collaborative model. The RAC program, a series of six regional adaptation hubs, created an opportunity for regions to tackle self-identified adaptation priorities. The program delivered a significant and diverse body of products that facilitate the integration of climate-related risks and opportunities into planning and decision-making in Canada. Many of these products are already publicly available (for more information see [adaptation.nrcan.gc.ca](http://adaptation.nrcan.gc.ca)).

As part of the Adaptation Platform, the RACs remain regional focal points, knowledge hubs with the dual role of disseminating regional adaptation knowledge and contextualizing information and tools coming from the Platform and other regions. In 2013–14, the five RACs operating in British Columbia, Ontario, Quebec, and the Prairies and Atlantic regions broadened the reach of adaptation knowledge and connected multiple stakeholders and sectors through targeted dissemination and engagement activities (Table 1).

**Table 1 — Adaptation Collaboratives Activities in 2013–14**

RAC	Lead	Example of Activities in 2013–14
<u>British Columbia</u>	Fraser Basin Columbia	<ul style="list-style-type: none"> <li>Facilitated a discussion with industry at the October 2013 meeting of the Fort St. John Petroleum Association as part of outreach activities to increase awareness of climate impacts and help identify the energy, mining and forestry sectors' adaptation needs.</li> <li>Working in collaboration with the BC Climate Action Secretariat and the Stewardship Centre for BC, led a workshop with more than 80 participants to enable the sharing of practical examples of what coastal communities are already doing to plan and adapt to climate change.</li> </ul>
<u>Prairies</u>	Saskatchewan Water Security Agency (2013)/University of Winnipeg (2014–)	<ul style="list-style-type: none"> <li>Developed a summary report on the Economic of Adaptation Prairie workshop held in March 2013. The report presents findings of discussions on methodologies and priorities for regional economic analysis.</li> <li>Following transfer of the leadership of the RAC to the University of Winnipeg in January 2014, planning meetings have been held in Alberta, Manitoba and Saskatchewan, with an Interprovincial Forum held in Winnipeg on March 19 to develop a plan forward for the RAC. The Forum was followed by a one-day Climate Access session (<a href="http://www.climateaccess.org">www.climateaccess.org</a>) to develop strategic communications that focus on engagement, action, and behavioural change.</li> </ul>
<u>Ontario</u>	Ontario Centre for Climate Impacts and Adaptation Resources	<ul style="list-style-type: none"> <li>Hosted a workshop for project leads to share information on six Ontario-based energy and adaptation projects, and to discuss opportunities under various theme areas such as network building, dissemination and challenges. Participants, including government and industry, validated the value of this forum and identified areas for ongoing collaboration, such as synthesizing lessons learned and coordination of climate data information.</li> </ul>
<u>Quebec</u>	Ouranos	<ul style="list-style-type: none"> <li>Organized more than 20 meetings involving new or established partners interested in new collaboration opportunities, and published over <b>15 fact sheets</b> promoting projects and scientific advancements in climate change adaptation from the RAC I.</li> <li>Organized two press conferences on the release of the IPCC Working Group I and II reports. The conference organized for the Working Group II report was the biggest Québec RAC II event in 2013–2014, and included panellists discussing the latest conclusions from the report and what it implies for Québec.</li> </ul>
<u>Atlantic</u>	University of Prince Edward Island	<ul style="list-style-type: none"> <li>Established an Expert Panel on Climate Change Adaptation in Atlantic Canada to provide guidance to provincial and local governments in the area of climate change adaptation. The Expert Panel met in Halifax in December 2013, and is preparing an annual report with recommendations for the provinces.</li> <li>Created three case studies to document innovative Atlantic RAC I projects to share lessons learned and methods across and beyond the region.</li> <li>Organized a conference on climate change adaptation and aquaculture in the Atlantic region. Over 75 aquaculture stakeholders attended the science symposium to discuss the potential impacts of climate change on aquaculture in the Atlantic Region.</li> </ul>

The Northern Working Group, the only regional Working Group under the Adaptation Platform, addresses some of the roles undertaken by the RACs in the other regions of Canada.

The RACs were also involved in the syntheses of products from previous adaptation programming to maximize their impact and legacy across Canada. To this end, the Adaptation Platform RAC & Tools Synthesis Working Group was established in 2012 to identify and develop value-added and synthesis products for application beyond the original target audience. This working group draws exclusively on the previous RAC body of work and is expected to complete its mandate in 2014.

Strong linkages between the RACs and the Adaptation Platform continue to broaden and connect Platform knowledge and products to

priority sectors in each region. This helps the transfer of adaptation knowledge and innovative practices to users across Canada.

## VIRTUAL COLLABORATION AND LEARNING

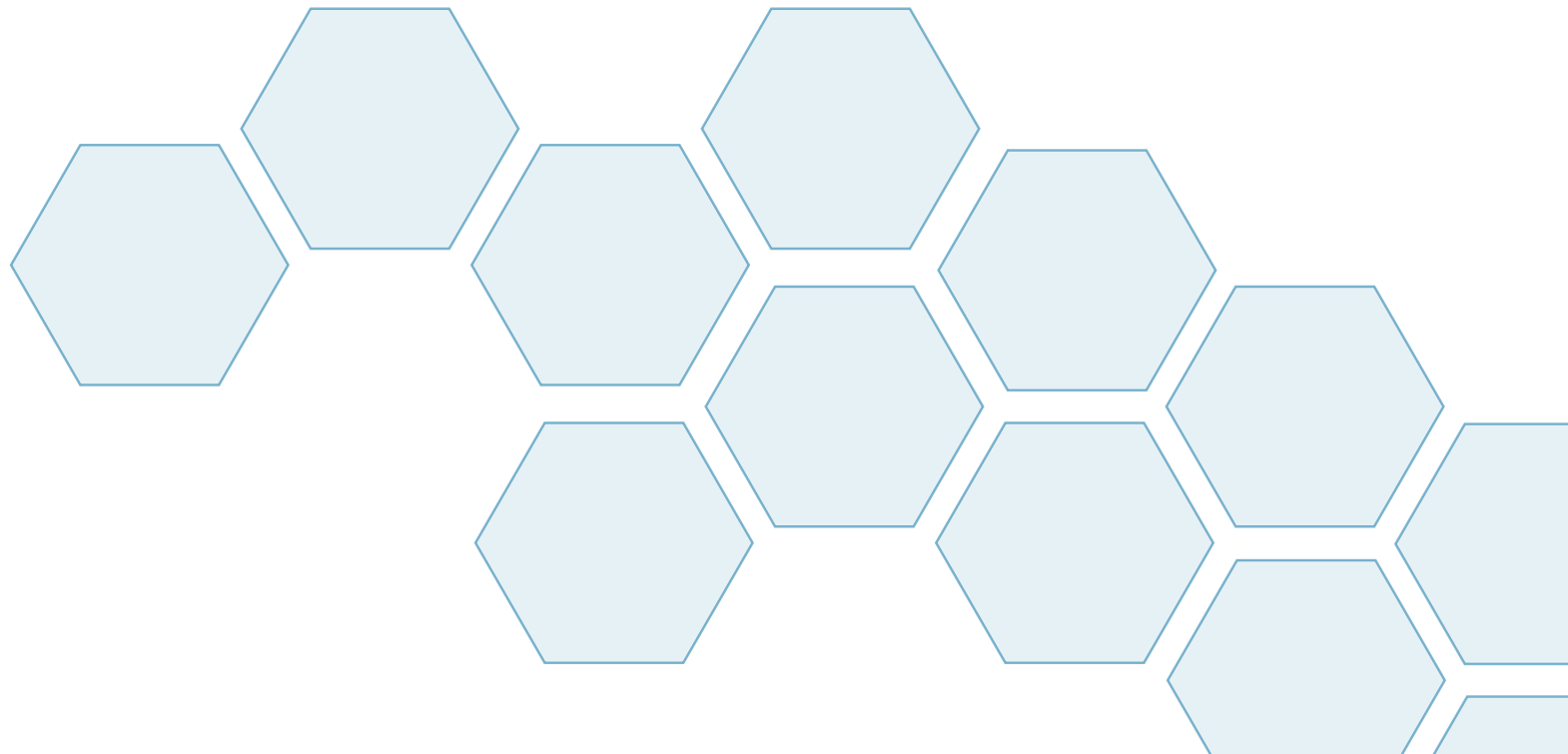
### Workspace

The Workspace is a web-based interactive forum providing a space to create, manage, and share knowledge between Platform members. This virtual forum complements traditional forms of discussion and collaboration (e.g. teleconferences and face-to-face meetings). The increased number of Workspace registered users in 2013–14 (317 compared to 198 in 2012–13) reflects the establishment of four new

working groups during this period. It is worth noting that the average number of individuals logged in each month remains the same as in the previous year (100 individuals per month) even though the total number of users has increased.

### Webinars

To share adaptation knowledge and products a webinar series was launched in 2013–14. The series aims to spur new ideas and encourage the mainstreaming of adaptation into decision-making frameworks by connecting people who develop information on adaptation choices (e.g. planners, researchers, program managers) to new information, perspectives, and practices. The webinars are reaching a wide audience across Canada, facilitating knowledge transfer at a national scale.



**Table 2 — Adaptation Platform Webinar Series 2013–14**

Date	Webinar Title	Presenter(s)
May 29, 2013	Adaptation in Response to Extreme Climate Events — An energy distribution and transmission company’s response to Hurricane Sandy	Ken Daly, President, National Grid, New York, USA
September 17, 2013	Planning for Adaptation in Canada: Local Government Action and Needs	Kevin Hanna, Associate Professor, I.K. Barber School of Arts and Science, Fipke Centre for Innovative Research, UBC
October 9, 2013	IPCC 5th Assessment: Key Findings	Greg Flato, Manager & Senior Scientist, Canadian Centre for Climate Modelling & Analysis, Environment Canada
February 11, 2014	Using ADAPTool to Assess What Makes Policies Adaptable under Climate Change	Dimple Roy, Lead, International Institute for Sustainable Development, with inputs from Stephen Tyler and others

In its first year, the Platform webinars series was attended by more than 260 participants, this number increasing to 452 people when viewing of video recordings are included. Over the course of the four webinars presented, there was a fourfold increase in the total number of participants (from 25 to 104) and an increase in the share of participants from outside the Platform (from 36% to 74%). This trend indicates that Platform members are increasingly using their networks to publicize the series. Going forward, the webinar series aims to showcase the Adaptation Platform’s products to a broader audience.





# GETTING THE WORK ON ADAPTATION DONE: WORKING GROUP HIGHLIGHTS

Working groups are innovation hubs, where Platform participants from a wide variety of sectors and organizations come together to invest in and co-create knowledge and tools that support adaptation decision-making. The year 2013–14 was particularly productive in terms of new collaborations, products and projects.

This year four new Working Groups on Energy, Economics of Adaptation, Climate and Water Information, and Infrastructure and Buildings, were established. This brings the total of Platform working groups to a total of 11 (Table 3). The new working groups provide a forum for focused discussions at the national scale and for the design of adaptation solutions in these thematic areas.

Previously established working groups are reaching cruising speed, delivering a total of 43 products in 2013–14. More than half of these new products are case studies. They provide practical examples of how communities, government departments and agencies, non-governmental organizations and industry are acting on adaptation. Other products provide information in new thematic areas or nascent adaptation issues. This includes a new report

reviewing actions taken in six environmental assessments (EA) in the mining sector, and making recommendations that could advance the role of project EAs in supporting climate change adaptation in the mining sector. New mainstreaming and decision-support tools are also being generated such as the beta version of the **Adaptive Design & Assessment Policy Tool (ADAPTool) for Creating New Policies**<sup>1</sup>. This software-based tool and accompanying guide is designed for policy-makers who are considering or are in the process of formulating a new policy, program or initiative and want to integrate climate concerns in their design.

**The full list of new Platform products can be found in the Appendix of this report.**

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<sup>1</sup> [http://www.iisd.org/pdf/2014/adapttool\\_overview.pdf](http://www.iisd.org/pdf/2014/adapttool_overview.pdf)



**Table 3 — Adaptation Platform Working Groups in 2013–14**

Working Groups*	Objectives
<b>Natural Resource Sectors</b>	
Energy*	Advance adaptation and increase resilience to a changing climate in the electricity and oil and gas sectors.
Forestry	Address sustainable forest management in the context of a changing climate.
Mining	Address information gaps while developing tools and information that will help the sector to adapt.
<b>Cross-Sectoral and Regional Themes</b>	
Coastal management	Increase understanding of the impacts of climate change on economic, human and cultural coastal assets and potential adaptation responses.
Economics of adaptation*	Create economic knowledge and tools that help decision-makers in both the private and public sectors make better adaptation investment choices and policy decisions.
Infrastructure & Buildings*	Build capacity, generate evidence and provide outreach to increase the capability of infrastructure managers, municipalities, builders, insurers, engineers and other relevant stakeholders to adapt and facilitate adaptation to climate change.
Measuring progress in adaptation	Improve the ability of decision-makers to measure progress in the implementation and effectiveness of adaptation.
Northern regions	Provide northern decision-makers with the information and tools necessary to advance adaptation.
Regional Adaptation Collaborative and Tools synthesis	Provide a forum through which value-added RAC and Tools products can be identified and developed.
Science assessment	Improve how science assessments in Canada are developed, how they are communicated, and how they are used.
Water and Climate Information*	Provide improved access to an inventory and tools for water and climate information products to support adaptation in Canada.

\*Working Group established in 2013–14

Thirty-nine new cost-shared projects were initiated in the past year. Included in these new projects is an increased emphasis on private sector engagement. Examples of the work to be conducted include:

- **Economics:** The Chartered Professional Accountants of Canada, representing almost 90% of Canada’s 175,000 professional accountants, will develop with its members a tool for accountants, or the clients they serve, to identify climate-related risk management and value-protecting strategies, as well as value-creating opportunities due to a changing climate.
- **Mining:** Analyzing the costs and benefits of adaptation investment in mining operations. Several mining companies will contribute to assessments of these costs on their mining operations.
- **Energy:** The Canadian Electrical Association will identify ways to incorporate climate change adaptation considerations into investment projections for planned electricity infrastructure.

**What follows is the individual working group highlights for 2013–14, as well as their outlook for 2014–15.**

## NATURAL RESOURCE SECTORS

### Energy

The 2013–14 activities of the newly established Energy Working Group centred on initiating new projects and establishing new collaborations. Highlights include:

- The launch of 20 projects addressing the emerging adaptation needs in Canada’s oil and gas and electricity sectors. Projects involve over 125 organizations such as the Toronto Region Conservation Authority, Manitoba Hydro and L’Institut de recherche d’Hydro-Québec.
- Examples of projects include assessing adaptation awareness and action in the energy distribution sub-sector, evaluating the impacts of future climate change on electrical distribution in urban and suburban centers, and understanding climate change impacts on energy demand.
- Managing extreme events is an area of considerable interest as was demonstrated by the broad participation in a webinar entitled “National Grid’s Response to Hurricane Sandy: Restoring, Reconnecting and Rebuilding” delivered by Kenneth Daly, National Grid President for New York, in May 2013.

In 2014–15, the Energy Working Group will focus on implementing projects, reviewing products, providing input to disseminating results to targeted users, and exploring emerging adaptation theme areas.

### Mining

In 2013–14 the Mining Working Group created a survey that the Mining Association of Canada used to survey its members about their adaptation actions. Members also followed the implementation and completion of projects, more specifically:

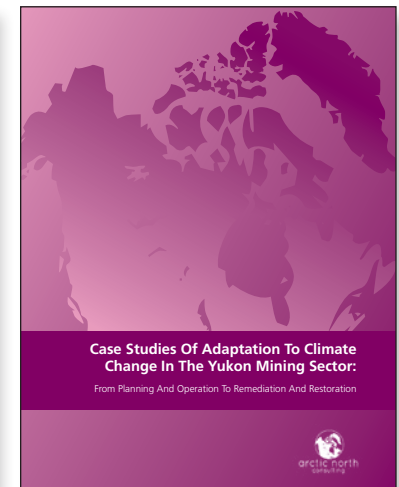
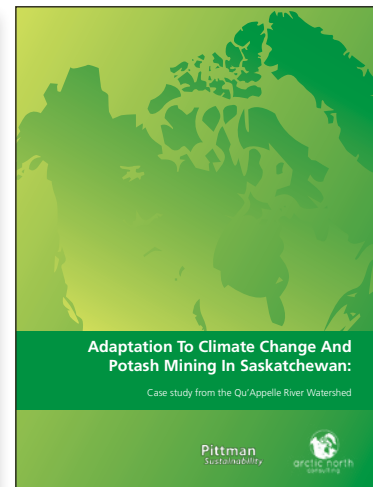
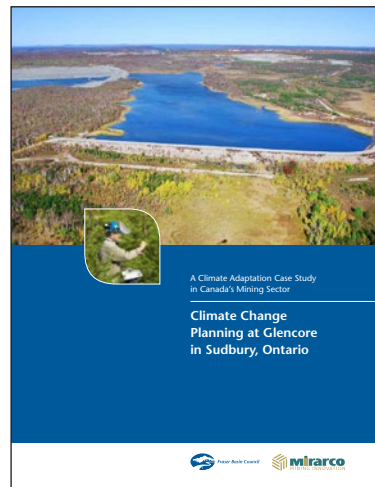
- Three projects reviewed mining-related policies and programs in British Columbia, Saskatchewan, Manitoba and Ontario, and examined whether and how the policies act as drivers of or barriers to adaptation in the sector.
- Three projects delivered case studies that illustrated actions being taken by mining companies to adapt to current climate risks in

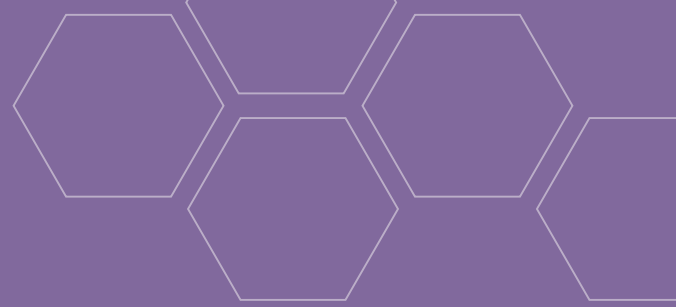
British Columbia, Saskatchewan, Yukon and Ontario. The case studies will provide a reference for companies and governments when engaging stakeholders on this issue.

- One project analyzed actions taken by mining companies in response to recommendations related to climate risks in environmental assessments such as permafrost thaw and changes in water quality and quantity. The project report will provide insights on how climate change concerns could be addressed in current environmental assessment processes.

In 2014–15, the Working Group will review the results of the projects already delivered to identify whether new activities are needed. The Working Group will also create a plan to widely disseminate the results of the case studies. Preparations for a

Example of products from the Mining Working Group





national assessment of climate change impacts and adaptation for the mining sector will also start. Finally, three new projects will deliver analysis of the costs and benefits of adaptation for mine sector transportation and waste management at various locations in Canada.

## Forestry

The Forestry Working Group builds on the work conducted by the **Climate Change Task Force (CCTF) of the Canadian Council of Forest Ministers (CCFM)**. Accomplishments in 2013–14 include:

- Contribution to the production of two reports as part of the “Adapting sustainable forest management to climate change” CCTF series. The primary goal of these reports is to provide members of the forest sector with state-of-the-art tools and new knowledge that will allow them to assess the vulnerabilities, risks, and opportunities associated with climate change.
- Facilitation of a climate change forest adaptation practitioners workshop in Edmonton in January 2014, as part of CCTF activities. The objective was to provide practical guidance to forest resource professionals applying vulnerability assessments and adaptation planning through the use of an adaptation guidebook.
- Through the **Forest Adaptation Community of Practice** (FACoP), initiation of a monthly webinar series to contribute to the dissemination of climate change adaptation tools targeted at the forestry sector.

The focus in 2014–15 will be on building awareness and disseminating the remaining CCFM–CCTF reports and guidebook on forestry adaptation through webinars and pilot projects. The Working Group also plans to produce a compendium of forest adaptation activities in Canada. The compendium will document what is currently happening within Canadian organizations or jurisdictions with respect to policy and regulation on forestry adaptation, and new forest management practices that incorporate climate change considerations. Finally, the Working Group will provide feedback on products and tools produced by the CFS’ Forest Change Initiative, and promote the use of the tools developed by the initiative through a webinar series.

## CROSS-SECTORAL AND REGIONAL THEMATIC AREAS

### Coastal Management

Highlights for the Coastal Working Group in 2013–14 include:

- There are 15 projects underway, with eight to be completed early in 2014–15. The projects will assist the identification of vulnerable elements of Canada’s diverse coastal environments as well as develop common lessons learned that can help facilitate adaptation action. Examples of projects underway include the development of a guide to implement effective soft-shore

“The working group provides great ways to bring people together that are involved in different sections of the decision-making process, while also allowing for the collaboration and coordination of efforts. This also gives us an opportunity to learn from each other, continue to raise awareness, continual networking, identifying common issues and knowledge gaps, facilitating the development of collaborative studies and delivery of tools and best practices”.

Brian Sieben,  
*Climate Change Adaptation Specialist,  
Environment Division, Climate Change  
Unit, Dept. of the Environment and  
Natural Resources, Government  
of the Northwest Territories*

shoreline protection measures for inclusion in provincial guidelines in British Columbia, and the development of a methodology for conducting coastal erosion risk assessments in Prince Edward Island.

- Under the 2013–14 call for proposals, a new project was initiated aimed at developing a web-based tool to provide planning and engineering guidance for the selection of sustainable coastal adaptation strategies and measures for rural communities in the Atlantic region.

In the coming year, the Coastal Management Working Group activities will focus on reviewing products, providing input on disseminating results to targeted users, coordinating with other Working Groups' related activities, and exploring key adaptation theme areas. Dissemination activities being planned are the Coastal Zone Conference in Halifax, Nova Scotia, June 15–19, 2014, and webinars.

## Economics of Adaptation

The Economics Working Group began work in three areas: the use of economic instruments for adaptation; cost and benefit analysis of adaptation measures; and financial community engagement:

- Four projects were initiated to explore existing economic instruments in the public, private, and/or non-profit sectors to determine how they might be modified and applied to adaptation measures in Canada. Areas being examined include financing adaptation action in large Canadian municipalities, economic instruments to incent or finance adaptation

action in the forest industry, and ecosystem management measures in urban, wetland and floodplain areas.

- Regional studies were designed that will identify regional and sector-specific economic impacts from a changing climate and the relative costs and benefits of possible adaptation measures. The Council of the Great Lakes Region, Mowat Centre and Ouranos are examining the economic costs of water level decline in the Great Lakes and St. Lawrence system by region, sub-region and sector. For the four Atlantic Provinces and coastal Quebec, the Atlantic Climate Adaptation Solutions Association, the University of Prince Edward Island and Ouranos are investigating the economic impacts and adaptation options for coastal infrastructure.
- The Working Group cemented partnership with the Insurance Bureau of Canada (IBC) and the Chartered Professional Accountants of Canada (CPA) with two projects. Work with IBC will result in a methodology for projecting the economic impact of the weather effects of climate change that can be adapted for use by communities, and that will help governments, business and property owners make the business case for investments in adaptation measures to reduce costs over the long term. CPA Canada work aims to integrate adaptation into the professional accountant certification process, education requirements and professional communities of practice through tools and professional development.

In 2014–15, the Economics Working Group will focus on implementing these important projects, developing a communications mini-plan for the work it is undertaking as part of the larger Adaptation Platform communications strategy, ensuring compatibility of results for the large regional studies, and identifying potential areas for future work.

## Infrastructure and Buildings

In 2013–2014, this new working group drew on its membership to develop and refine activities. These include:

- A project entitled “Best Practices for Reducing the Risk of Infiltration and Inflow at the Time of Construction of Residential Subdivisions.” The primary objective of this project will be to identify cost-effective means of reducing the risk of rainwater and groundwater entering sewer systems at the time of construction of new housing infrastructure. The end-users of the project include municipal planners, engineers and the home building and development industries.
- Identifying and creating a database of measures applied by local governments across Canada to reduce risks associated with extreme rainfall events. ICLEI, the Institute for Catastrophic Loss Reduction and Engineers Canada have been leading this work. End-users of the project will include municipal planning and engineering staff, as well as regulatory professionals at the provincial and federal government levels, the non-profit sector and academics.

- The creation of a post-disaster data collection and forensic analysis protocol—a project led by Engineers Canada and the Institute for Catastrophic Loss Reduction. The protocol will standardize data collection and disseminate lessons learned following disaster events. The end-users of the project will include emergency management professionals, infrastructure managers, and professionals at the municipal, provincial and federal government levels involved in infrastructure codes and standards, design and regulation.

In 2014–2015, the Infrastructure and Building Working Group will continue to identify and develop new activities. Its members will also provide advice for the three aforementioned activities and assist in their implementation. The Working Group currently relies on in-kind resources and the challenge ahead is to identify additional resources to carry out the work.

## Measuring progress

- Three projects delivered the results of their reviews of measurement systems used in issues such as children’s health and forest management. These projects identified lessons that can be used in the design and implementation of adaptation monitoring and evaluation. They discussed challenges such as measuring over long time frames, and how to encourage voluntary reporting, while also providing guidance related to the program structure, cost, choice of indicators, the usefulness of benchmarking, and engaging champions to build and sustain commitment.
- In September, Kevin Hanna, from the National Municipal Adaptation Project, presented the



Abandoned section of NWT highway 4, east of Yellowknife, being examined for damage caused by permafrost thaw. Source: Natural Resources Canada

results from a survey of local government adaptation planning activities and discussed the approach taken to surveying this community.

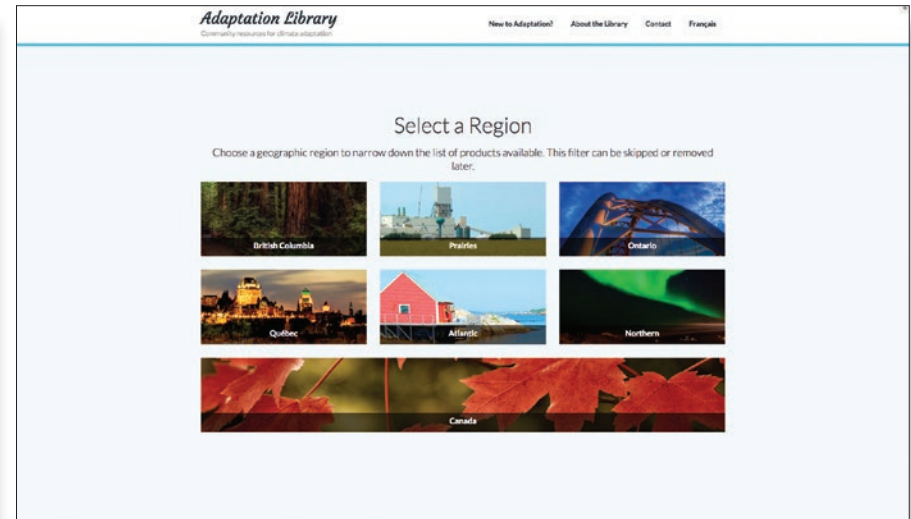
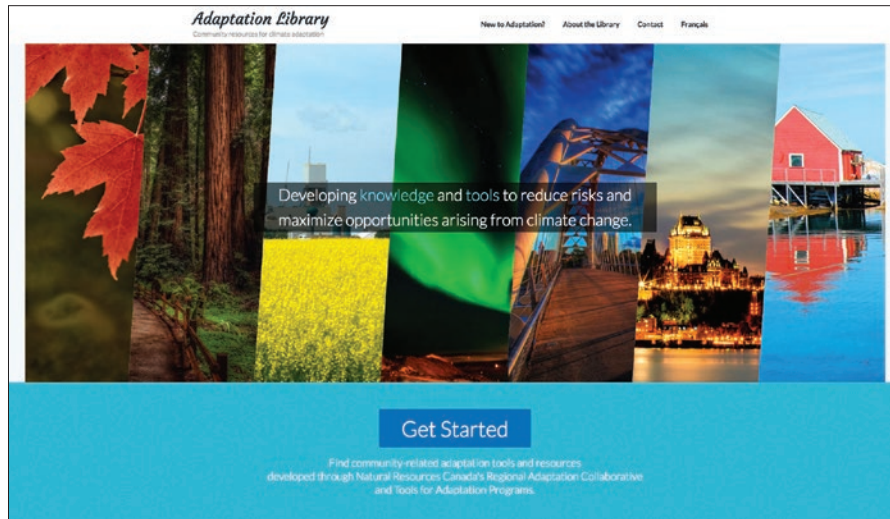
Early in 2014–15, a contractor will complete work on a guide on using surveys to measure adaptation progress and effectiveness. The guide will draw on the lessons learned from a selection of surveys completed in Canada and globally to date. By the end of the year, five projects will deliver their results. Two of the projects will identify lessons that can be learned from international use of indicators to measure adaptation. Three others will review Canadian indicators that are currently used to measure the effectiveness of policies and actions in communities, coastal management, infrastructure

and other issues for their potential application to measure adaptation to climate change.

## Northern Regions

Key to successful growth in the North are infrastructure and natural resource sectors that are able to manage variation in climatic conditions and adapt to the changing needs of northern business and communities. And while access to relevant and usable adaptation knowledge can help drive enhanced adaptation actions, this knowledge is often scattered across the northern regions, does not always exist in forms useful to those who need it, or is difficult to access. In 2013–14 the Northern Working Group addressed these two issues by:

The Adaptation Library: Connecting community and municipal users with relevant adaptation knowledge and tools



- Completing three projects providing tools for the integration of climate change concerns into adaptation planning and decision-making. These include the beta version of the “Climate Infrastructure Forensic Analysis System” (CIFAS), a unique database in Canada identifying real-world examples of failures and/or adaptation design measures related to a changing climate in the northern ground transportation sector. CIFAS is targeted at transportation, mining and energy sector practitioners, professional and industry associations, as well as public sector agencies involved in infrastructure management.
- Initiating three new projects facilitating the integration of climate change considerations in the management, maintenance and design of infrastructure supporting natural resource development. These include the vulnerability risk assessment of transportation infrastructure supporting the supply

chain between Manitoba and Nunavut, a collaboration between the Government of Nunavut, the Mining Association of Manitoba, and the rail services company OmniTrax Inc.

- Developing a proposal to the Arctic Council Sustainable Development Working Group on an on-line portal to facilitate the exchange of adaptation knowledge and actions in the circumpolar region. This work was carried out in collaboration with the University of Alaska Fairbanks and the U.S. State Department.

One of the challenges for the Northern Working Group is coordinating such a geographical spread of participants. The focus in 2014–15 will be on consolidating intra-working group collaboration through targeted initiatives. Another key activity will be the coordination of members’ participation in the on-line information portal development, one of the priorities under Canada’s Arctic Council Chairmanship to be delivered by May 2015.

## Regional Adaptation Collaborative and Tools Synthesis

The RAC and Tools Synthesis Working Group work focused on developing products building on the outputs of the Regional Adaptation Collaborative (RAC) and Tools Programs (2009–2012). Highlights for the RAC and Tools Synthesis Working Group in 2013–14 include:

- A total of 18 products were generated, ranging from case studies, tools and guidance resources (see product list in the Annex). Tools created include the **Adaptation Library**, a publicly accessible, web-based and searchable collection of community-related products. The goal of the Library is to connect community and municipal users with relevant information related to local climate change adaptation.

- Presented two webinars: “Using ADAPTool to Assess What Makes Policies Adaptable under Climate Change” in February, and “Preparing Your Coast for a Changing Climate: Tools and Lessons Learned” in March.

In the coming months, all projects will be completed and the Working Group will develop a product dissemination plan. This working group is the first to complete its program life cycle and will formally wrap up in 2015. Other working groups are encouraged to mine the full RAC body of work for additional opportunities to build this very valuable resource.

## Science assessment

The goal of the Science Assessment Working Group is to help improve how science assessments in Canada are developed, how they are communicated, and how they are used.

Highlights for 2013–14 include:

- Development of a Summary for Business Leaders as a pilot project on supplementary products to the national assessment update. The update, titled *Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation*, will be completed in Spring 2014 and supplementary products will be available in the months following release.
- Organization of Webinars presenting major findings of the Intergovernmental Panel on Climate Change Fifth Assessment Report

(IPCC AR5). The first webinar presented findings of the Working Group I report — *The Physical Science Basis*, which was released in September 2013. The second webinar presented findings of the Working Group II report — *Impacts, Adaptation and Vulnerability*, which was released in March 2014. Both webinars featured Canadian experts who served as lead authors or coordinating lead authors for the AR5.

- Participation in the scoping meeting for the Transport Assessment, organized by Transport Canada. The scoping meeting, held in November 2013, involved science and policy experts from federal / provincial and territorial governments, industry associations and academia. The assessment report is expected to be completed in December 2015.

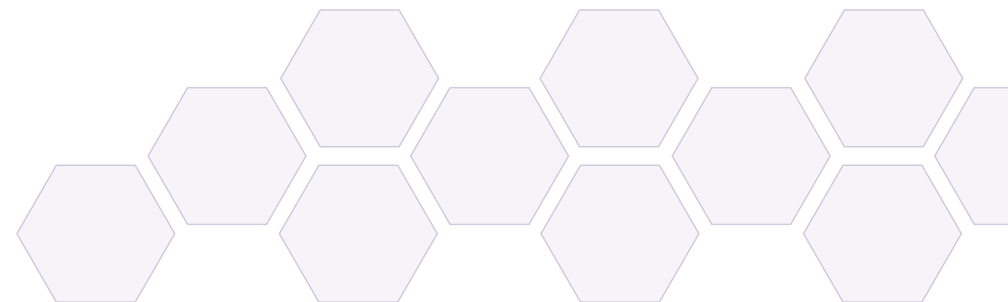
The focus in 2014–15 will be on building awareness of the findings of the IPCC and NRCan assessment reports, including the development of new products targeted to key decision-makers. In addition, the working group plans to complete its survey of decision-makers and synthesize the findings to inform the planning of future assessments. The goals continue to be developing champions to promote science assessments, and enhancing the capacity of key groups to contribute to assessment activities.

## Water and Climate Information

The purpose of the Water and Climate Information Working Group is to provide improved access to an inventory and tools for water and climate information products to support adaptation in Canada. Accomplishments for 2013–14 include:

- The WG has started to engage the other WG co-leads within the Adaptation Platform to identify their current and future data needs.
- Initiating the assessment of the current provision of water and climate information across Canada by various providers (i.e. federal, provincial/territorial, academia, consortia, private sector) in a mapping exercise led by Environment Canada with participation for WG members.
- Initiating an investigation for the potential for a “single” window access point/portal for Canadian water and climate information.

In 2014–15, complementary to activities identified in 2013–14, the Working Group will hold a webinar on the mapping exercise to gather feedback from Platform members, and develop stronger documentation for the information products including metrics such as level of accuracy and confidence levels, and caveats for data use to support risk assessments and adaptation.



# LOOKING FORWARD

The Adaptation Platform collaborative model will continue to mature in the coming year; new partners will come forward to lead exciting new areas of work and new products will be launched into the quickly changing Canadian adaptation landscape.

In the coming year, we will continue to explore new opportunities to help Canadians and key economic sectors adapt to a changing climate. The past year witnessed a variety of extreme weather-related events, which resulted in record property and economic losses. One important issue to be considered is how adaptation might align with disaster risk reduction. This is an area we will explore in some depth throughout the coming weeks and months.

Transportation is also important to consider in the context of climate, climate variability and climate change. As an important component of Canada's national economy, transportation is a cross-cutting activity that is relevant to all sectors of the economy and all aspects of society, from forestry and fisheries to human health and trade. Canada's transportation infrastructure connects markets and consumers, as well as employers and workers, and has an asset value in excess of \$100 billion. Transport Canada and Natural Resources Canada are working together

to provide the first assessment of potential climate change impacts, risks, opportunities and adaptation measures specifically as they relate to Canada's transportation system. This assessment, due in 2015, is expected to be the foundation for adaptation work in the years to come.

For the immediate future, implementing the Platform communications and product dissemination strategy will be one of our top pursuits in the coming year. As a key element of this, we will be activating our various networks and targeting specific audiences to ensure that these practical products do not sit on the shelf but are taken up and used. Understanding where, when and how these products are put to work tells us how our investments are paying off — a factor critical to the Platform's success.

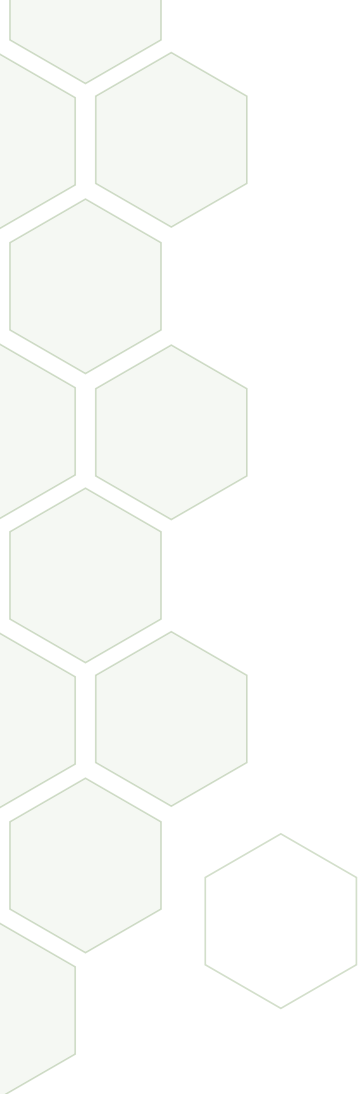


# APPENDIX: ADAPTATION PLATFORM PRODUCTS 2013/14

Working Group	Product Title	Description
<b>Measuring Progress Working Group</b>		
	<b>Measuring Progress on Climate Change Adaptation: Lessons from the Community Well-Being Analogue</b>	A report that examines measurement of community well-being and identifies lessons for measurement of adaptation. (National)
	<b><u>Developing knowledge on monitoring and evaluation of progress through a case study approach and analogues for adaptation to climate change</u></b>	A report on the measurement of effectiveness of actions in health and water sectors to identify lessons for measurement of adaptation. (National)
	<b><u>Research and Analysis of Monitoring and Evaluation Programs as Analogues for Climate Change Adaptation Measurement</u></b>	A report that examines measurement approaches used in sustainable forest management and child health and identifies lessons for measurement of adaptation. (National)

continued

For more information, visit  
<http://www.nrcan.gc.ca/environment/impacts-adaptation/adaptation-platform/10027>



Working Group	Product Title	Description
<b>Mining Working Group</b>		
	<b>Adaptation to Climate Change and Potash Mining in Saskatchewan</b>	A case study of adaptive actions taken by six potash mines in the Qu'Appelle River watershed, Saskatchewan.
	<b>Case Studies of Adaptation to Climate Change in the Yukon Mining Sector</b>	A case study that examines climate change vulnerabilities and adaptation in three life stages of mines (planning, operation, post-closure) located in Yukon Territory.
	<b>Adaptive Policy Analysis of Mining Policies in Manitoba</b>	A report on the ability of six of Manitoba's mining-related policies and programs to enable adaptation in the mining sector.
	<b>Adaptive Policy Analysis of Mining Policies in Saskatchewan</b>	A report on the ability of nine of Saskatchewan's mining-related policies and programs to enable adaptation in the mining sector.
	<b>Strengthening Adaptive Capacity in Two Canadian Provinces: ADAPTool analysis of selected mining policies in Manitoba and Saskatchewan: A synthesis report.</b>	A report that synthesizes the results of the application of the ADAPTool to mining policies in Manitoba and Saskatchewan, and identifies lessons about its use in these applications.
	<b>Policy Issues and Barriers to Climate Change Adaptation for the British Columbia Mining Sector</b>	A report examining the role of provincial policies and programs as entry points or barriers to adaptation in the mining sector.
	<b>Past, Present and Future Vulnerability and Risk Assessment to Climate Extremes for Potash Mines in the Qu'Appelle River Watershed: Literature Review</b>	A report summarizing historic vulnerability and possible future impacts of climate change on the potash industry, including a preliminary examination of costs.

continued

Working Group	Product Title	Description
	<b>Characterization of Historical Drought and Excess Moisture in the Qu'Appelle River Watershed</b>	A report summarizing the climate of the watershed over the past 110 years and presenting trends in temperature, precipitation, drought and evapotranspiration.
	<b>Risk of Dry and Wet Extremes in Southeast Saskatchewan: From the Past into the Future</b>	A fact sheet that summarizes information about historical and possible future drought and extreme wet years.
	<b>Future Possible Dry and Wet Extremes in Saskatchewan, Canada</b>	A report characterizing projections of future severe climate events in eastern Saskatchewan to identify worst-case scenarios of drought and excessive moisture based on existing literature.
	<b>What Risks to Potash Mining are posed by Droughts?</b>	A presentation summarizing the risks to potash mining from droughts. (Saskatchewan)
	<b><u>Understanding Ontario's Mining Policy Drivers and Barriers in the Context of Climate Change Impacts and Adaptation</u></b>	A report examining the ability and potential of two policies and eight policy instruments to enable adaptation in the mining sector in Ontario.
	<b>Adaptation in the Mining Sector in Canada: a compilation of case studies</b>	Case studies of adaptive actions taken by two mining companies, one in BC and another in Ontario.
	<b>Assessing the Treatment of Climate Change Impacts and Adaptation in Project-Level Environmental Assessments (EAs) in the Canadian Mining Sector</b>	A report that identifies actions taken in six EAs to reduce climate change-related risks, and makes recommendations that could advance the role of project EAs in supporting climate change adaptation in the mining sector. (National)

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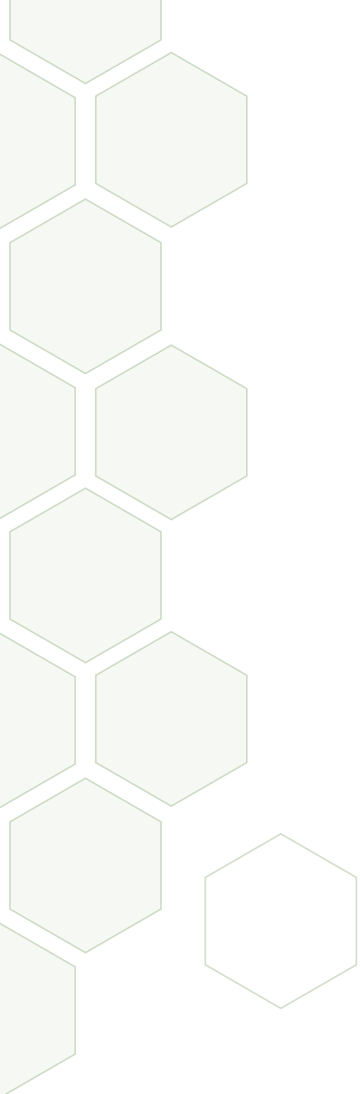
Working Group	Product Title	Description
<b>Northern Working Group</b>		
	<b>Best practices for climate change adaptation and northern resource development</b>	A report that evaluates adaptation activities in the energy and mining sectors across Canada's north and includes an evaluation tool that can be used to identify best practices.
	<u><b>Adapting the Built Environment in a Changing Northern Climate</b></u>	A report that reviews hazard-related mapping activities and vulnerability assessments of the built environment in Canada's North.
	<u><b>Adapting the Built Environment in a Changing Northern Climate: Searchable Database</b></u>	An online, searchable database of climate hazard mapping and vulnerability assessment initiatives and outputs, including a geo-referenced map.
	<u><b>Enhancing Knowledge Transfer to Decision Makers with Respect to Climate Change Impacts on the Cryosphere: Literature Review Report</b></u>	A literature review focused on the impacts of snow and permafrost and their interactions on surface transportation and mining in Yukon and the Northwest Territories.
	<b>Climate Infrastructure Forensic Analysis System (CIFAS)</b>	A beta version of a database of infrastructure failures in Yukon and the Northwest Territories, and the response measures undertaken to address these failures.
	<b>Case Studies to Improve Informed Decision-Making with Respect to Climate Change in the Cryosphere</b>	Two case studies that demonstrate how the Climate Infrastructure Forensic Analysis System (CIFAS) can be used to identify options to prevent infrastructure failure in a changing climate.

continued

Working Group	Product Title	Description
<b>Regional Adaptation Collaborative (RAC) and Tools Synthesis Working Group</b>		
	<b>Case study: Supporting the Assessment of the Hydrologic Impacts of Climate Change in Ontario (French and English)</b>	A case study that describes an innovative approach to integrating adaptation into water management in Ontario. (Based on projects conducted under the RAC program 2009–2012)
	<b>Case study: Reducing Public Health Risks from Heatwaves in Toronto (French and English)</b>	A case study that describes how to integrate climate change to manage and reduce public health risks in Toronto. (Based on projects conducted under the RAC program 2009–2012)
	<b>Case study: Analysis of socio-economic impacts and adaptation to climate change by Québec’s tourism industry</b>	A case study that describes the results of a project that assessed climate change impacts on Quebec tourism industry. (Based on projects conducted under the RAC program 2009–2012)
	<b>Case study: Assessing vulnerabilities to climate change of a forest-dependent community: The case of Le Bourdon Forest Community</b>	A case study that describes the project to assess climate change vulnerabilities of a forest-dependent community. (Based on projects conducted under the RAC program 2009–2012)
	<b><u>Adaptation Library (French and English)</u></b>	A web-based tool that is a publicly accessible and searchable collection of community-related products that connect community and municipal users with relevant information largely produced under the RAC and Tools Program 2009–12.
	<b><u>Strengthening Adaptive Capacity in Four Canadian Provinces: ADAPTool analysis of selected sectoral policies. A synthesis report</u></b>	A report synthesizing the results of the pilot testing of the ADAPTool in four Canadian provinces and the lessons on how to use the ADAPTool.

continued





Working Group	Product Title	Description
	<b>The Adaptive Design and Policy ADAPTool 2.0 for <i>Existing</i> Policies and Guide</b>	A web-based tool and accompanying guide designed to assess programs and policies for their adaptability and resilience to stressors including climate change. This version of the tool was modified based on the pilot assessments conducted in four Provinces (British Columbia, Saskatchewan, Manitoba and Nova Scotia).
	<b><u>Pilot Application, Adaptive Design &amp; Assessment Policy Tool (ADAPTool), Government of British Columbia Agriculture Programs</u></b>	A report describing the results and lessons learned from the pilot ADAPTool assessment of existing agriculture policies and programs in British Columbia.
	<b><u>Pilot Application, Adaptive Design &amp; Assessment Policy Tool (ADAPTool), British Columbia Ministry of Agriculture’s Marine Fisheries and Seafood Program</u></b>	A report describing the results and lessons learned from the pilot ADAPTool assessment of existing fisheries policies and programs in British Columbia.
	<b><u>Adaptive Policy Analysis of Nova Scotia: Selected policies and programs of Nova Scotia Environment</u></b>	A report describing the results and lessons learned from the pilot ADAPTool assessment of existing water withdrawal and parks and protected areas policies and programs in Nova Scotia.
	<b><u>Adaptive Policy Analysis of Forestry and Wetlands Policies in Manitoba, 2013 ADAPTool Application</u></b>	A report describing the results and lessons learned from the pilot ADAPTool assessment of existing forestry and wetland policies and programs in Manitoba.
	<b><u>Adaptive Policy Analysis of Saskatchewan’s 25-year Water Security Plan</u></b>	A report describing the results and lessons learned from the pilot ADAPTool assessment of existing water policies and programs in Saskatchewan.

continued

Working Group	Product Title	Description
	<b>The Adaptive Design &amp; Assessment Policy Tool (ADAPTool) for Creating New Policies — Tool</b>	A beta version of a web-based tool that can be used to integrate adaptation into the design of <i>new</i> programs and policies.
	<b><u>Sea Level Rise Adaptation Primer: a Toolkit to Build Adaptive Capacity on Canada’s South Coasts</u></b>	A web-based report that includes climate change adaptation tools and resources for Canada’s southern coasts to address sea level rise.
	<b>Sea Level Rise Primer Factsheet Summary (French and English)</b>	A fact sheet summarizing the full report <i>Sea Level Rise Adaptation Primer: a Toolkit to Build Adaptive Capacity on Canada’s South Coasts</i> .
	<b>Sea Level Rise Adaptation Primer (PowerPoint) (French and English)</b>	A presentation describing the <i>Sea Level Rise Primer: A Toolkit to Build Adaptive Capacity on Canada’s South Coasts</i>
	<b><u>Case study: Sea Level Rise in British Columbia: mobilizing science into action (French and English)</u></b>	A case study describing an innovative approach to integrating adaptation to sea level rise into policies and programs in British Columbia. (Based on projects conducted under the RAC program 2009–2012)
	<b><u>Case study: Adaptation Planning: the local government experience in British Columbia (French and English)</u></b>	A case study describing how climate change adaptation was integrated into planning and management for communities in British Columbia. (Based on projects conducted under the RAC program 2009–2012)



